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[REGISTERED No. 29.]

No. 1 of 1890.

The Calcutta Gazette.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 3450A.

GENERAL.—*The 20th December* 1889.—Baboo Ram Sadan Bhuttacharjee, Deputy Magistrate and Deputy Collector, is appointed to perform the functions of a Collector under section 4 of the Public Demands Recovery Act VII (B.C.) of 1880 in the district of Manbhoom, *vice* Baboo Radha Kanto Banerjee, Deputy Collector.

The 21st December 1889.—The Lieutenant-Governor is pleased to accept the resignation tendered by Dr. R. Macleod of his commission as Honorary Surgeon of the Behar Light Horse.

The 23rd December 1889.—Surgeon Francis Samuel Peck is appointed to be Honorary Surgeon of the Behar Light Horse, *vice* Dr. R. Macleod, resigned.

The 24th December 1889.—Mr. H. F. J. T. Maguire, Joint-Magistrate and Deputy Collector, 24-Pergunnahs, is appointed to act temporarily as Magistrate and Collector of Burdwan, with effect from the date on which he joined his appointment.

The 28th December 1889.—Mr. Minden J. W. Augier, Temporary Sub-Deputy Collector, Monghyr, is transferred to the district of Moorshedabad.

The 30th December 1889.—Mr. S. J. Douglas, Joint-Magistrate and Deputy Collector, Gya, is appointed to act, until further orders, in the first grade of Joint-Magistrates and Deputy Collectors, with effect from the date on which he joins his appointment at Gya.

The 31st December 1889.—The services of Mr. E. P. Chapman, Assistant Magistrate and Collector, 24-Pergunnahs, are placed temporarily at the disposal of the Financial Department of this Government.

The following Officiating Deputy Magistrates and Deputy Collectors are posted to the Sudder station of the district mentioned opposite their names :—

Moulvi Syed Karam Hossein	...	Durbhunga.
Baboo Abhilash Chandra Mookerjee	...	Rajshahye.
Moulvi Mahammad Habibullah	...	Khoolna.

Mr. H. Luson, Officiating Joint-Magistrate and Deputy Collector, Bettiah, Chumparun, is transferred to Jessore, and is appointed to have charge of the Jhenidah and the Magoorah sub-divisions of that district.

Baboo Soshi Bhusan Bose, Officiating Deputy Magistrate and Deputy Collector, Hooghly, is transferred to Jessore, and is posted to the Magoorah sub-division of that district.

Baboo Kedar Nath Biswas, Deputy Magistrate and Deputy Collector, Jhenidah, Jessore, is transferred to the Sudder station of the district of Cuttack.

Baboo Bangshi Dhar Banerjee, Deputy Magistrate and Deputy Collector, Magoorah, Jessore, is transferred to Dacca, and is appointed to have charge of the Manickgunge sub-division of that district.

EDUCATION.—*The 26th December* 1889.—Baboo Jadu Nath Pal, Officiating Deputy Inspector of Schools, Howrah, is appointed to act in class III of the Subordinate Educational Service, *vice* Baboo Hara Mohan Bhattacharjee.

The following notification is republished from the *Assam Gazette* :—

No. 412.—*The 20th December* 1889.—Mr. W. B. Brown, C. S., Assistant Commissioner, is appointed Sub-Registrar of North Lakhimpur in addition to his other duties, with effect from the 19th November 1889.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT,—FORESTS.

NOTIFICATION.

The 31st December, 1889.—Mr. A. L. Home, Conservator of Forests, Bengal, is allowed leave for three months, under Article 291 of the Civil Service Regulations, with effect from the 30th instant.

P. NOLAN,
Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT—(OPIUM).

NOTIFICATION.

The 28th December, 1889.—Mr. F. J. R. Field, Assistant Sub-Deputy Opium Agent, acted as Sub-Deputy Opium Agent, Gya, from the 18th to the 26th October, 1889, both days inclusive.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 31st December, 1889.—Mr. A. Elliot, Sub-Deputy Opium Agent, Tehta, has been allowed by Her Majesty's Secretary of State for India a further extension of two months' leave in continuation of the leave granted to him under the orders of the 6th November, 1889.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 31st December, 1889.—In continuation of the Government notification dated the 15th January, 1889, published at page 31, Part I of the *Calcutta Gazette* of the 16th January, 1889, the Lieutenant-Governor directs that the orders therein passed for the making of a survey and preparation of a record of rights in the Srinagar estates shall apply also to patnis and other tenures held exclusively by the minor proprietors of that estate in the following estates :—

Name of tenure.	Estate in which situated.	District.
Patnis and Darpatnis.		
Lot Sripur	Tajpore, towji Nos. 19 and 20.	Purneah.
Belahi	Kadwan, towji No. 65 ...	
Taluka Belahi	Kadwa, towji No. 65 ...	
Bhunrailee		
Mouzah Chundi Katwa		
„ Baneli		
„ Sotta		
„ Mohui		
„ Rohori		
„ Pool Bálwa Baneli		
Arazee Ramena, Lalia Singh	Haveli, towji No. 8 ...	
Chanba Singhia		
Purra Bathna, Istambrar		
Khakhat Kamat Durgali		
Bansi Nahkar		
Kamat Nawada		
„ Bhabaninagar and Durganugar ...		
Taluka Sarrabasathi and Jhuni Balwa ...		
Mouzah Hurda Gangili	Dharampur, towji No. 22	
Satkodaria		
Mouzah Mathour Istambrar	Kadwa, towji No. 2 ...	
„ Khuti Dudheli	Haveli, towji No. 8 ...	
Jot Jamas.		
Arazee Srinugar Khutea		
„ Sursauni		
Dihia		
Bagnan Agangir		
Jogeli and Kamat Rampur ...		
Bhag Prayag		
Kamat Kohbara		
Bhagat Ghoghri		
Deuria Kamat		
Bagat Farkia	Haveli, towji No. 8 ...	
Arazee Srinugar Hari Loll		
Kamat Rampur Kalumbagh		
Bogan Mahbarabari		
Kaimipathi Sadhaili		
Bagnan Tamghoti		
Nya Kalambag		
Khuti Baisa		
Milik Madhua Kola		
Kamat Gareah		
„ Ankhari	Katiaar, towji No. 1239 ...	

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 31st December, 1889.—The services of Baboo Juga Das Bhattacharjee, who was, under the notification dated the 2nd October, 1889, appointed to be a Revenue Officer in the Srinagar-Baneli Estates, and vested with the powers of an Assistant Settlement Officer, as defined in Rule 1, Chapter VI of the Bengal Tenancy Act Rules, are extended up to the end of January, 1890.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 27th December, 1889.—With reference to the notification of the 5th October, 1889, it is hereby declared that the subjects of the Examination for Admission into the Opium Department will be taken up on the dates and in the order mentioned below. The examination will be held in Calcutta at the Senate House of the Calcutta University.

January, 1890.

27th.		28th.		29th.
Morning.	Afternoon.	Morning.	Afternoon.	Morning.
Essay, 10 A.M. to 12-30 P.M.	English History and Literature and Elementary Indian History, 1 P.M. to 4 P.M.	Hindustani, 10 A.M. to 12-30 P.M.	Geography, 1 P.M. to 3-30 P.M.	Arithmetic and Algebra 10 A.M to 1 P.M.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 31st December 1889.—Under the powers conferred upon him by section 101, sub-section 2, clause *a* of the Bengal Tenancy Act VIII of 1885, the Lieutenant-Governor is pleased to order that a survey shall be made and a record of rights prepared in respect of all lands included within the boundaries of the estate, towji No. 1763, within pergunnah Dakhin Shabazpore, in the district of Backergunge, and also of all tenures held by any or all of the proprietors of the aforesaid estate which lie within the boundaries of the estate, towji No. 1764.

The particulars to be recorded in the survey and record of rights shall be the following :—

(*a*) —The names of the proprietors, with the character and extent of their interests.
(*b*).—The situation, quantity and boundaries of the proprietors' private lands as defined in chapter XI of the Act.
(*c*).—The name of each tenant.
(*d*).—The class to which he belongs, viz. whether he is a tenure-holder, raiyat holding at fixed rates, occupancy raiyat, non-occupancy raiyat; and if he is a tenure-holder, whether he is a permanent tenure-holder or not, and whether his rent is liable to enhancement during the continuance of his tenure.
(*e*).—The situation, quantity and boundaries of the land held by him.
(*f*).—The name of his landlord.
(*g*).—The rent payable.
(*h*).—The mode in which that rent has been fixed, whether by contract, by order of a Court or otherwise.
(*i*).—If the rent is a gradually increasing rent, the time at which, and the steps by which, it increases.
(*j*).—The special conditions and incidents, if any, of the tenancy.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 31st December 1889.—Under the powers conferred upon him by section 3 of the Bengal Survey Act of 1875, the Lieutenant-Governor is pleased to order that a survey shall be made of the lands situated within the estate, towji No. 1764, within the district of Backergunge, and that the boundaries of such estate, and of the tenures, mouzahs, and of fields therein, shall be demarcated on the lands so to be surveyed.

P. NOLAN,
Secretary to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 3451A.

The 31st December 1889.—The following officers are vested with the powers of a Magistrate of the third class :—

Moulvi Syed Karam Hossein, Officiating Deputy Magistrate and Deputy Collector, Durbhunga.

Baboo Abhilash Chandra Mookerjee, Officiating Deputy Magistrate and Deputy Collector, Rajshahye.

Moulvi Mahammad Habibullah, Officiating Deputy Magistrate and Deputy Collector, Khoolna.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[Second Publication.]

NOTIFICATION.

The 18th December 1889.—It is hereby notified that the Lieutenant-Governor authorizes the extension of the provisions of section 34 of Act V of 1861 to the village of Saidpore, in the district of Rungpore, within the boundaries specified below :—

On the North.—A straight line drawn from the Saidpore Rifle Range to Pendu Ram Boiragy's house.

On the South.—A straight line drawn from East Baboo Para to the village road east of Nanku Haolder's Para.

On the East.—A straight line drawn from Pendu Ram Boiragy's house to East Baboo Para.

On the West.—A straight line drawn from the village road east of Nanku Haolder's Para to the high ground for target practice.

JOHN ENGAR,
Chief Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—(BENGAL.)

ESTABLISHMENT.

The 30th December 1889.

No. 476.—Adverting to the Notification No. 438, dated the 6th instant, Mr. L. R. Fraser, Assistant Engineer, was on special duty in the Office of the Superintending Engineer, Western Circle, from the 5th to the 13th idem, both days inclusive.

The 31st December 1889.

No. 477.—The following notifications by the Government of India, Public Works Department, are republished for information :—

No. 403, *dated 24th December* 1889.—Lieutenant Colonel C. W. I. Harrison, R.E., Officiating Chief Engineer and Joint-Secretary to the Government of Bengal, is, on return of Colonel J. M. McNeile, R.E., from special leave, re transferred to the North-Western Provinces and Oudh and appointed to officiate as Chief Engineer and Joint-Secretary to that Government.

No. 404, *dated 24th December* 1889.—Colonel J. M. McNeile, R.E., Chief Engineer and Joint-Secretary to the Government of Bengal, Public Works Department, having vacated his appointment under Article 687, clause (c) of the Civil Service Regulations, is re-appointed to that post, with effect from the 26th February 1889.

E. J. MARTIN,
Secy. to the Govt. of Bengal, P. W. Dept.

ESTABLISHMENT.

The 31st December 1889.

No. 478.—Mr. J. P. Coy, Assistant Engineer, returned from furlough on the 15th November 1889.

IRRIGATION.

The 31st December 1889.

No. 479.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for a dock siding at Harpur, it is hereby declared that for the above purpose a piece of land measuring about 525 feet in length, and from 100 to 125 feet in width, and containing an area of 1 acre 1 rood and 2¼ poles, more or less, situate in mouzahs Harpur and Andhari, pergunnah Nonore, bounded on the north by the Arrah Canal ; on the east by the boundary lands of mouzah Andhari ; on the south by lands in the cultivation of Dwarka Ojha, Chhathoo Ojha, and others ; and on the west by lands in the cultivation of Chhathoo Ojha and others, is required in the district of Shahabad.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 480.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for Basoodhar Distributary Extension, it is hereby declared that for the above purpose a piece of land measuring about 1 mile and 2,720 feet in length, and varying from 10 to 110 feet in width, and containing an area of 16 acres and 4¼ poles, more or less, situate in mouzah Basoodhar, pergunnah Bhojpur, is required in the district of Shahabad.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

Erratum.—In Notification No. 455, published at page 1042, Part I of the *Calcutta Gazette* of the 18th December 1889, *for* "1st April 1889" *read* "1st April 1890."

No. 481.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for an escape from the Kantya Distributary at the 8th mile and 5,122nd feet, it is hereby declared that for the above purpose a piece of land measuring about 3,045 feet in length and from 90 to 160 feet in width, and containing an area of 7 acres 1 rood and 12¼ poles, more or less, situate in mouzah Baligaon, pergunnah Beehea, bounded on the north and south by the lands of mouzah Baligaon; on the west by the Kantya Distributary; and on the east by a *nala* and *naddee*, is required in the district of Shahabad.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 482.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for the Baliaghye Branch Channel, in the villages noted below, pergunnahs Narnamutha, Paharpur, and Dantamutha, zillah Midnapore, it is hereby declared that for the above purpose a piece of land measuring, more or less, 491 beegahs and 19 cottahs of standard measurement, is required within the aforesaid villages noted below—

Paschim Sarpai, Kausulya, Dakhin Nischinta, Shiuli, Kandaramari, Dhalgada, Jamna, Jugurnath Karbar, Asti Chak, Goguadegar, Dakhin Chaumuk, Utter Chaumuk, Hurkuchia, Rajendra Chak, Uttarpatar, Samil Madhub Chak, and Gharabashan.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

[Fourth Publication.]

IRRIGATION.

The 9th December 1889.

No. 442.—*Notification.*—In exercise of the powers conferred on him by section 99 of Act III (B.C.) of 1876, the Hon'ble the Lieutenant-Governor proposes to pass the following rule for the Orissa Canals:—

Beali lands in a five-year lease, if not irrigated, are to be exempted from assessment provided "Beali" is not followed by "sarud" or any other *irrigated* crops in the same year.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

PUBLIC WORKS DEPARTMENT,—(MARINE.)

The 22nd December 1889.

No. 204.—*Notification.*—In exercise of the powers conferred upon him by section 36, clause (2) of Act X of 1889 (The Indian Ports Act), the Lieutenant-Governor is pleased to prescribe the following forms as those in which the accounts of the Chittagong Port Fund are to be kept.

PAYMENTS.

Date.	Amount as per Register of Payments.

Total of month ... ...

Closing Balance as per details below :—

GRAND TOTAL ... ...

Balance in Treasury as per Pass Book ... ...

Cash received too late for remittance to Treasury ... ...

Permanent advance ... ...

Deduct—Outstanding cheques as per following details :—

No. of cheque , date , amount Balance as above ... ...

Date of receipt.	No. of Treasury chalan.	From whom received.	Particulars of receipt.	Port-dues.			Mohesahkhally toll collections.			Mooring fees, &c.			Fines.			Sale proceeds of stores.			Fees for drawing painting meta badge, &c.		
				Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P
		Sanctioned grant																			
		Total for the month ...																			
		Add Total to end of last month ...																			
		Total from 1st April to date ...																			

Receipts on account of water-supply.			Miscellaneous.			Interest on Government Promissory Notes.			Cash recoveries.													Total of each receipt.			Daily total carried to cash book.		
Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.

RECEIPTS.

Date.	Amount as per Register of Receipts.

Total of month ...

Opening Balance ...

GRAND TOTAL ...

Date.	Number of Voucher.	Number of cheque by which paid.	To whom paid.	Detailed heads.
			Budget Grant ...	
			Total to end of month	
			Add Total to end of last month	
			Total from 1st April to date.	

EXPENDITURE.	Total of each Voucher.	Daily Total carried to Cash-book.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

NOTIFICATION No. 210Mne.

The 30th December 1889.—It is hereby notified for general information that, in exercise of the powers conferred on him by section 49 of Act X of 1889 (the Indian Ports Act), the Lieutenant-Governor directs that hospital port dues shall be levied at Chittagong on all ships manned by European crews at the rate of one anna per ton, with effect from the first day of April 1890.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

NOTIFICATION No. 211Mne.

The 31st December 1889.—In continuation of the notification of this Government, No. 132Mne., dated the 27th August 1889, published at Part I, page 739 of the *Calcutta Gazette* of the 28th idem, the following communication from the Government of India, in the Foreign Department, regarding the imposition of quarantine against arrivals from the Persian Gulf, is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

Telegram, dated 23rd December 1889.

From—Pera, *vid* Turkey,	To—Calcutta,
From—White.	To—Governor-General.

QUARANTINE on arrivals from Persian Gulf reduced to five days.

[First Publication.]

NOTIFICATION No. 206Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 125).

AFRICA—EAST COAST.

MOZAMBIQUE CHANNEL.

Additional soundings north-eastward of St. Lazarus Bank.

WITH reference to Notice to Mariners, No. 67, dated 2nd July last, issued by this office, the British Admiralty has given notice (No. 403 of 1889) that some further soundings have been obtained by H. M. Surveying Ship *Stork* to the north-eastward of the bank as defined in that Notice, which indicate the existence of either another bank, or of an extension of the slope of the St. Lazarus bank for some 30 miles. No sounding less than 320 fathoms was obtained, but until the ground is more thoroughly searched, vessels should avoid passing over this area to the north-eastward of the St. Lazarus bank.

The soundings obtained are as follows :—

(1) Lat. 11° 55′ S., long. 41° 28′ E. ... ... 320 fathoms.
(or 9 miles northward of a depth of 1,080 fathoms previously obtained).
(2) Lat. 11° 48½′ S., long. 41° 35⅗′ E. ... ... 460 fathoms.
(3) Lat. 11° 38½′ S., long. 41° 39½′ E. ... ... 807 ditto.
(4) Lat. 11° 32′ S., long. 41° 41′ E. ... ... 910 ditto.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[First Publication.]

NOTIFICATION No. 207Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 126).

AUSTRALIA—EAST COAST.

INNER ROUTE.

Shoal north-eastward of two isles.

THE British Admiralty has given notice (No. 405 of 1889) of the existence of a coral shoal lying about 1½ miles north-eastward of two isles :—

This shoal, with a depth of 6 fathoms, is 8 cables in length within the 10-fathoms line in a north-east and south-west direction ; from the shoalest part, South Direction island bears N. 13° E., distant 11 miles, and cape Flattery summit N. 76° W., distant 7⅗ miles.

Position, lat. 15° 0′ S., long. 145° 30′ E.

Also the following information concerning g reef and Sand Bank, lying respectively about 5½ and 7 miles eastward of Two isles :—

g reef, as heretofore charted, does not exist.

Sand bank, now named g reef, is 4 cables in length in an east and west direction, with a width of 2½ cables, it is steep-to, and has a small sandy head near its west extreme which dries 6 feet at low water spring tides ; from this head, cape Flattery summit bears N. 88° W., distant $13\frac{8}{10}$ miles, and South Direction island N. 18½° W., distant $10\frac{8}{10}$ miles.

Position, lat. 15° 0½′ S., long 145° 36′ E.

Unsuccessful search for shoal north-west of Look-out point.

FURTHER information has been received that a shoal spit extends in a north-westerly direction from Look-out Point for a distance of 2¼ miles, having a least depth of 6 feet, with the summit of the point bearing S. 45° E., distant 2 miles ; it is steep-to on its eastern edge, the water deepening quickly from 2 to 6 and 7 fathoms ; on the north-western side it deepens more gradually.

The position heretofore given for the 2½ fathoms shoal is about 8 cables northward of the extreme of the spit, and depths of 6½ to 7½ fathoms over even ground were obtained around that spot with no sign of shoal water.

Consequent on the foregoing, it is considered that the *Decapolis* grounded on the spit about 2 miles north-west of Look-out point, and the 2½ fathoms shoal has been removed from the Admiralty Charts.

NOTE.—Cape Flattery summit in line with the red beacon on Sand cay (about 2½ miles south-east of Look-out point), bearing S. 38° E., leads eastward of the shoal ground off Look-out point ; and end of range in line with Round hill, bearing S. 82° W., leads 4 cables northward of it.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[First Publication.]

NOTIFICATION No. 208Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 127).

JAPAN.

SIMONOSEKI STRAIT—WESTERN ENTRANCE.

Fixed light on Narusi rock.

THE British Admiralty has given notice (No. 415 of 1889) that on 21st September 1889 a light would be exhibited from the beacon (which has been rebuilt during the present year) on Narusi-rock, north side of western entrance to Simonoseki strait :—

The light is a *fixed* white light, visible from the bearing of S. 86°E., through north, to S. 48° W. ; it is elevated 17 feet above high water, and should be seen in clear weather from a distance of three miles.

The beacon, constructed of stone and circular in shape, is painted white.

Position, lat. 33° 54′ 45″ N, long. 130° 54′ 50″ E.

NOTE—The light is kept burning day and night by automatic arrangement without the constant attendance of a keeper. Should the light be extinguished by accident, there may be some delay in re-lighting it.

(*The bearings are Magnetic, and are given from seaward. Variation 4° Westerly in* 1889.)

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[First Publication.]

NOTIFICATION No. 209Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 129).

ARABIAN SEA.

BOMBAY COAST.

"Chaldea Rock" buoy placed in position.

WITH reference to Notice to Mariners, No. 106, dated 26th October last, the Collector of Salt Revenue, Bombay, through the Director of Indian Marine, has given notice that the *Chaldea Rock* buoy was put in its position on the 3rd ultimo.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 28th December* 1889.

[Second Publication.]

NOTIFICATION No. 205Mne.

The 24th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 128).

BAY OF BENGAL.

BURMA COAST.

Position of a water-logged Burmese boat—dangerous to navigation.

A TELEGRAPHIC communication has been received from the Port Officer of Rangoon that the Commander of the Government steamer *Canning* passed a Burmese boat, water-logged, South 55° East, 8 miles from Krishna light-vessel. Ship-masters are cautioned accordingly.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 23rd December* 1889.

[Third Publication.]

NOTIFICATION No. 196Mne.

The 16th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 119).

BAY OF BENGAL.

ORISSA COAST.

Beacons on the "Temple Tree," &c., re-erected.

IN continuation of Notice to Mariners, No. 118, dated the 7th instant, issued by this office, the Port Officer of False Point has given further information that the beacons on the "*Temple Tree*," and over the wreck of the "*Walter Morrice*," have been re-erected.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 14th December* 1889.

[Third Publication.]

NOTIFICATION No. 197Mne.

The 16th December 1889.—The following Notice to Mariners is publis r general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 120).

ARABIAN SEA.

GULF OF CUTCH.

The light at Cutch-Mandvi re-lighted.

WITH reference to Notice to Mariners, No. 105, dated the 26th October last, issued by this office, the Government of Bombay have given notice that the light at Mandvi, Cutch, will be re-lighted on the 21st December 1889. The new light is a 4th order holophotal revolving white light, group flashing, giving three flashes at short intervals every 30 seconds. It is placed on the old Tower, and will be visible at the same distance as the old light, viz., 18 miles.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 14th December* 1889.

[Third Publication.]

NOTIFICATION No. 198Mne.

The 16th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 121).

BAY OF BENGAL.

ORISSA COAST.

A Nun buoy placed in the North Channel, Dhamra river (entrance).

A NUN buoy has now been placed in the North Channel, Dhamra river (entrance), to mark the position of the E. buoy which is reported adrift.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 14th December* 1889.

[Third Publication.]

NOTIFICATION No. 199Mne.

The 16th December 1889.—The following Notice to Mariners is published for general nformation.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 122).

INDIAN OCEAN.

AFRICA—EAST COAST.

Declaration of Conclusion of the Blockade of Zanzibar.

IN continuation of Notice to Mariners, No. 100, dated the 17th October last, issued by this office, the following extract from the *Calcutta Gazette* of the 11th instant is republished for general information:—

In accordance with instructions received from our respective Governments, and in the name of His Highness the Sultan of Zanzibar, we, the Admirals commanding the British and German Squadrons in East African Waters, and the Commander of the Italian Man-of-War "*Staffetta*," hereby declare that the declaration of Blockade against the importation of munitions of war and the exportation of slaves on this coast between 2·10′ south latitude and 10·28′ south latitude, published in Zanzibar on the 29th November last year, and commencing on the 2nd December following, to be annulled from noon on the 1st October next.

E. R. FREMANTLE,
British Rear Admiral.

G. PORCELLI,
Italian Commander.

In the name of the Chief of the Imperial German Flying Squadron.

VALETTE,
Corvette Captain Commanding,
H. M.'s S. "Carola."

Dated at Zanzibar, this 29th day of September 1889.

By order of His Majesty the Emperor, and in the name of His Highness the Sultan of Zanzibar, I declare that, notwithstanding the above said declaration, German ships of was will continue to give chase to slave craft under Arab Flags in East African Waters and bring them up.

Further I declare, that in accordance with my orders, and in conformity with the declaration of the Imperial German High Commissioner, that any importation of arms and material of war on the coast of the Mainland of Africa under German Administration is strictly prohibited.

Zanzibar, 29th September 1889.

In the name of the Chief of the Imperial German Flying Squadron.

VALETTE,
Corvette Captain Commanding,
H. M.'s S. "Carola."

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 14th December* 1889.

[Third Publication.]

NOTIFICATION No. 200Mne.

The 17th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 123).

BAY OF BENGAL.

BURMA COAST.

'Krishna Shoal' Light-vessel replaced in position.

IN continuation of Notice to Mariners, No. 116, dated 28th November last, issued by this office, a telegraphic communication has been received from the Port Officer, Rangoon, that the *Krishna Shoal* Light-vessel will be replaced in position on the 19th instant, and the temporary light-vessel now doing duty removed.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 16th December* 1889.

[Third Publication]

NOTIFICATION No. 201Mne.

The 17th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 124).

CHINA SEA.

SINGAPORE—NEW HARBOUR.

The Bell Buoy on the Ajax Shoal replaced by a Light-ship.

THE following Hydrographic Notice issued by the Master-Attendant, Straits Settlements, dated Singapore, 18th November 1889, is republished for general information :—

On and after the 1st February 1890, the Bell Buoy on the Ajax Shoal in Salat Sinki, or western approach to the New Harbour of Singapore, will be replaced by a Light-ship exhibiting a white revolving light, showing a flash every half minute, visible ten miles in clear weather, and elevated 38 feet above the sea. The Light-ship will be painted yellow with the word *Ajax* in white letters on a black ground painted on her sides ; a caged ball painted red will be shewn at the mast-head.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 16th December* 1889.

CIVIL MEDICAL DEPARTMENT, BENGAL.

No. 11646, *dated* 28*th December* 1889.—Assistant Surgeon Ganes Chandra Mitra, Resident Assistant Surgeon, Campbell Medical School and Hospital, is allowed leave for 78 days under article 291 of the Civil Service Regulations, with effect from 1st February 1890.

No. 11648, *dated* 28*th December* 1889.—Assistant Surgeon Durlabh Chandra Datta, a supernumerary at the Presidency, is appointed to act as Resident Assistant Surgeon, Campbell Medical School and Hospital, during the absence, on leave, of Assistant Surgeon Ganes Chandra Mitra.

No. 11655, *dated* 28*th December* 1889.—Assistant Surgeon Kali Prosanno Chowdry, in medical charge of the Charitable Dispensary at Burdwan, is allowed leave for one month and fifteen days under article 291 of the Civil Service Regulations.

No. 11657, *dated* 28*th December* 1889.—Assistant Surgeon Kasi Nath Ghosh is appointed temporarily to have medical charge of the Charitable Dispensary at Burdwan during the absence, on leave, of Assistant Surgeon Kali Prosanno Chowdry, or until further orders.

A. HILSON, M.D.,
Inspector-General of Civil Hospitals, Bengal.

EDUCATION DEPARTMENT, BENGAL.

Prize Essay for Native Ladies.

THE following subject has been selected for Babu Brajamohan Dutt's Prize of Rs. 40 for the year 1889-90:—

"The present condition of Bengali Women."

The conditions for the award of the prize are—

(1) That the competition be open to all educated women, being natives of Bengal, without regard to age.

(2) That the prize be given for an essay, to be written in either Bengali or Sanskrit.

(3) That the essays be sent to the Central Text-Book Committee for adjudication within six months of the date of advertisement.

(4) That each essay be accompanied by the written declaration of the husband, parent, or guardian of the competitor that, to the best of his belief, she has received no assistance of any kind, direct or indirect, in writing the essay.

Candidates are requested to send their essays, not later than the 30th June 1890, to the Secretary to the Central Text-Book Committee, Office of the Inspector of Schools, Presidency Circle, Calcutta. The envelope containing the essay should be superscribed "Brajamohan Dutt Prize Essay." The name of the successful competitor will be published in the *Calcutta Gazette*.

The winner of the prize in any year may, if she pleases, again compete. If she is adjudged to have sent in the best essay in such subsequent competition, her name will be published in the *Gazette*, but the prize will be awarded to the next eligible candidate.

No prize will be awarded if, in the opinion of the judges, the best essay sent in is not such as to deserve a prize.

A. CROFT,
Director of Public Instruction.

The 28*th December* 1889.

NOTIFICATIONS OF THE BOARD OF REVENUE.

No. 1494B.

NOTICE is hereby given that the First Sale of Opium, the Provision of 1887-88 will be held at the Government Opium Sale-room, No. 2, Bankshall-street, on Monday, the 6th January 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. They may be ascertained by reference to the Notification issued on the 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Board of Revenue.

3rd.—The latest dates for deposit and clearance will be the 11th and 21st January 1890, respectively, that is to say, no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 11th January 1890, and no Bank of Bengal Receipts in full payment of lots will be accepted after 3-30 P.M. of Tuesday, the 21st January 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the Opium manufactured at the Patna and Ghazeepore Factories will be brought to sale during the next year about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so :—

DATES.		Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Monday, 3rd February	1890 ...	2,250	2,500	4,750
On or about Monday, 3rd March	„ ...	2,250	2,500	4,750
On or about Wednesday, 2nd April	„ ...	2,250	2,500	4,750
On or about Thursday, 1sth May	„ ...	2,250	2,500	4,750
On or about Monday, 2nd June	„ ...	2 250	2,500	4,750
On or about Wednesday, 2nd July	„ ...	2,250	2,500	4,750
On or about Monday, 4th August	„ ...	2,250	2,500	4,750
On or about Monday, 1st September	„ ...	2.250	2,500	4,750
On or abont Wednesday, 1st October	„ ...	2,250	2,500	4,750
On or about Monday, 3rd November	„ ...	2,250	2,500	4,750
On or about Monday, 1st December	„ ...	2,250	2,500	4,750
Total	...	24,750	27,500	52,250

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L. P., *Fort William, the 3rd December* 1889.

No. 1562B.

CUSTOMS.
HON'BLE F. B. PEACOCK.

THE following rules, framed by the Board of Revenue under Sections 9 and 105 of the Sea Customs Act VIII of 1878, for regulating the removal of salt warehoused at Chittagong to be re-warehoused at Naraingunge, having received the sanction of the Lieutenant-Governor, are published for general information.

BOARD OF REVENUE, L.P.,
Fort William, the 18th December 1889.

K. G. GUPTA,
Offg. Secretary.

1. When any owner of salt warehoused at Chittagong intends to remove it under section 105 for the purpose of being re-warehoused at Naraingunge, an application in writing, specifying the name, tonnage, and master's name of the vessel intended to convey the salt shall be made to the Collector of Customs, Chittagong, before 3 P.M. on the day prior to that on which it is proposed to remove the salt.

2. The salt shall be conveyed from Chittagong to Naraingunge by such vessels only as are approved by the Collector of Customs, Chittagong. Each vessel must carry a special pass in the annexed form under the signature of the Collector of Customs, Chittagong, covering the consignment of salt shipped in it.

3. The salt can only be removed from Chittagong under a bond to be executed by the bonder in conformity with the requirements of section 106 of the Sea Customs Act. The bond shall be in the form appended to these rules. Port clearance shall not be granted till after the due execution of the bond and after the quantities entered in the tally books have been found to agree with those entered in the manifest (or cargo books) of such vessel or vessels. Single bonds may be accepted for any quantity of salt not exceeding 20,000 maunds, and shall cover all the vessels being loaded with the quantity of salt for which the bond, in each case, is given, and such vessels must, in each case, be named in the bond. The number

and date of the bond are to be noted in the pass which accompanies each vessel, and in the copies of the pass retained by the Collector of Customs, Chittagong, and forwarded to the Collector of Customs, Naraingunge, respectively.

4. When the discharge of salt from the warehouse at Chittagong for conveyance under bond to Naraingunge is interrupted, or not completed, such quantity as has been actually delivered at the time of interruption shall be covered by a Customs boat-note. The salt so delivered must also be completely stamped over, and the hatches and all access to the hold must be sealed by Custom seals, to be examined by the night Customs Inspector, who must record his report of each such inspection.

5. The salt when placed on board must be stamped all over and conveyed under sealed hatches. Both the seals on the hatches and the stamps on the salt as reported on clearance by the Collector of Customs at Chittagong shall be separately examined and reported on by the Salt Darogah or other officer deputed by the Collector of Customs, Naraingunge, to the Collector of Customs, Naraingunge, on receipt of whose orders on the report the seals may be broken and the salt weighed.

6. The vessel on arrival at Naraingunge shall be anchored as close as possible to the ghât leading to the warehouse in which the salt is to be stored, or at the nearest moorings to such ghât.

7. The weighment of the salt shall be made in the presence of the Salt Darogah or other officer deputed by the Collector of Customs, Naraingunge, and a Customs peon shall invariably remain with the salt until the weighment shall have been completed. Weighment of the salt shall be made, as a general rule, on board the importing vessel. It will, however, be competent to the Board, on sufficient cause being shown, to permit the salt of any bonder to be weighed after removal to the shore, under such suitable precautions, to be taken at the sole expense of the bonder, as may be prescribed by the Collector of Customs, Naraingunge, and approved by the Board.

8. The owner of the salt shall be required to pay full duty on any difference between the quantity of salt weighed out of bond at Chittagong and the quantity weighed out of the brig or steamer at Naraingunge, less an allowance of one per cent. on the quantity weighed into each vessel for wastage during the passage, if such wastage actually occurs.

9. The salt shall be stored under proper supervision in a licensed warehouse immediately the weighment shall have been made. The door of the warehouse shall have two locks; the key of one lock (which must be a Chubb's lock) shall remain with the Darogah or other officer deputed by the Collector of Customs, Naraingunge, and the key of the other with the bonder's agent.

10. The bonder will be required to defray the cost of the preventive officers, and all charges attendant on the weighing of the salt, both at Chittagong and Naraingunge, such weighments being conducted as laid down in the Board's rules for weighing salt intended for bond at Chittagong.

11. Both Customs officers and the exporter's agent will be required to certify at the end of each day's weighment the correctness of the tally books for that day's work.

12. The working hours with regard to delivery and weighment of salt shall be from 6 A.M. to 3 P.M., or such other hours as may be fixed from time to time by the Collector of Customs, with the approval of the Commissioner.

13. If from any cause the weighments cannot be completed in one day, extra peons as may be considered necessary by the Collector of Customs shall be appointed to guard the salt, the cost being borne by the bonder.

14. The duty on the warehousing bill-of-entry shall be calculated on the whole quantity delivered on weighment from the vessel or vessels covered by the bond. As salt is cleared from bond, the quantity as entered in the clearance bill-of-entry shall be noted on the warehousing bill-of-entry and duty paid accordingly. When the last quantity of salt under each bond is cleared, the bonder shall make good the deficiency, if any, between the amount of duty originally entered in the warehousing bill-of-entry and the total amounts of duty paid, less an allowance on account of wastage, if such wastage has actually occurred, which shall not exceed 2½ per cent. on the whole quantity warehoused.

15. In addition to the above rules, the rules contained in sections VII and IIX of the Salt Manual shall apply generally to all salt conveyed under bond from Chittagong and warehoused at Naraingunge.

16. Before permission can be given to transport salt warehoused at Chittagong to Naraingunge, under bond, the bonder will be required to construct a suitable warehouse at Naraingunge, to be approved by the Collector and licensed by the Chief Customs authority, together with suitable accommodation for the warehouse establishment, also to be approved by the Collector. The bonder will also be required to enter into an agreement with the Collector to defray the cost to Government of the establishment noted in the margin, which will be appointed by the Collector for the guard and supervision of the warehouse.

	Rs.
1 Darogah on	50
2 Peons at Rs. 6 each ...	12
Cost per mensem ...	62

17. The rules contained in paragraphs 5, 11 and 13 of section II of the Salt Manual shall apply generally to the appointment and payment of this establishment, and to the construction and repair of the warehouse and establishment accommodation.

These rules shall come into force from 1st January 1890.

I

SPECIAL SALT PASS.

Under Bond No. , *dated*

NON-DUTY PAID.

Serial number
Bonder's name
Name of importing ship
Nationality
Master's name
Whence imported
Description of salt
Quantity despatched to Naraingunge in maunds
Date of despatch to Naraingunge
Whether from ship-board or golah
Name of vessel by which despatched
Master's name
Number of stamps on salt
Ditto of seals on hatches
Current for days
Date
Signature of Customs Collector, Chittagong

II

(To be forwarded by post to Collector of Customs, Naraingunge.)

SPECIAL SALT PASS.

Under Bond No. , *dated*

NON-DUTY PAID.

Serial number
Bonder's name
Name of importing ship
Nationality
Master's name
Whence imported
Description of salt
Quantity despatched to Naraingunge in maunds
Date of despatch to Naraingunge
Whether from ship-board or golah
Name of vessel by which despatched
Master's name
Number of stamps on salt
Ditto of seals on hatches
Current for days
Date of clearance from Chittagong
Signature of Customs Collector, Chittagong

III

(To be given to Masters of vessels by which despatched.)

N. B.—This pass must invariably accompany the salt in transit.

SPECIAL SALT PASS

Under Bond No. , *dated*

NON-DUTY PAID.

Serial number
Bonder's name
Name of importing ship
Nationality
Master's name
Whence imported
Description of salt
Quantity despatched to Naraingunge in maunds
Date of despatch to Naraingunge
Whether from ship-board or golah
Name of vessel by which despatched
Master's name
Number of stamps on salt
Ditto of seals on hatches
Current for days
Date of clearance from Chittagong
Signature of Customs Collector, Chittagong

Seal.

KNOW all men by these presents that we

are held and firmly bound unto the Secretary of State for India in Council in the sum of Rupees of lawful money of British India to be paid to the said Secretary of State in Council, his certain attorney, successors and assigns, for which payment to be well and truly made, we bind ourselves, our heirs, and representatives jointly, and every two of us bind ourselves, our heirs and representatives jointly, and each of us binds himself, his heirs, and representatives severally firmly by these presents sealed with our respective seals dated this day of one thousand eight hundred and eighty . And each of us the said doth hereby, for himself, his heirs, and representatives, covenant with the said Secretary of State in Council, his successors, and assigns, that if any suits shall be brought touching the subject-matter of this obligation or the condition hereunder written in any court subject to the superintendence of the High Court of Judicature at Fort William in Bengal other than the said High Court in its original jurisdiction, the same shall and may, at the instance of the said Secretary of State in Council, be removed into, tried, and determined by the said High Court in its extraordinary original jurisdiction.

The full amount of duty payable.

WHEREAS the said

is the of the ship or vessel called the of the burthen of tons, and the said vessel is laden with maunds of Liverpool Pungah salt non-duty paid transhipped* from , and ready to proceed on a voyage from the port of Chittagong to the port of in British India, for which port the said has declared that the said ship is bound: And whereas the Collector of Customs for the port of Chittagong has refused port clearance to the said ship, unless the said with two sufficient sureties should execute such a bond as above written with such condition as hereunder written, which he the said as principal and the said

(Owner, agent, master, or commander as the case may be.)

* In the case of salt removed from Bond substitute for the word "transhipped," "stored in a warehouse at Chittagong."

as his sureties have agreed to do: Now the condition of the above written bond is such that if the above bounden or some or one of them, their heirs, or representatives shall and do on or before the day of one thousand eight hundred and eighty produce or cause to be produced to the Collector of Customs for the port of Chittagong for the time being, or the officer in charge of the Custom House for the time being, a certificate from the proper officer of the said port of , to which the said ship has been declared bound as aforesaid of her safe arrival on or before the† day of next at the said port, and shall also faithfully observe and perform all the rules for the time being in force as to the removal of non-duty-paid salt under bond to from board ship (or from bond) at Chittagong, then the above written bond shall be void, otherwise to be and remain in full force and virtue.

Signed, sealed, and delivered

† The date to be fixed in respect of salt intended for the port of Naraingunge should be calculated in the manner following:—Within twenty-one days from the granting of the port clearance during the north-east monsoon (*i.e.* from the 16th September to 30th April), or within fifteen days from the date of the granting of port clearance during the south-west monsoon (*i.e.*, from the 1st May to the 15th September).

No. 1594B.

NOTICE is hereby given that the Second Sale of Opium, the provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall Street, on Monday, the 3rd February 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. They may be ascertained by reference to the Notification issued on the 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Board of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th February 1890, respectively, that is to say, no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 8th February 1890, and no Bank of Bengal Receipts in full payment of lots will be accepted after 3-30 P.M. of Tuesday, the 18th February 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the opium manufactured at the Patna and Ghazeepore Factories will be brought to sale during the year 1890 about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so :—

DATES.		Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Monday, 3rd March	1890	2,250	2,500	4,750
On or about Wednesday, 2nd April	,,	2,250	2,500	4,750
On or about Thursday, 1st May	,,	2,250	2,500	4,750
On or about Monday, 2nd June	,,	2,250	2,500	4,750
On or about Wednesday, 2nd July	,,	2,250	2,500	4,750
On or about Monday, 4th August	,,	2,250	2,500	4,750
On or about Monday, 1st September	,,	2,250	2,500	4,750
On or about Wednesday, 1st October	,,	2,250	2,500	4,750
On or about Monday, 3rd November	,,	2,250	2,500	4,750
On or about Monday, 1st December	,,	2,250	2,500	4,750
TOTAL		22,500	25,000	47,500

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L.P., CALCUTTA, *the 30th December* 1889.

Statement showing the Importation of Salt (private property) in bond and afloat on the River Hooghly, subject to Customs Duty, on the 15th December 1889.

DESCRIPTION OF SALT.	Government golahs.	Private golahs.	Afloat.	Total.
	Mds.	Mds.	Mds.	Mds.
Liverpool Punga	9,83,925	.....	1,01,121	10,85,046
Bombay Kurkutch	31,020	.....	.....	31,020
Arabian and Persian Gulfs Kurkutch and Muscat Rock ...	6,23,219	.....	50,247	6,73,466
Aden Kurkutch	86,794	.....	.....	86,794
Hamburg salt	21,611	.....	47,981	69,592
Total ...	17,46,569	.....	1,99,349	19,45,918

By order of the Board of Revenue, L. P.,

J. SCOBELL ARMSTRONG, *Collector of Customs.*

CUSTOM HOUSE, CALCUTTA, *the 27th December* 1889.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that a bye-election will be held, under section 27 of Act III (B. C.) of 1884, on Monday, the 24th February next, in Ward I of the Coomarkholly Municipality, for the purpose of filling the vacancy caused in that Ward by Baboo Dina Nath Mazoomdar having absented himself from six consecutive meetings of the Municipal Commissioners.

A. BHATTACHARJEE, *Personal Assistant, for Commissioner.*

COMMR.'S OFFICE, PRESY. DIVN., *Calcutta, the 27th December* 1889.

NOTIFICATION.

IT is hereby notified for general information that a bye-election will be held on the 20th February next in Ward No. III of the Goverdanga Municipality, in the district of the 24-Pergunnahs, for the purpose of electing a Commissioner for that Ward in the place of Baboo Dijaraj Chatterji, who has ceased to be a Commissioner for not attending six consecutive meetings.

A. BHATTACHARJEE, *Personal Assistant, for Commissioner.*

COMMR.'S OFFICE, PRESY. DIVN., *Calcutta, the 27th December* 1889.

NOTIFICATION.

IT is hereby notified for general information that the following gentlemen have been elected as members of the several Local Boards in the district of the 24-Pergunnahs :—

Local Boards.	Thanas.	Names of members elected.
ALIPORE	Sonerpore	... Baboo Narain Dass Chatterjea, M.A., B.L.
	Barripore	... „ Grish Chunder Dutta.
	Bhangore	... „ Moti Lall Roy Chowdry.
		„ Nil Kanto Chuckerbutty.
	Joynagore	... „ Hem Chunder Dhur.
	Tallygunge	... „ Nundo Lall Sarkar.
	Bistopore	... „ Mohendra Nath Singha.
		„ Tara Pada Ghose.
	Budge-Budge	... „ Rajkrishna Mandal.
BARASET	Baraset	... „ Amar Nath Bosu
		„ Hira Lall Mokerjea.
	Deygunga	.. Moonshi Alli Hafez.
	Nyehatty	... Syed Fuzlur Rubbi.
	Habra	... Koche Muddin Mandal.
		Baboo Bani Kanto Mokerjea.
BUSSIRHAUT	Bassirhaut	... Moonshi Buzlur Rohoman.
	Baduria	... „ Johoruddin Mondol.
		Baboo Hurish Chunder Mullick.
	Hushnabad	... Kabil Mondal.
DIAMOND HARBOUR	Diamond Harbour	... Baboo Nitai Chundra Dass.
		„ Hem Chunder Mitter.
	Bankipore	... „ Saroda Prosaud Dutta.
		Khoja Bux.
	Kulpi	... Baboo Baikunta Nath Bosu.
		Moonshi Kazem Ali.
	Mothoorapore	... Baboo Kamini Mohun Bapuli.
	Debipore	... „ Rusick Chunder Sikdar.
BARRACKPORE	Barrackpore	... „ Khettra Nath Chatterjea.
		„ Kedarnath Ghose.
		„ Kali Prosunno Banerjea.
		„ Nobin Krishna Ker.
DUM-DUM	Dum-Dum	... „ Troy Lukho Nath Haldar.

A. SMITH, *Commission*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the 28th December* 1889.

The Calcutta Gazette.

WEDNESDAY, JANUARY 1, 1890.

PART IA.

Orders and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following orders issued by the Government of India, in the Legislative Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATIONS.

Fort William, the 23rd December 1889

No. 31.—His Excellency the Governor-General, under the authority vested in him by the Statute 24 and 25 Vict., cap. 67, section 10, has been pleased to re-nominate the Honourable F. M. Halliday, of the Bengal Civil Service, to be an Additional Member of the Council of the Governor-General for the purpose of making Laws and Regulations, with effect from the 24th instant.

The 27th December 1889.

No. 32.—The Governor-General in Council has been pleased to accept the resignation, by Mr. K. M. Chatterjee, of the office of Reporter for the Indian Law Reports in the High Court, Calcutta, with effect from the 28th ultimo.

No. 33.—Mr. C. D. Panioty, Barrister-at-Law, has been confirmed in the appointment of Reporter for the Indian Law Reports in the High Court, Calcutta, *vice* Mr. Chatterjee, resigned.

S. HARVEY JAMES,
Secy. to the Govt. of India.

The following orders issued by the Government of India, in the Home Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to Govt. of Bengal.

NOTIFICATIONS.—ESTABLISHMENTS.

The 27th December 1889.

No. 757.—Sir C. H. T. Crosthwaite, K.C.S.I., resumed charge of the office of Chief Commissioner of Burma from Mr. A. P. MacDonnell, C.S.I., on the forenoon of the 9th December 1889.

J. P. HEWETT,
Under-Secy. to the Govt. of India.

JUDICIAL.

The 26th December 1889.

No. 1772.—The Governor-General in Council has been pleased to accept the resignation tendered by the Hon'ble Romesh Chunder Mitter of his office of Judge of the High Court of Judicature at Fort William in Bengal, with effect from the 1st January 1890.

No. 1776.—APPOINTMENT.—Under the provisions of the Act of Parliament 24 and 25 Vict., cap. 104, section 7, the Governor-General in Council is pleased to appoint Mr. Amir Ali, C.I.E., Barrister-at-Law, to act as a Puisne Judge of the High Court of Judicature at Fort William in Bengal, until Her Majesty's pleasure is known.

A. P. MACDONNELL,
Secy. to the Govt. of India.

The following order issued by the Government of India, in the Department of Finance and Commerce, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

STATISTICS AND COMMERCE.

CUSTOMS.

The 23rd December 1889.

No. 3028.—In exercise of the powers conferred by section 23 of the Sea Customs Act, 1878, the Governor-General in Council exempts from the export duty to which it is liable under the Indian Tariff Act, 1882, all rice exported by sea and entered outwards for either of the French ports of Pondicherry and Karikal, or passing by land into either of those settlements.

This exemption shall commence on the 23rd day of December 1889, and shall continue in force until the 31st day of March 1890, inclusive.

J. F. FINLAY,
Offg. Secy. to the Govt. of India.

The following orders issued by the Government of India, in the Military Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

Fort William, the 27th December 1889.

FURLOUGH AND LEAVE.

No. 1082.—The undermentioned officers have been granted extensions of furlough by the Secretary of State for India :—

* * * * * *

Surgeon-Major E. A. Birch, M.D., (M.C.) for three months.

JUDICIAL.

No. 1083.—G. G. O. No. 1066, dated the 20th December 1889, is republished for information :

Dated the 20th December 1889.

No. 1066.—The following draft of proposed rules under section 26, clause 21, of the Cantonments Act, 1889, is, as required by section 27 of that Act, hereby published for the information of persons likely to be affected thereby.

The draft will be taken into consideration on the expiry of three months from the date of this notification—

DRAFT RULES.

Under section 26, clause (21), and section 27, sub-sections (2) and (4), of the Cantonments Act, 1889, the Governor-General in Council is pleased to make the following rules, and to direct that they shall be general for every cantonment in British India :—

1. As many hospitals as may be necessary, within or without the limits of the cantonment, as the Cantonment authority with the concurrence of the District Magistrate may determine, shall be maintained at the expense, wholly or in part, of the Cantonment Fund, for the treatment of persons suffering from infectious or contagious disorders.
2. A medical officer, to be appointed in such manner as the Local Government may direct, shall be in charge of every such hospital.
3. A person admitted to such a hospital shall be treated gratuitously, and if such person is without means of support, and is either a resident of the cantonment or was admitted to the hospital on the request of the Cantonment authority, or of any officer of that authority, shall receive from the Cantonment Fund such subsistence allowance, not being less than the lowest allowance for the time being fixed by the Local Government under section 338 of the Code of Civil Procedure, as the Cantonment authority may determine.
4. If the medical officer for the time being in charge of a hospital maintained under these rules for the treatment of person suffering from any infectious or contagious disorder, certifies in writing to the Commanding Officer of the cantonment that any person is suffering, or is supposed by such medical officer to be suffering, from the disorder, and such person either refuses to go to the hospital, or, having gone to the hospital, leaves it before such medical officer has pronounced such person to be free from the disorder, the Cantonment Magistrate may, on the application of such medical officer, order such person to remove from the cantonment within 24 hours, and prohibit such person from remaining in or re-entering it without the written permission of such medical officer.
5. If a person having been prohibited under the last foregoing rule from remaining in or re-entering a cantonment, remains in, or re-enters the cantonment without such written permission as is mentioned in that rule, such person shall be punished with fine which may extend to fifty rupees, or with imprisonment for a term which may extend to eight days, for every breach of the said prohibition.

E. H. H. COLLEN,
Secretary to the Govt. of India.

The following Extraordinary issued by the Government of India, Foreign Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

Fort William, the 30th December 1889.

No. 4879*I*.

HIS ROYAL HIGHNESS THE PRINCE ALBERT VICTOR OF WALES is expected to arrive at Calcutta on Friday, the 3rd January 1890, between 3-30 and 4-30 P.M. A Royal Salute will be fired from the Ramparts of Fort William as soon as the vessel upon which His Royal Highness is embarked arrives off Prinsep's Ghât.

At 4 P.M. a deputation, consisting of the Chief Secretary to the Government of Bengal, the Military Secretary, and an Aide-de-Camp to the Viceroy will wait upon the Prince Albert Victor of Wales.

At 4-30 P.M. His Royal Highness, attended by his Suite, will land at Prinsep's Ghât, under a Royal Salute from the Ramparts of Fort William. The Salute will be fired as His Royal Highness steps ashore.

A Guard of Honour, furnished by the Calcutta Volunteers, will be drawn up at Prinsep's Ghât, and a Guard of Honour of Native Infantry will be drawn up outside the Colonnade. The Pontoon will be lined by the Calcutta Naval Volunteers.

The Viceroy, attended by His Excellency's Personal Staff, and the Lieutenant-Governor of Bengal, attended by His Honour's Staff, will receive His Royal Highness on the Pontoon.

The Commander-in-Chief, the Chief Justice of Bengal, the Bishop of Calcutta, the Members of Council, the Puisne Judges of the High Court of Bengal, and the Officers noted in the margin, will be in attendance at the landing stage. The Foreign Consuls in Calcutta will also be invited to attend at the same place. The Commander-in-Chief, the Chief Justice, the Bishop, the Members of Council, and the Brigadier-General Commanding, will be presented to the Prince Albert Victor of Wales by the Viceroy.

Additional Members of the Council of the Governor-General.
Secretaries to the Government of India.
Members of the Bengal Legislative Council.
The Commissioner of the Presidency Division.
Secretaries to the Government of Bengal.
The Head-quarters Staff of the Army in India.
Brigadier-General Commanding the Presidency District.
The Deputy Director of Indian Marine.
The Commander-in-Chief's Personal Staff.
The Chairman of the Corporation of the Town of Calcutta.
The Vice-Chairman of the Port Commissioners.
The Sheriff of Calcutta.

His Highness the Maharaja of Kuch Behar, G.C.I.E., Nawab Sir Sayid Hasan Ali Khan Bahadur, K.C.I.E., of Moorshidabad, Premier Noble of Bengal, and Maharaja Sir Jotindra Mohan Tagor, K.C.S.I., President of the Reception Committee, will be introduced to His Royal Highness by the Viceroy.

The Prince will then receive an address from the City of Calcutta.

Tickets will be issued by the Commissioner of Police to admit ladies and gentlemen to the enclosure, in such number as the space available will permit.

The route of the procession from Prinsep's Ghât to Government House will be across the Maidan by the Ellenborough Course to the top of the Red Road, and thence to the North-East Gate of Government House. It will be lined throughout by troops under the orders of the Brigadier-General Commanding the Presidency District.

A procession will be formed at Prinsep's Ghât in the following order:—

PROCESSION.

A Staff Officer, Presidency District.

A Troop of Native Cavalry.

The Officers of the District Staff on horseback.

The Calcutta Mounted Volunteers.

A Troop of the Viceroy's Body-Guard.

The carriage containing—

HIS ROYAL HIGHNESS THE PRINCE ALBERT VICTOR OF WALES.

HIS EXCELLENCY THE VICEROY.

An Equerry in immediate attendance upon His Royal Highness.

An Aide-de-Camp to His Excellency the Viceroy.

A Troop of the Body-Guard.

The Commissioner of Police will ride at the side of the Prince's carriage.

The Viceroy's carriages containing—

Sir Edward Bradford, K.C.S.I., and others of His Royal Highness's Suite.

The Viceroy's Staff and Guests.

of Cavalry.

The procession will enter the North-East Gate of Government House.

A Guard of Honour of British Infantry will be drawn up opposite the Grand Staircase of Government House.

The Body-Guard will form up on the north side of the road between the Grand Staircase and the North-West Gate.

When the Prince Albert Victor of Wales enters the North-East Gate, a Royal Salute will be fired from the Ramparts of Fort William. His Royal Highness will enter Government House by the Grand Staircase, and the ceremony of reception will be at an end.

Officers and Gentlemen wearing uniform will appear in full dress. Gentlemen not wearing uniform will appear in morning dress.

By order of the Viceroy and Governor-General in Council,

W. J. CUNINGHAM,
Offg. Secy. to the Govt. of India.

The Calcutta Gazette.

WEDNESDAY, JANUARY 1, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 28th December 1889.—It is hereby notified that, under section 19, Act III (B.C.) of 1885, Shah Atta Hossain has been elected by the members of the Sasseram Local Board in the district of Shahabad to be a member of the District Board of Shahabad, *vice* Mr. W. M. Reid, deceased.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th December 1889.—It is hereby notified for general information that, in exercise of the power vested in the Local Government by clause 2, section 80 of Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to exclude from the operation of the said Act the Chuprah dead-house road, east of the jail garden, lying within the limits of the Chuprah Municipality. The Lieutenant-Governor is also pleased to authorize the transfer of the road described above to the charge of the District Board of Sarun.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th December 1889.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Kumar Gopendra Krishna Deb, Joint-Magistrate, Sealdah, to be a Commissioner of the Manicktolla Municipality, in the district of the 24-Pergunnahs, *vice* Mr. Kedar Nath Roy, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th December 1889.—It is hereby notified that, under section 19, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint Mahamed Azzal Hug, to be a member of the Bhola Local Board, in the district of Backergunge, *vice* Mr. J. H. Mogose, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 30th December 1889.—It is hereby notified that under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Ambica Pershad to be a Commissioner of the Sitamarhi Municipality in the district of Mozufferpore, *vice* Adhicari Deo Narain Dass, who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 30th December 1889.—Whereas a notification, dated the 14th May 1889, was published at page 112, Part IB of the *Calcutta Gazette* of the 22nd idem, declaring the intention of the Lieutenant-Governor to extend the provisions of Part IX of Act III (B.C.) of 1884 to the Khoolna Municipality, and whereas no objection has been raised to the proposal within one month from the date of the publication of the above notification within the Municipality, it is hereby notified for general information that, in the exercise of the power vested in the Local Government by section 221 of the Act, and in accordance with the recommendation of the Commissioners of the Khoolna Municipality, made at a meeting, the Lieutenant-Governor sanctions the extension of Part IX of the Municipal Act to the portion of the Municipality defined below—

It is bounded on the North by the river Bhayrub and a line drawn from the first level-crossing to the Bengal Central Flotilla Company's docks; on the East by the river Rupsha; on the South by a line from the cart bridge over Shahebkhali and by the road through Tootpara joining and going along Babukhan's road, then passing by south of Anerulla Chaprasi's house and along the new road on the west of drain No 8, then along the road south of Mirzapur *mát*, and then along the road going westward to join west Bana Khamar road; and on the West by Boroda Roy's road and the Jessore road up to the first level-crossing.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 30th December 1889.—It is hereby notified that, under section 19, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint Mr. F. W. Duke, Joint-Magistrate, and Baboo Sadanand Jha to be members of the Bhagulpore Local Board, *vice* Mr. C. P. Caspersz, transferred, and Baboo Nunda Lal Misser, deceased.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 30th December 1889.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Munshee Sultan Mohomed to be a Commissioner of the Cuttack Municipality, *vice* Munshee Mohomed Atahar, who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 30th December 1889.—It is hereby notified that, under section 19, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the Deputy Inspector of Schools, Gya, to be a member of the Gya Local Board, *vice* Moulvie Muzhar Imam, deceased.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 30th December 1889.—In the notification, dated the 10th December 1889, published at page 272, Part IB, of the *Calcutta Gazette* of the 11th idem, containing the names of the elected and appointed members of the Banaghat Local Board—

For "Baboo Sri Krishna Roy" and
„ Prialall Choudhuri"
Read "Baboo Shiba Krishna Roy" and
„ Prio Lall Paul Chowdhury."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 30th December 1889.—It is hereby notified that, under section 24 of the Bengal Local Self-Government Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to re-appoint the Magistrate of Hooghly to be the Chairman of the Hooghly District Board, with effect from the 19th December 1889.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 31st December 1889.—It is hereby notified that, under section 11, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the following gentlemen to be members of the Local Boards in the district of Dacca mentioned against their names :—

Name of Local Board.	Name of Member.
Sudder	Baboo Rajani Kanta Choudhury. „ Kali Prosanno Ghose. Moulvie Mohamed Abdul Majid. „ Zaharal Huq.
Manikgunge ...	Baboo Baman Das Sen, L.M.S. Munshi Nural Islam. Baboo Soshi Bhusan Roy.
Munshigunge ...	Munshi Khobirulla. Choudhury Aminuddin. Baboo Tara Kanta Das. „ Prem Binoda Pal Choudhury. Munshi Mahamed Abdul Ghani.
Naraingunge ...	Moulvie Kumeruddin. Choudhury Khoaj Bux. Moulvie Fakiooddin.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 28th December 1889.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Dacca Municipality for a public purpose, viz., for extending the premises of the water-works in the town of Dacca, station Lalbag, zillah Dacca, it is hereby declared that for the above purpose a piece of land measuring, more or less, 9 cottahs and 5 dhoors of standard measurement, is required. The land is bounded on the North and East by the land of Gopi Ghose, Radha Nath Bose, Nunda Kumar Dutta and others, and on the South and West by a lane.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, JANUARY 1, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Beerbhoom will be put up for sale at the Collector's Office of that district on 10th January 1890 for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale

1	2	3	4	5	6	7	8	9
Towji Nos.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
73 Separate account No. 15.	Kirthat, pergunnah Khargram.	Rs. A. P. 1,931 10 0	.....	16g. 8kag 13til 8kara.	Jadab Lal Bondyopadyaya.	Rs. A. P. 97 15 0	Rs. A. P.	Rs. A. P. 2 15 10
75	Turigram, pergunnah Shahajadpur.	1,508 0 0	The whole	.....	Shekh Tarifullah ...	.....	21 9 0	.....
170 Separate account No. 293.	Akuni, pergunnah Swarupsinha.	1,832 10 0	.....	1a. 10g.	Purna Chandra Shome	171 12 8	.....	0 3 5

Beerbhoom Collectorate, the 5th November 1889. M. K. Bose, Deputy Collector in charge.

NOTICE is heerby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Jessore will be put up for sale at the Collector's Office of that district on Friday, the 10th January 1890, corresponding 27th Pous 1296 B.S., for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
192	Madhabpasa, pergunnah Isafpur.	Rs. A. P. 2,527 2 4	.....	Hissa No. 1	Raj Kumar Roy and others.	Rs. A. P. 305 6 3½	Rs. A. P.	Rs. A. P. 19 5 8½
196	Madhubpur, pergunnah Mohamedshahi.	339 1 7	.....	Do. No. 1	Bhuban Mohini Dasya and others.	129 10 5	.....	1 12 11
268	Srirampur, pergunnah Isafpur.	39 1 6	.....	Do. No. 1	Modhu Sudan Baksi and others.	638 1 0	.....	81 8 5
5296	Gonsadaspur, pergunnah Ukhra.	5,169 0 7	.....	Do. No. 6	Rama Churn Chowdhry.	25 2 2	.....	6 5 7

Jessore Collector's Office, the 2nd December 1889. A. Gupta, Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Backergunge will be put up for sale at the Collector's Office of that district on the 8th January 1890, corresponding with 25th Pous 1296 B.S., for the kist ending with 28th September 1889, for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
1408	Abu Mahamud taluq, pergunnah Bozergomedpur.	2,965 4 1	.....	6a. 1½g. 2kts. Ijmali share.	Lal Mahomed and others.	1,127 3 5½	.....	61 2 10½
1416	Bancharam Basu taluq, pergunnah Bozergomedpur, hissa 8 annas.	1,550 5 3	.....	2a. Ijmali share ...	Jogodiswari Chaudhurain.	190 9 8	.....	58 14 9
1445	Durgapur Toar, pergunnah Bozergomedpur.	820 4 10½	.....	10a. Ijmali share ...	Dakhina Kumar Roy Choudhury and others.	513 11 0½	.....	60 11 11½
1478	Gouri Kanta and Radha Kanta Bhattacharji taluq, pergunnah Bozergomedpur.	596 5 4	.....	6a. 2½g. Ijmali share...	Jogodiswari Chaudhurain.	228 4 7	.....	55 14 10½
1487	Jiban Krishna Sen, Hari Krishna Sen, Kamal Krishna Sen, Gobinda Deb Roy, Pran Manikya Chandra Roy, Durga Narayan Roy, and Mirtunjay Mukerjee taluq, pergunnah Bozergomedpur.	2,295 9 5½	.....	6a. 15½g. 1½kt. Ijmali share.	Jogodiswari Chaudhurain and others.	978 13 0½	.....	174 3 11
1578	Panioty Alexander taluq, pergunnah Bozergomedpur.	4,833 12 0½	.....	2a. Ijmali share ...	Ditto ditto ...	604 8 2½	.....	179 5 1½
1585	Radha Krishna Roy, Harananda Roy, Kali Dass Sidhanta taluq, pergunnah Bozergomedpur.	2,436 10 10	.....	5a. 14½g. 1½kt. Ijmali share.	Ditto ditto ...	874 11 7	.....	215 4 5½
1628	Ramna Bomna Toar Mohamed Safi taluq, pergunnah Bozergomedpur.	9,487 10 8	.....	8a. 15½g. 19 15 0½ 2kts. Ijmali share.	Golam Ahad Chowdhuri and others.	10,676 12 1	.....	2,044 15 4½
1633	Ram Raju Deo taluq, pergunnah Bozergomedpur.	2,062 2 11½	.....	2a. Ijmali share ...	Jogodiswari Chaudhurain.	257 12 2½	.....	76 8 7
1638	Ditto ditto ...	2,002 2 11½	.....	3a. share under separate account.	Taramoni Debya ...	386 10 7	.....	129 12 10
1651	Ramjan Bibi, Farjana Bibi and Sadurudain Kazi taluq, pergunnah Bozergomedpur.	565 6 7½	.....	2a. share under separate accounts.	Rahamjan Bibi ...	70 10 10	.....	14 14 8
1721	Pergunnah Chandra Dip, &c., hissa 2a. 13½g. 3kts.	13,916 5 10	.....	3a. 13½g. 1kt. share under separate account.	Mr. C. Panioty, executor to the estate of Mr. Theodaras Constantine Panoity and others.	3,189 2 9	.....	1,173 3 1
1723	Pergunnah Ditto, hissa 2a 16g 1kt.	14,464 10 1½	.....	Ditto.	Ditto	3,314 13 0	.....	2,416 15 0
1725	Mousah Chikni-Kandi, hissa 8½a., pergunnah ditto	3,382 8 1	.....	6a 17½g 2kt. Ijmali share.	Kali Mohan Sen and others.	1,479 8 7	.....	24 3 0
1727	Ditto 7a pergunnah ditto.	2,815 15 10	.....	5a 2½g 1½ Ijmali share.	Ditto.	902 2 11	.....	40 7 10
1739	Khajeh Nur taluq, hissa 5a 2½g, pergunnah ditto.	2,525 8 1½	Whole estate.	.....	Wasedennessa Khatoon, mother of Mahamud Ismail Khan Chaudhuri and others.	.....	675 11 3	.....
1764	Pergunnah Dakhin Shahabazpur, hissa 8a 1½g 1kt.	6,343 6 8	Ditto.	.....	Mr. A. Thomas and others.	.....	1,765 14 11	.....
1916	Tappeh Habili Silimabad, hissa 10g.	1,045 7 9½	.....	6½a Ijmali share.	Bama Sundari Gupta and others.	289 6 2½	.....	63 11 0
1994	Bishonath Sen taluq, pergunnah Khanja Bahadurnagore.	570 6 11½	Whole estate.	.....	Raj Kumar Sen and others.	.....	142 6 5	.....
2749	Durgaconeswar taluq, pergunnah Utter Shahabazpur.	1,037 11 2	.....	2a. 18½g. 1kt. share under separate account.	Abdul Aziz Chowdhuri	172 15 1	.....	66 2 2
3257	Pergunnah Ratandi Kalikapur, hissa 4 annas.	6,309 6 10	.....	½a. Ijmali share ...	Jogodiswari Debya ...	197 2 6	.....	30 12 8
3257	Ditto ditto ...	6,309 6 10	.....	15g. share under separate account.	Iswar Chandra Roy ...	295 13 1	.....	90 15 4
3258	Ditto ditto ...	6,309 6 10	.....	6½g. 2kt. Ijmali share	Jogodiswari Debya ...	181 7 4	.....	54 12 7½
3258	Ditto ditto ...	6,309 6 10	.....	½a. share under separate account.	Iswar Chandra Roy and others.	197 2 9	.....	76 6 3
3263	Pergunnah Sahazadpur, hissa 2a. 1½g.	581 7 6	Whole estate.	.....	Nohin Kishore and others.	.....	182 14 3	.....
3265	Tappeh Abdullapur, hissa 16a. 13g.	2,367 13 0	Ditto ...	.....	Durga Charan Pal and others.	.....	62 2 11	.....
4597	Chur Karnokati, pergunnah Chandradip.	1,226 0 3	.....	8a. 13½g. 1kt. Ijmali share.	Mrs. D. Panioty ...	281 2 5	.....	23 10 9
4757	Chur Madunpura, pergunnah Ratandi Kalikapur.	1,139 0 0	Proprietary right of whole estate.	.....	Rajendra Chandra Roy Chaudhury and others.	.....	639 0 0	.....
5211	Kumaria Chur, hissa 13a. 18½g. 1kt., pergunnah Utter Shahabazpur.	1,169 0 0	.....	8a. 8g. 2kt. 11½tl., Ijmali share.	Durga Prasanna Roy and others.	269 5 0	.....	18 6 1½
5211	Ditto ...	1,169 0 0	.....	1a. 11g. 2kt. share under separate account.	Krishna Kumar Das...	113 14 9	.....	1 1 3

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
5851	Nalgara Chur, pergunnah Dakhin Shahabazpur.	Rs. A. P. Revenue— 1,595 13 5 Malikana— 177 5 0 1,773 2 5	Howladari rights of whole estate.	.....	Raj Kumar Bhaduri...	Rs. A. P.	Rs. A. P. 1,664 6 3	Rs. A. P. .....
6412	Tappeh Azimpur and pergunnah Tahapur, Thak No. 1632, mouzah Darickur Lakshmipura *alias* surplus alluvial accretion to estate Khalsa Chur.	528 0 0	Proprietary right of whole estate.	.....	Abdul Majid Kasi Chowdhury.	.....	198 0 0	.....
6441	Tappeh Sultanabad, hissa 13½*g.* 12*k.* Gabadafibibi.	963 11 3	Whole estate.	.....	Syed Mozzum Ali Chowdhury and others.	.....	74 12 5	.....
6442	Ditto, hissa 1½*a.*, Salima Begum.	2,169 5 3	Ditto ...	.....	Ditto ditto ..	.....	168 4 3	.....
6443	Ditto, hissa 1*a.* 15*g.*, Syed Uzir Allal Hosani Choudhury.	2,529 11 5	Ditto ...	.....	Ditto ditto ...	.....	196 5 7	.....
6449	Ditto, hissa 7*g.*, Asimonessa Khatoon.	542 1 4	Ditto ...	.....	Ditto ditto ...	.....	7 0 11	.....
6454	Thak No. 1631 surplus alluvial accretion to Ilsa Chur.	865 0 0	Proprietary right of whole estate.	.....	Durga Mohun Dass and others.	.....	1295 B. S.— 865 0 0 Current year— 150 0 0 015 0 0	.....

Backergunge Collectorate, the 27th November 1889. H. SAVAGE, Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Chumparun will be put up for sale at the Collector's Office of that district on 4th January 1890, Saturday, corresponding with 28th Pous 1297 Fusli, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
777	Estate Roopoulia Khani, pergunnah Mehsi.	Rs. A. P. 631 10 4	Whole ...	.....	Babu Deo Nandan Singh and others.	Rs. A. P.	Rs. A. P. 66 4 0	Rs. A. P. .....
613	Estate Mehsi Khas, pergunnah Mehsi.	763 8 9	Do. ...	.....	Ditto	.....	61 11 0	.....
609	Estate Parsowni Khem, pergunnah Mehsi.	3,195 11 9	.....	12*a.*	Ditto	2,396 12 10	... ..	168 7 4
215	Estate Jogoulia, pergunnah Mehsi.	3,201 1 1	.....	3*a.* 9*p.*	Babu Deo Nandan Singh.	750 4 0	.....	210 7 6
283	Estate Dilamerpore, pergunnah Mehsi.		Whole ...	... ..				
	Village Dilamerpore ...		Do. ..	.....				
	Do. Rampur Jetha.		Do. ...	.....	Mussamut Malihuttunisa and others	576 13 3	.....	84 11 10
	Do. Halim Nagar *alias* Tarania.	698 8 0						
	Do. Bishunpore Ruthi.		.....	4*a.* 14*g.* 2*c.* ...				
	Do. Raghunathpore		.....	3*a.* 9*g.* 3½*c.* ...				
626	Estate Madhopore, pergunnah Mehsi.		.....					
	Village Bishumbharpore.		Whole ...	.....				
	Village Sersia Gunga.		Do. ...	.....				
	Do. do. Ganesh.	764 1 5	Do. ...	.....				
	Do. Halim Nagar *alias* Tarania.		Do. ...	.....	Ditto	647 11 8	.....	53 4 8
	Do. Bishunpore Ruthi.		.....	3*a.*				
	Do. Raghunathpore		.....	4½*g.*				

Chumparun Collectorate, Motihari, the 28th November 1889. A. W. B. POWER, Collector of Chumparun.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Dacca will be put up for sale at the Collector's Office of that district on 6th January 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
106	Pergunnah Nurullapur, hisya 10*a.* 13*gds.* 1*kr.*, Maulvi Abdul Ali.	2,199 4 11½	.....	Residue share ...	Maulvi Abdul Hye and others.	1,984 6 4	.....	443 8 9½
				Hisya 2*a.*	Mir Mahamud Muzaffer Hosen *alias* Milan Meah and others.	274 14 ½	.....	103 9 6
115	Pergunnah Pathpasar, Banameh Mohadev Mukhapadhya.	10,703 0 1½	.....	Residue share	Hara Sundari Chaudhurani and others.	8,973 5 4½	.....	838 12 8½
				Hisya 2*a.* 13*gds.* 1*kr.* 1*kt.*	Monindra Nath Mukhapadhya and others.	1,794 10 9	.....	561 9 6
193	Pergunnah Rajnagar, tuppeh Hoseinabad, Jowar Hyderabad, hisya Raj Krishna Sen, Khajat Pitraah market.	668 5 4½	Entire estate.	.....	Sukhmay Chandra Das and others.	.....	9 4 8½	.....
194	Pergunnah ditto, hisya Raj Krishna Sen, Chakla Nurpur Hurannessa.	708 9 11½	.....	Residue share ...	Husni Khanain and others.	261 13 6½	.....	78 0 11
197	Pergunnah Rajnagar, Chakla Nurpur Debi Prosad Sen.	633 10 5½	.....	Ditto	Chandrabali Bosu and others.	337 10 7½	.....	47 6 8½
				Hisya 2*gds.* 3*kr.* 3*dt.*	Durga Sunker Sen ...	5 7 9	.....	2 8 1
202	Taluk Brindaban Chandra Radha Kisore Sen, hisya 8*a.*	1,452 9 1	.....	Residue share ...	Nanda Kumar Guha ...	425 6 1½	.....	60 12 8½
				Specific land in Patanidhi and char Patanidhi.	Jogot Chandra Das ...	3 5 7	.....	0 14 0
				Hisya 1*a.* of mouzah Shirkhara.	Kailash Chandra Biswas.	9 8 9	.....	3 6 3½
203	Pergunnah Bikrampur, taluk Brindaban Chandra Radha Kishore Sen, hisya 8*a.*	1,452 9 1	.....	Residue share ...	Rup Lal Raghu Nath Das and others.	554 10 9½	.....	147 10 1½
406	Tuppeh Moheswardi, taluk Ram Krishna Sen.	583 5 4	.....	Hisya 3*gds.* 19½*til* ...	Wahed Bux and others	5 1 8	.....	0 3 2
				8*a.* 8*gds.* 10*kag* ...	Naba Durga and others.	114 6 0	.....	77 12 1½
				2*a.* 2*gds.* 3*kr.* 1*kt.* 12½*til.*	Podma Lochan Saha and others.	71 7 7½	.....	27 6 6½
				2*gds.* 2*kr.* 2*kag* ...	Kali Kumar Rai ...	4 6 0	.....	3 11 5
				3½*gds.*	Janu Khan and others.	5 13 4	.....	0 11 1
				5½*gds.*	Nitai Saha and others	8 11 10½	.....	0 15 7
				1½*gds.*	Nara Narain Rai ...	2 1 4	.....	1 6 7
				2*gds.* 2*kr.* 1½*kt.* ...	Krisna Chandra Das and others.	4 6 0	.....	2 2 1
				1*gd.* 3*kr.* 3*kag* 7*til* ...	Kali Charan Das and others.	3 4 3	.....	0 1 6
				3½ *gds.*	Naba Kisore Kur and others.	5 13 4	.....	3 8 6
				3*gds.* 1*kr.* 2*kag.* ...	Girish Chandra Chakraverty.	5 6 0	.....	3 10 6
569	Pergunnah Bikrampur, taluk Ram Gunga Bosu.	664 3 0	.....	Residue share ...	Sitamani and others ...	256 9 0	.....	60 8 0
4349	Pergunnah Pathpasar, taluk Golam Hosen Chaudhuri.	930 3 11½	.....	Ditto	Amirannessa Khatun, manager for Maulvi Abdul Hye and others.	359 1 9	.....	16 3 6
6551	Pergunnah Rajnagar, taluk Ram Dev Ghosh.	643 2 10	.....	Ditto	Kala Chand Saha and others.	535 1 8½	.....	10 1 1
8576	Kismut Turkev, within char Khodadadpur.	4,275 6 0	.....	Ditto	Raja Surjya Kanta Acharjya Chaudhuri.	3,310 14 9½	.....	10 2 1
8434	Char Buktabali ...	584 0 0	Entire estate.	.....	Pran Nath Pare and others.	.....	154 0 0	.....
8069	Char Fukurhati, within char Krishnapura.	519 0 0	Ditto ...	.....	Raja Rajendra Naran Rai Chaudhuri.	.....	6 14 0	.....
9084	Char Hargaz, within char Jalna Kamta.	2,623 0 0	Ditto ...	.....	Ram Chandra Sirkar...	.....	656 0 0	.....
9101	Char Tilli, within char Mirsapur.	1,187 0 0	Ditto ...	.....	Ramoni Mohun Rai and others.	.....	290 0 0	.....
9178	Pergunnah Kashimnagar, hisya 9*a.* 8*gds.* 2*kt.*, semindari Banameh Munshi Mahamed Hafes.	2,160 0 0	.....	Residue share ...	Obhoya Charan Chaudhuri, manager for Prossonno Kumar Rai and others.	1,060 7 10½	.....	348 14
9768	Pergunnah Bardakhat, Char Delwarpur.	4,196 0 0	Entire estate.	.....	Joharuddin Hyder and others.	.....	1,081 0 0	.....

L. HARE, Collector.

NOTICE is hereby given, under section 6 of Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of the 24-Pergunnahs will be put up for sale at the Collector's Office of that district on the 8th January 1890 for arrears of revenue which fell due on the 28th September 1889.

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
9	Pergunnah Magura, kismut Chitta and others.	318 1 7½	The whole	.....	Harish Chandra Roy Chowdhury and others.	.....	72 4 4	.....
15	Pergunnah Magura, mousah Kharibera and others.	4,091 4 2½	Ditto ...	.....	Hem Chundra Roy Chowdhury and others.	.....	230 4 6½	.....
53	Pergunnah Magura, kismut Rameshurpur and others.	3,287 3 0	.....	12*a.* 10*g.* 5*kag* 13½ residuary share.	Radha Mohan Mundal and others.	2,571 11 8	.....	23 3 8
64	Pergunnah Magura, kismut Banadroni and others.	6,842 4 9	.....	10*a.* 8*g.* 6*kora* 8 residuary share.	Prosunna Coomar Banerjee and others.	4,455 13 9	.....	128 1 2
67	Pergunnah Magura, kismut Futtepore and others.	1,383 1 9	.....	11*a.* 5½*g.* residuary share...	Kalli Kristo Mundal and others.	974 10 5	.....	72 12 9
97	Pergunnah Magura, kismut Bagi and others.	990 10 4	.....	9*a.* 11½*g.* residuary share	Ditto ...	618 2 0½	.....	52 10 7
98	Pergunnah Magura, mousah Moheshurpur and others.	553 3 11	The whole	.....	Ditto ...	.....	28 11 3	.....
99	Pergunnah Magura, kismut Mokundpur and others.	1,065 7 11	.....	13*a.* 18*g.* residuary share...	Ditto ...	924 10 10	.....	20 4 8
151	Pergunnah Baridbati, kismut Chak Hotoo-ria and others.	39,930 11 11½	.....	15*a.* 15½*g.* 12½ residuary share.	Trailakha Nath Biswas and others.	39,374 1 0½	.....	336 3 1
267	Pergunnah Medon Molla, mousah Soobo-dhepur and others.	633 2 9	The whole	.....	Woomesh Chunder Ray Chowdhury and others.	.....	28 1 9	.....
313	Pergunnah Moora-gacha, kismut Sakooya and others.	1,385 9 2	.....	8*a.* 17*g.* 2*kranti* residuary share.	Kalli Kristo Mundal and others.	767 1 10½	.....	62 14 4
314	Pergunnah Moora-gacha, kismut Hari-narayanpur and others.	12,248 10 1½	.....	9*a.* 10*g.* 4 residuary share	Radha Mohan Mundal and others.	7,346 13 9½	.....	180 0 6
315	Pergunnah Moora-gacha, kismut Raghu-nathpur and others.	10,256 13 10½	.....	10*a.* 16½*g.* residuary share	Kalli Kristo Mundal and others.	7,003 8 2½	.....	450 3 2½
322	Pergunnah Moora-gacha, mousah Aulum-pur and others.	10,565 0 2	.....	8*a.* 16*g.* 11*kag* 9-6 residuary share.	Harry Mohan Banerjee and others.	5,834 7 5½	.....	86 7 9
343	Pergunnah Ghur and others, mousah Rai-pur and others.	7,847 2 4½	The whole.	.....	Kalli Kristo Mundal and others.	.....	202 10 6½	.....
346	Pergunnah Balia, mousah Shantoshbati and others.	5,548 2 9	.....	15*a.* 14*g.* 2*kranti* residuary share.	Radha Mohan Mundal and others.	5,447 0 9	.....	189 7 2
348	Pergunnah Balia, kismut Panchaor and others.	2,136 15 4	.....	10*a.* 18*g.* 1*kori* 1*kranti* residuary share.	Manindra Mohun Mukerjee and others.	1,424 10 2½	.....	49 7 8
355	Pergunnah Balia, kismut Raipur and others.	2,762 0 7	.....	10*a.* 10*g.* 1*kora* 1*kranti* residuary share.	Kalli Kristo Mundal and others.	1,815 7 4½	.....	181 3 7½
385	Pergunnah Auseem-abad, hooda Rash Khalli and others.	19,424 8 1½	.....	Excluding shares separated under section 10 of Act XI of 1859, and under section 70 of Act VII (B. C.) of 1876, the residuary share paying a revenue of Rs. 10,055-1-6.	Apoorba Kumari Dasi and others.	10,055 1 6	.....	525 9 2½
385-3	Ditto ditto ...	19,424 8 1½	.....	Share separated under section 70 of Act VII (B. C.) of 1876, paying a revenue of Rs. 1,362-8-7½.	Upendra Kristo Mundal.	1,362 8 7½	.....	151 4 8
385-7	Ditto ditto ...	19,424 8 1½	.....	Share separated under section 70 of Act VII (B.C.) of 1876, paying a revenue of Rs. 1,362-8-7½.	Kalli Kristo Mundal	1,362 8 7½	.....	151 4 8
386	Pergunnah Auseem-abad, mousah Udayа-rampur and others.	1,724 9 8	.....	8*a.* 17*g.* 2*kranti* residuary share.	Kalli Kristo Mundal and others.	954 12 11½	.....	68 13 6
388	Pergunnah Balia, mousah Molowyapur and others.	8,327 4 6	.....	Excluding share separated under section 10 of Act XI of 1859, the residuary joint shares 12*a.* 6*kora.*	Ditto ...	6,271 7 8½	.....	364 4 8½
389	Pergunnah Balia, mousah Santoshpur and others.	9,434 9 7	.....	13*a.* 6*g.* 3*kora* 1*kranti* residuary share.	Ditto ...	7,867 1 3½	.....	477 15 1
390	Pergunnah Balia, mousah Gondho Baduli and others.	1,381 9 7	.....	11*a.* 5½*g.* residuary share	Ditto ...	973 9 3	.....	72 13 11
391	Pergunnah Moora-gacha, mousah Gomokhi and others.	3,538 8 6	.....	11*a.* 6*g.* 2*kranti* residuary share.	Ditto ...	4,087 8 7	.....	210 8 6
392	Pergunnah Auseem-abad, hooda Joychan-dipur and others.	8,313 7 8	.....	12*a.* residuary share ...	Saroda Dasi and others.	6,235 1 9	.....	345 0 10½
394	Pergunnah Auseem-abad, mousah Kissori-pur and others.	7,018 13 11	.....	10*a.* 10*g.* 1*kora* 1*kranti* residuary share.	Kalli Kristo Mundal and others.	4,672 8 11½	.....	428 14 8
395	Pergunnah Auseem-abad, taraf Madhub-pur and others.	14,657 13 11	The whole.	.....	Kailash Chunder Mundal and others.	.....	1,229 0 9	.....
401	Pergunnah Auseem-abad, hooda Ram-kristopur and others.	8,941 9 7	.....	10*a.* 10*g.* 1*kora* 1*kranti* residuary share.	Kalli Kristo Mundal and others.	5,877 3 10	.....	699 6 3½
403	Pergunnah Auseem-abad, taraf Pathor-beria and others.	5,143 3 3	.....	15*a.* 10*g.* residuary share...	Radha Mohan Mundal and others.	4,982 7 8	.....	150 12 8½
411	Pergunnah Magura, kismut Dhanya Khola and others.	3,519 11 10	The whole.	.....	Harish Chandra Roy Chowdhury.	.....	309 7 1	.....
1534	Pergunnah Magura, taraf Bantra and others.	14,681 6 4	.....	4*a.* 2*kora* 2*kranti* residuary share.	Soorat Mohini Dasi and others.	3,700 14 9	.....	233 14 6
1534-2	Pergunnah Moydu, taraf Bantra and others.	14,681 6 4	.....	1*a.* 3*g.* 3*kora* share ...	Sookhomoyi Dasi ...	1,089 10 2	.....	98 15 5

RAM CHURN BOSE, Deputy Collector, for Collector.

24-Pergunnahs Collectorate, Alipur, dated the 25th November 1889.

NOTICE is hereby given, under section 6, Act XI of 1859, and section 11 of Act VII of 1868, that the under mentioned mehals and tenures borne in the towji of the district of Noakhally will be put up to public and unreserved sale at the Collector's Office of that district on Saturday, the 11th January 1890, corresponding with 28th Pous 1296 B.S., for arrears of revenue and other demands like revenue recoverable under the law in force lue for kist 28th September 1889.

Towji No.	Name of pergunnah, mehal, and tenure.	Sudder jumma of entire estate or tenure.	Whether the whole estate to be sold or part thereof.	If only a share is to be sold, specification of such share or shares.	Names of proprietors or tenure-holders of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
1	2	3	4	5	6	7	8	9
45	Kismat Mohindra Narayan, pergunnah Sundeep, station Sundeep.	Rs. A. P. 0.57 1 11	Whole...	.....	Chundra Mohon Nandi	Rs. A. P.	Rs. A. P. 109 7 8	Rs. A. P. .....
194	Chur Rudrakhali, zemindari Moodafat Hossen, ghat Maghi, pergunnah Sundeep.	1,094 0 0	Do. ...	.....	Asanullah Choudhuri and Rahimullah Choudhuri Mutauli.	.....	318 0 0	.....
1551	No. 14, Gayer Makarari Howla Abdul Rahaman in chur Shulukya *alias* Sunya chur, pergunnah Bhoolooah.	595 6 11	Do. ...	.....	Wazuddin Maghi, son of Tomizuddin Bhuya of chur Shulukya, station Shudharam.	.....	130 2 6	.....
1671	No. 1, Gayer Makarari Meadi (temporary) Howla Anwaruddin, Kali Das, Madan Nath Moodafat, Mahammed Manwar, Mahammed Kalim, Akramuddin in chur Gazi, pergunnah Jagira.	1,667 4 6	Do. ...	.....	Isaf Maghi, son of Amiruddin, Hawladar of Chiladi, station Lukhipura.	.....	364 10 0	.....
1671	No. 3, Gayer Makarari Meadi (temporary) Howla Mahammed Manwar, Mahammed Kalim, Akramuddin in chur Gazi, pergunnah Jagira.	1,818 9 0	Do. ...	.....	Srimati Halimennessa Choudhurani, wife of Baksha Ali Choudhuri of Shahar Kashba, station Lukhipura.	.....	391 13 0	.....
1671	No. 45, Gayer Makarari Meadi Howla Sarforuddin, Kalimuddin, No. 279, Dakhal in chur Gazi, pergunnah Jagira.	555 9 7	Do. ...	.....	Ajamuddin Patwari, son of Shorafuddin Bhuya; Amirjan, wife of Kalimuddin, mother and guardian of Ameenullah, Fazil, minors of chur Lukhi Chuni, son of Panaullah; Matimesh, son of Ajamuddin; Kasim, son of Munshi; Kaimennessa, wife of Hasim; Moonsar Ali, son of Samaber Ali; Samadali, son of Khan Mahamed; Tazumaddin, son of Kagamuddin; Umed Ali, son of Ajamuddin: Manmeah, son of Mahamed Hanip; Abdul Meah, son of Amud Ali; Fazar Ali, son of Hasim; Srimati Halubernessa, wife of Himat Ali; Kadir Baksha, son of Kasim Sarkar; Janbaksha, son of Juman Ali; Amjad, Asabuddin, Munswar Ali, sons of Ajamuddin of chur Gazi, station Hatia.	.....	121 7 0	.....
1686	No. 1, Gayer Makarari Meadi Howla Polan Meah and others in chur Alexander, pergunnah Jagira.	540 13 7	Do. ...	.....	Polan Meah, son of Golam Ali Bhuya; Amiruddin, son of Ashak Maghi; Abdul Kareem Meah, son of Umed Ali of chur Gazi; Abdul Meah, son of Alabuddin; Aptar Ali, son of Tomu of chur Algi; Umed Ali Serang, son of Reazuddin Mullah of chur Gassain, station Hatia.	.....	118 2 0	.....
1686	No. 2, Gayer Makarari Meadi Howla Polan Meah and others in the said chur, pergunnah Jagira.	649 12 9	Do. ...	.....	Polan Meah, son of Golam Ali Bhuya; Amiruddin, son of Ashak Maghi; Abdul Kareem Meah, son of Anis Mazoomdar and Manoo Meah, son of Umed Ali of chur Gazi; Abdul Meah, son of Alabuddin; Aptar Ali, son of Tomu of chur Algi, station Hatia; Umed Ali Serang, son of Reazuddin Mullah of chur Gassain, station Hatia.	.....	142 3 0	.....
1662	No. 80, Gayer Makarari Meadi Howla Ajmatullah, Shubal Chandra Guho in chur Muzhdhora, pergunnah Sundeep.	708 14 7	Do.	.....	Uma Choran Guho, son of Rajkishore Guho of Mirjapur station, Hat Hazari, zillah Chittagong, at present of chur Maghdhora, station Sundeep.	.....	155 0 0	.....

Noakhally Collectorate, the 26th November 1889. MOHINI MOHUN CHAKRAVARTY, Dy. Collr. for Offg. Collr.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Maldah will be put up for sale at the Collector's Office of that district on 11th January 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrear due from it.
1	2	3	4	5	6	7	8	9
233	Tikoil, pergunnah Chandlai.	Rs. A. P. 1,851 13 0	Whole estate.	.....	Madhu Sudan Sanyal, Pran Nath Sanyal, Jadumoni Debi, Hari Nath Sanyal, Saroda Sundari Debi, Radha Madhab Choudhuri, Ram Narain Sircar and Radha Raman Dey, executors on behalf of Bata Kristo and Radha Kristo Choudhuri, minors, Guru Prasad Sanyal, guardian on behalf of Gobinda Bandhu Sanyal, Bhagabati Debya, Promoth Nath Choudhuri, and Radha Madhab Choudhuri.	Rs. A. P.	Rs. A. P. 50 8 0 Arrears of land revenue.	Rs. A. P. .....

Collector's Office, Maldah, the 30th November 1889. C. A. SAMUELLS, Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Chittagong, will be put up for sale at the Collector's Office of that district on the 31st January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:-

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P				Rs. A. P.	Rs. A. P.	Rs. A. P.
	Thanas Town and Ranzan—							
2 / 2	Taruf Ajoldha Ram, Fattiabad.	723 13 0	Yes: the whole estate is to be sold.	.....	Pran Kristo Das, Ram Shabak Das and others.	.....	49 8 8	.....
	Thanas Patya, Futtickcherry, Hathazari, and Satkania—							
25 / 51	Taruf Alearkhan ...	1,606 0 9	No: only shares are to be sold.	Separate accounts having been opened under Act XI of 1859, share No. 1, Asad Ali Khan; share No. II, Akber Ali Khan; share No. III of the remaining proprietors.	Share No. 1, proprietor Anwar Ali Khan.	408 7 5	.....	139 1 6
					Share No. 2, Asharaf Ali Khan and Jandah Bibi and others.	811 6 3	.....	240 14 2
					Share No. 3, Uzir Ali and Anwar Ali Khan.	326 3 1	.....	96 13 0
								476 12 8
	Thanas Futtickcherry, Hathazari, Patya, Ranzan, Town, and Zowargunge—							
28 / 54	Taruf Anandi Ram, Kanongoe.	849 6 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 10, Ram Joy Mohazan; share No. 11, Ram Joy Mohazan; share No. 13, Sudder Ali, and share No. 24, Bisham-bur.	Share No. 10, Kali Kumar, Durgakripa De.	12 11 0	.....	3 12 3
					Share No. 11, Kali Kumar, Durgakripa De.	14 14 0	.....	4 6 6
					Share No. 13, Asharaf Ali Aminolla, *alias* Gurun Meah.	11 0 0	.....	3 4 3
					Share No. 24, Kali Kumar and Durgakripa De.	53 15 5	.....	16 0 6
								27 7 6
	Thanas Hathazari, Ranzan, and Town—							
29 / 55	Taruf Anis Nasarat ...	791 12 0	Yes: the whole estate is to be sold.	.....	Sheik Karam Ali Meah.	.....	235 0 1	.....
	Thana Futtickcherry—							
37 / 64	Taruf Annundy Manollah	1,160 0 3	Ditto ...	.....	Nemai Charan Nandi, Gunashila.	.....	59 1 6	.....
	Thana Ramzan—							
63a / 391	Taruf Basanta Ram, Fateabad.	557 14 3	Ditto ...	.....	Anunda Mohon, Samad Ali and Sreemati Meherjan Bibi and others.	.....	31 1 0	.....
	Thanas Hathazari, Futtickcherry, Patya, Town, and Satkania—							
93 / 401	Kismut Balaram Sircar Baboit, taruf Sonoullah Khan.	1,003 11 3	Ditto ...	.....	Gris Chandra Rakhit and Guru Das Rakhi	.....	315 12 6	.....
	Thanas Bhatiari, Hathazari, Ramoo, Zorwargunge, Patya, and Satkania—							
116 / 389	Kismut Bissessari Baboit, taruf Gouri Sankur.	1,228 12 9	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 13 of the remaining proprietors.	Share No. 13, Mohabat Ali, Mahamed Hossen, Kali Charan and others.	404 13 11	.....	3 13 6
	Thanas Futtickcherry, Hathazari, Patya, Town, Satkania, and Ramoo—							
207 / 1283	Taruf Jubber Dust Khan...	6,538 11 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 1, Fazal Ahamud.	Share No. 1, Fazal Ahamud and Bazal Samad.	2,043 14 5	.....	299 13 5
	Thanas Futtickcherry, Hathazari, Patya, and Satkania—							
284 / 1467	Taruf Karim Khan ...	715 12 0	Yes: the whole estate will be sold.	.....	Anwar Ali Khan ...	.....	210 0 0	.....
	Thanas Patya and Satkania—							
286 / 1469	Taruf Komur Kulli ...	1,015 13 0	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 10, Dwarka Nath Kundo.	Dwarka Nath Kundo	68 10 5	.....	20 5 11
	Thana Ranzan—							
308 / 1552	Taruf Kanus Fernandez ...	1,640 5 3	Yes; the whole estate will be sold.	.....	Gris Chandra Roy Rakhit, Guru Das Roy Rakhit, and others.	.....	486 15 0	.....
	Thana Bhatiari—							
336 / 1751	Taruf Modun Chowdhury	638 6 5	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 4, Kushalya.	Shib Prosad Shukul	141 10 0	.....	43 0 9
	Thanas Hathazari and Ranzan—							
372 / 1589	Taruf Mohomad Shafi Nasir.	558 7 3	Yes: the whole estate will be sold.	.....	Susty Charan Sen, Bhairab Chandra Chowdhury, and others.	.....	155 12 8	.....

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
383 / 1900	Thana Zorwargunza— Taruf Mohomed Monohur	606 15 6	Yes: the whole estate will be sold.	.....	Sreemati Raiso Nissa Chowdhuria.	.....	198 0 0	.....
	Thanas Hathazari, Patya, Ranzan and Town—							
480 / 2433	Kismut Pran Kristo, Gopi Mohun, Guru Das and Haridas Roy Haboit, taruf Jugul Kissor Chowdhury.	3,353 14 6	No: only shares will be sold.	Separate accounts having been opened under Act XI of 1859, share No 2, Akhil Chandra Roy, share No. 6 of the remaining proprietors.	Share No. 2, Akhil Chandra Roy.	361 8 9	.....	113 4 4
					Share No. 6, Gris Chandra Roy, on behalf of minor Bhikon Chandra and Esof Ali and others.	1,329 2 8	.....	365 4 7
								478 8 11
	Thanas Futtickcherry, Patya, Hathazari, Ranjan and Town—							
481 / 2437	Taruf Pran Ballab ...	944 5 5	No: only a share will be sold.	Ditto, share No. 2, Mohesh Chandra Chowdhury.	Mohesh Chandra Chowdhury and Obhoy Charan Chowdhury and others.	118 0 6	.....	36 0 9
	Thana Ranzan—							
511 / 2536	Taruf Raghob Juggodish	615 0 3	Ditto ...	Ditto, share No. 12 of the remaining proprietors.	Gunga Das, Brejo Mohon and others.	138 2 1	.....	24 3 7
	Thanas Patya, Ranzan, Town, and Hathazari—							
517 / 2544	Taruf Ram Mohon Sen ...	884 11 3	Yes: the whole estate will be sold.	.....	Prasanna Kumar and Ali Meah.	.....	129 13 6	.....
	Thanas Chakaria, Patya, Ranzan, and Town—							
527 / 2554	Taruf Ram Sondur Kanongoe.	849 6 6	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2 of the remaining proprietors.	Srimoti Latifa Khatun.	681 6 6	.....	202 8 9
	Thanas Zorwargunge, Patya, Ranjan and Satkania—							
545 / 2565	Taruf Ram Kishore Kanongoe.	618 11 10	Ditto ...	Ditto, share No. 6, Ram Chandra Biswas and Bangshi Badon Biswas.	Mohesh Chandra Bhuttacharjee.	14 11 0	.....	4 5 9
	Thanas Patya and Town—							
569 / 2929	Taruf Sachi Roshun ...	752 11 0	No: shares will be sold.	Ditto, share No. 1, Sheik Sadak Ali; share No. 2, Keramut Ali.	Share No. 1, Sadut Ali Chowdhury.	83 5 3	.....	24 7 1
					Share No. 2, Anwar Ali Chowdhury.	188 2 9	.....	17 10 3
								42 1 4
	Thanas Bhatiari, Hathazari, Zowargunge, Patya, Ranzan, Town and Satkania—							
573 / 2603	Taruf Sachi Ram Kanongoe.	26 12 9	No: shares will be sold.	Separate account having been opened under Act XI of 1859, share No. 1, Lal Mohomed; share No. 16, Dwarka Nath Kanongoe; share No. 52, Ram Kumar Dey and others; share No. 63 of the remaining proprietors.	Share No. 1, Lal Mohamed.	4 14 3	.....	1 7 3
					Share No. 16, Dwarka Nath Kanongoe on behalf of Lakhi Narain Chackro.	4 4 6	.....	1 4 3
					Share No. 52, Ram Kumar Brejo Bashi	0 10 6	.....	0 2 11
					Share No. 63 of the remaining proprietors Assanullah Chowdhury and others.	298 0 3	.....	83 8 9
								86 7 2
	Thanas Hathazari, Patya, Ranzan and Town—							
590 / 2654	Taruf Shib Durga Sharan...	2,942 8 9	No: only a share will be sold.	Ditto, share No. 8, Shoobal Chandra Das.	Shoobal Chandra Das.	25 14 5	.....	7 9 5
	Thana Chakaria—							
606 / 2113	Taruf Sheremast Khan Chowdhuri.	527 6 6	Ditto ...	Ditto, share No. 1, Fazal-ahamed.	Share No. 1, Fazal-ahamed, Hazi Samad and others.	165 10 0	49 2 8	.....

N. B.—The amounts in columns 8 and 9 represent arrears, the latest day for payment of which was 25th September 1889.

Chittagong Collectorate, the 14th December 1889.

C. G. H. ALLEN, for Offg. Collector

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Balasore, will be put up for sale at the Collector's office of that district on 3rd January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
124	Araji Dograi, mousah Dolesahi, pergunnah Sensoot.	Rs. A. P. 6,941 6 6½	Share ...	8kr. 14b. 6g. 2k. 1kr. 8b.	Jaggarnath Boiriganjan, Radhakrushna Jena, Kapil Sahu and Maguni Sahu.	Rs. A. P. KR. B. G. B. 16 1 3 15 0 0 0	Rs. A. P.	Rs. A. P. 8 1 3½
				1p. 2kr. 10b. 4g. 3k.	Ramchandra Neka ...	54 9 1 0 0 0 0	.....	54 9 1
238	Thana Jahangir, pergunnah Dhamnagar	2,257 15 2	Do. ...	3a. 4p. 13kr. ...	Atal Behari De and Godabari Dei.	478 0 1 2 8 0 0	.....	215 8 1½
238	Ditto ...	2,257 15 2	Do. ...	2p. 2kr. 1b. 8g. 2k.	Sidhyanath Pati	24 12 7 0 0 0 0	.....	12 6 3
661	Thana Gobindpur, pergunnah Koondi.	761 15 11½	Do. ...	2a.	Choudhuri Raghunath Prosad Das.	95 3 11 0 15 0 0	.....	13 12 0
661	Ditto	761 15 11½	Do. ...	2a. 11p. 8b. ...	Vidyadhar Sahu ...	140 14 2 0 14 15 8	.....	20 14 3
661	Ditto	761 15 11½	Do. ...	6p.	Badyanath Nayak and Somnath Nayak.	23 12 11 0 15 15 0	.....	3 13 0
661	Ditto	761 15 11½	Do. ...	8a. 8b.	Sadasib Das, Brajamohan Das, Mohanprosad Das, &c.	382 15 8 0 12 1 10	.....	30 4 9
734	Thana Barunsingh, pergunnah Khejuri.	1,678 0 6	Whole ...	.....	Canunco Jaggar Nath Das Patnayak, himself and on behalf of Gopinath Das Patnayak, Radha Madhab Kar, &c.	.....	423 5 9	.....
823	Araji Payakali, mousah Brahmapur, pergunnah Talsabang, &c.	1,060 8 0½	Do. ...	.....	Tara Dei *alias* Tara Bai, Madan Mohan Das, Janardan Singh, &c.	.....	58 0 4½	.....
1135	Thana Gokulanandpur, pergunnah Katsahi.	2,870 10 11½	Do. ...	.....	Parbati Dasi, Bhagirathi Dasi, Jageswari Dasi and Choudhuri Dwarikanath Das Mahapater, &c.	.....	394 2 2½	.....
1104	Mehal Bedapal, pergunnah Shahabandar.	734 7 9	Share ...	11a. 3p.	Choudhuri Akhoy Narayan Ghose, Choudhuri Mohendra Narayan Ghose, &c.	515 13 9 0 2 0 0	.....	0 5 9
1531	Thana Darba, pergunnah Kaima.	559 3 8	Whole ...	.....	Choudhuri Trilochan Narendra Mahapater, Chintamoni Nayak and Bijaram Nayak, &c.	.....	9 14 0	.....
1031	Thana Madhabnagar, pergunnah Randiaorgara.	1,067 4 9	Share ...	1a. 3p. 2kr. 14b. 8g. 2k. 15b. 2g. 3k. 2kr.	Shamsunder Patnayak, Damodar Patnayak, himself and uncle and guardian of Krushna Chandra Patnayak, minor, &c.	84 7 6 0 0 2 0	.....	42 3 9
229	Thana Malda, pergunnah Dhamnagar.	1,710 4 0	Do. ...	6g. 3k. 8b. 5g. ...	Badyanath Prosad Dutt and Sudam Charan Dutt, &c.	36 5 0 0 0 0 0	.....	18 2 6

Balasore Collectorate, the 2nd December 1889. R. CORNISH, Collector.

NOTICE is hereby given that the proprietary right of Government, as specified in the conditions of sale below, to the undermentioned estate, situate in the district of Bankoora, will be put up to sale at the Bankoora Collectorate on 13th January 1890, corresponding 1st Magh 1296 B.S.

The purchasers will be subject to the following conditions of sale:—

Conditions of Sale.

1*st*.—The estate to be sold to the highest bidder above the upset price, which will be fixed by the Collector at the time of sale. The purchaser of this estate will be considered as the proprietor of the estate, and the entire proprietary right of Government in such estate will be transferred to him subject to the revenue fixed in perpetuity.

2*nd*.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings, and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3*rd*.—If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid down at once.

4*th*.—If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the estate to be again put up to sale at the risk of the defaulting purchaser, after issue of advertisement, as in the case of original sale:—

Number on the district roll.	Name of estate and pergunnah.	Approximate area in acres.	Government revenue assessed.	REMARKS.
		A. R. P. S.YD. S.FT. S.IN.	Rs A. P.	
1022	Sadistar Puraton Rastab, pergunnah Bishenpore.	1 2 14 11 4 72	4 13 0	

Bankoora Collectorate, the 7th December 1889. W. V. G. TAYLER, Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Monghyr will be put up for sale at the Collector's Office of that district on 28th January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.		*I.—Permanently-settled estates.*		Rs. A. P.	Rs. A. P.	Rs. A. P.
13	Jose, pergunnah Salemabad.	613 14 0	.....	2a. 13g. 6c. 13b. ...	Kuldip Narain Singh and others.	102 5 0	.....	104 6 0
18	Ditto ...	613 14 0	.....	3a. 3d. 18c. 6f. 14r. ...	Ramman Singh and others.	122 10 0	.....	74 10 6
283	Belchhi, pergunnah Amerthu	641 1 0	.....	2a. 8d.	Gopal Singh and others ...	96 3 0	.....	10 1 0
283	Ditto ...	641 1 0	.....	3a.	Ramadheen Rai and others.	120 1 0	.....	29 1 0
602	Parora, pergunnah Ballia.	830 15 0	.....	1 dam	Lachmi Kumri	2 10 0	.....	0 2 0
602	Ditto ...	830 15 0	.....	1a. 11d. 1c. 1d. 4r. 2p.	Lal Mohun Mullik and others.	132 2 0	.....	1 5 6
639	Sultanpur Tetri, pergunnah Ballia.	893 0 0	.....	11a. 9d 1k.	Sheik Tohower Hossain and others.	639 5 0	.....	131 15 0
804	Taluqa Tulsipur and others, pergunnah Malki.	932 10 0	.....	1a. 18d. 2d.	Manohar Lal and others...	110 15 3	.....	52 13 9
830	Ganga Persad, pergunnah Malki.	588 3 0	.....	2a. 1c. 1k. 0r.	Reet Lal Singh and others	121 2 0	.....	61 5 3
1451	Bhowanandpur *alias* Ramdearl, pergunnah Malki.	1,166 13 0	.....	1a. 5g. 1c. 3d.	Shew Dyal Singh and others.	91 9 0	.....	21 14 0
1451	Ditto ...	1,166 13 0	.....	5g. 2c. 8d. 2k. 5f. ...	Mussamut Amrito Kumri and others.	20 15 0	.....	3 15 0
1451	Ditto ...	1,166 13 0	.....	16g. 2c. 6d.	Bhojraj Singh and others	60 12 0	.....	14 11 0
2305	Chuckangra, pergunnah Amerthu.	1,063 14 0	.....	1a. 15d. 11c. 2b. 4f. 8h.	Shah Mohamad Hossain and others.	120 7 0	.....	29 14 0
2317	Imannagar, pergunnah Amerthu.	513 14 0	Whole...	.....	Syed Tasaduk Hossain and others.	.....	0 13 6	.....
2746	Halsi, pergunnah Amerthu.	1,504 1 0	.....	13a. 10d. 5c. 2b. ...	Beni Singh and others ...	1,282 0 0	.....	220 14 0
2779	Mahiuddinagar Karik, pergunnah Amerthu.	564 11 0	.....	3a.	Kokil Singh and others ...	95 3 0	.....	11 14 0
2779	Ditto ...	564 11 0	.....	2a.	Rohim Singh and others...	120 9 0	.....	0 14 0
5289	Mohamedpur Fataha, sali and dakhil, pergunnah Emadpur.	706 0 0	.....	12a.	Moulvi Asrafuddin Ahmad and others.	531 0 0	.....	18 14 9
				II.—Temporarily-settled estates.				
1483	Akberpur Harari, pergunnah Malki.	783 13 0	.....	14a.	Kharag Singh and others	685 14 0	.....	60 8 8

Monghyr Collectorate, the 4th December 1889. T. E. COXHEAD, Officiating Collector.

NOTICE is hereby given that the proprietary right of Government, as specified in the Conditions of Sale below, to the undermentioned estate situate in the district of Maldah, will be put up to sale at the Maldah Collectorate on 11th January 1890, corresponding with 28th Pous 1296 B.S.

The purchasers will be subject to the following conditions of sale—

Conditions of sale.

1*st*.—The estate to be sold to the highest bidder above the upset price, which will be fixed by the Collector at the time of sale. The purchaser of this estate will be considered as the proprietor of the estate, and the entire proprietary right of Government in such estate will be transferred to him, subject to the revenue fixed in perpetuity.

2*nd*.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3*rd*. If the amount of purchase money do not exceed Rs. 100, the whole amount to be paid down at once.

4*th*.—If the amount of purchase money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the estate to be again put up to sale at the risk of the defaulting purchaser, after issue of advertisement, as in the case of original sale.

Number on the district roll.	Name of estate and pergunnah.	Approximate area in acres.	Government revenue assessed.	REMARKS.
		A. R. P.	Rs. A. P.	
98	Kismut Jot Kasturi, pergunnah Kotuali.	62 0 12	50 0 0	

Collector's office, district Maldah, the 15th November 1889. C. A. SAMUELLS, Collector.

NOTICE is hereby given, under sections 6 and 12, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Mozufferpore will be put up for sale at the Collector's Office of that district on 7th of January 1890, corresponding with 1st of Magh 1297 Faslee, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue due on the 28th September 1889.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder Jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
16	Deorah Sobjan, pergunnah Akbarpore.	522 15 6	.....	2a. 2g. 3c. 18r.	Behari Thakur and others	71 6 0	.....	15 15 6
16	Ditto ...	522 15 6	.....	1a. 11g. 1c.	Mossamat Chaurasee Kuar	51 0 6	.....	0 15 6
16	Ditto ...	522 15 6	.....	6a. 19r.	Gangaram Thakur, Nand Singh and others.	197 14 0	.....	23 3 0
261	Ibraheempore, pergunnah Barail.	535 0 9	.....	12a. 5g. 1c. 2d. 5r. ...	Balsakhee Lal	410 2 9	.....	128 2 3
261	Ditto ...	535 0 9	.....	3a. 14g. 2c. 2k. 15r. ...	Chuturbhuj Sahai	124 14 6	.....	39 1 0
907	Akhta, pergunnah Habree Chumparun.	1,173 5 9	.....	3a. 12g. 2c. 2k. 12r. ...	Baboo Salookat Deo Narain Singh and others.	266 8 1	.....	74 14 8½
921	Busidpore Dowlat, pergunnah Bubree Chumparun.	4,450 12 3	.....	6g. 2c. 2k.	Sheodeep Narain Singh and Laldeep Narain Singh.	92 11 9	.....	2 15 4½
921	Ditto ...	4,450 12 3	.....	8a. 1g. 1k. 1d.	Raj Coomar, Baboo Deo Nandan Singh and others.	2,240 13 2	.....	280 15 2
926	Bel, pergunnah Habree Chumparun.	510 6 5	.....	7a.	Baboo Bhogwat Prasad, Baboo Deo Nandan Singh and others.	223 4 3	.....	19 4 9½
995	Jhiktahi Basant Jogeewan, pergunnah Habree Chumparun.	887 9 7	.....	2a. 16g. 1c.	Ashrafful Nisa Begum and others.	150 12 2	.....	32 6 3½
996	Chiknowta, pergunnah Habree Chumparun.	3,311 4 10	.....	6g. 2c. 2k.	Sheodeep Narain	69 0 0	.....	2 2 6
996	Ditto ...	3,311 4 10	.....	6a. 1k. 1d.	Baboo Simbhoo Prasad, Chandika Prasad and others.	1,048 14 5	.....	332 8 1½
1075	Kuari Madan, pergunnah Baree Chumparun.	645 1 4	.....	6a. 8g. 1c. 1d. 15r. ...	Raja Sheo Raj Nandan Singh Bahadur.	258 11 3	.....	6 6 0
1075	Ditto ...	645 1 4	.....	7a. 6g. 2c. 2k.	Mossamat Janki Kuer and others.	295 10 7	.....	4 9 10
1122	Masowdha, pergunnah Babree Chumparun.	618 10 8	The whole estate.	.....	Rai Goodar Sahai	.....	34 13 5	.....
1270	Akhtiarpore Kanti, Top Bhotsala, pergunnah Bisara.	1,025 13 4	.....	6a. 15g. 1c. 15r. ...	Hajee Syed Mohammad Taqui Khan and others.	686 2 2	.....	27 12 4
2229	Banthu Harbans Chakla Garjowl, pergunnah Bisara.	1,912 3 3	.....	7g. 1c. 1k. 1d.	Ram Baks Thakur and Jangi Lal.	45 5 6	.....	2 10 0
2229	Ditto ...	1,912 3 3	.....	4g. 3c. 2k. 1d. 5r. ...	Harakh Singh Thakur and Dhanukh Dharee Thakur.	29 10 11	.....	9 11 11
2229	Ditto ...	1,912 3 3	.....	13g. 3c. 2k. 1d. 5r. ...	Lal Bihari Singh and Jangee Lal.	82 11 11	.....	49 15 7
2229	Ditto ...	1,912 3 3	.....	2g. 3c. 2k.	Raghu Nandan Singh and Janki Singh.	26 14 0	.....	6 5 0
2229	Ditto ...	1,912 3 3	.....	1a. 1g. 2c. 1k. 1d. ...	Ajodhia Singh and Prithivi Rai.	103 5 6	.....	27 5 9
2229	Ditto ...	1,912 3 3	.....	5g. 2c. 1d.	Ramanugrah Singh ...	39 2 4	.....	28 14 2
2236	Bariarpore Kandh, pergunnah Bisara.	828 10 11	.....	1a. 3g. 3c. 1k. 1d. 10r.	Gajraj Sahai and Mauraj Sahai.	61 13 3	.....	0 14 6
2236	Ditto ...	828 10 11	.....	10g. 2k. 1d.	Lachhmi Narain	40 11 2	.....	13 7 3
2236	Ditto ...	828 10 11	.....	13g. 2d. 10r.	Harbalabh Sahai, Roodar Singh and others.	33 13 7	.....	2 5 7
2236	Ditto ...	828 10 11	.....	10g. 1d.	Kulwant Rai	25 13 2	.....	4 5 3
2236	Ditto ...	828 10 11	.....	17g. 3c. 1k. 1d.	Goberdhan Lal and others	46 0 10	.....	5 8 10
2236	Ditto ...	828 10 11	.....	18g. 1c. 1k. 2d. 10r. ...	Sree Tiwaree...	47 10 0	.....	0 10 0
2236	Ditto ...	828 10 11	.....	1g. 1c. 2k. 5r.	Sree Tiwaree and Sodagar Tiwaree.	3 10 8	.....	3 10 8
2236	Ditto ...	828 10 11	.....	1g. 2k. 10r.	Debee Prasad	3 2 11	.....	3 2 11
2236	Ditto ...	828 10 11	.....	1a. 13g. 2k. 2d. 10r. ...	Jadoo Kuer, Sobhan Kuer and others.	98 1 0	.....	29 3 6
2239	Bahbalpore Chhorahee, pergunnah Bisara.	1,031 14 9	.....	1a. 11g.	Nag Narain	160 15 6	.....	44 15 6
2239	Ditto ...	1,031 14 9	.....	4a. 1g.	Balgobind Sahai	212 15 0	.....	39 14 0
2239	Ditto ...	1,031 14 9	.....	7g. 3c. 2k.	Jagdeep Sahai	40 4 0	.....	9 15 5
2239	Ditto ...	1,031 14 9	.....	6g. 2c. 1k.	Abdul Karim and Sherifunnissa.	38 10 10	.....	1 7 8
2455	Ghataro Protap, pergunnah Bisara.	1,139 11 9	.....	5g. 1c. 2k. 10r.	Sheo Sankar Sahoo and Thakur Prasad.	19 6 0	.....	0 9 6
2455	Ditto ...	1,139 11 9	.....	7g. 2c.	Khedoo Singh and Ajeet Narain.	26 11 6	.....	26 11 6
2455	Ditto ...	1,139 11 9	.....	12g. 2c. 2k. 1d.	Bachoo Lal and others ...	45 7 3	.....	14 9 7
2462	Lodipore, pergunnah Bisara.	763 5 7	.....	1a. 8g. 1c. 10r.	Sarabjeet Lal	55 7 11	.....	30 6 11
2462	Ditto ...	763 5 7	.....	1g. 2d. 5r.	Kalee Charan	6 3 3	.....	3 4 5
2462	Ditto ...	763 5 7	.....	2a. 18g. 2c. 1d. 4r. ...	Nand Lal and others ...	181 3 2	.....	56 1 9
2463	Niamatpore Sahtna, pergunnah Bisara.	664 5 11	.....	18g. 2c. 2d.	Dyal Narain Singh, Deo Nandan Singh and others.	52 1 3	.....	24 2 4
2463	Ditto	664 5 11	.....	18g. 1c. 1k. 2d.	Nandan Lal and others ...	51 7 5	.....	11 13 3
2485	Pojheea Basanta, pergunnah Bisara.	1,693 10 7	.....	11a. 17g. 2c. 1k. 1d. 10r.	Hira Lal Sahoo, Brij Mohan Lal Sahoo and others.	1,339 7 10	.....	27 14 10
2540	Rasulpore Wahid, pergunnah Bisara.	1,500 13 0	.....	15a. 17g. 1c. 2d. ...	Bhanuprasad Umrao Bahadur and others.	1,482 2 9	.....	67 4 11
2706	Majhowli, pergunnah Bisara.	3,107 6 9	.....	1a. 1g. 1k. 10r.	Sumran Thakur and others.	204 13 8	.....	28 13 6

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
3478	Uphrowl, pergunnah Hajeepore.	1,435 7 9	.....	6a. 1c. 2d. 5r.	Ghanshum Singh	519 14 0	.....	162 7 1
3478	Ditto ...	1,435 7 9	.....	2a. 19g. 3c. 1k. 7r. 8p.	Rajkumar Singh and Bibi Najeeban.	269 13 2	.....	65 3 1
3494	Biddupore, pergunnah Hajeepore.	1,707 3 3	The whole estate.	.....	Ram Krishna Panday and others.	.....	320 4 9	.....
3504	Babhangawan, pergunnah Hajeepore.	764 15 9	.....	8a.	Bhagwan Sahai and Jagarnath Sahai.	382 7 10½	.....	41 10 1
3532	Jahangirpore Sham, pergunnah Hajeepore.	565 10 11	.....	4a. 10g. 1c. 1k. 12r. 6p.	Phekoo Lal Chaudhry, Sri Dhar Lal and others.	382 7 10½	.....	41 10 1
3534	Jasrapore Balia, pergunnah Hajeepore.	735 10 11	.....	5g. 1k. 1d. 14p.	Chutursal Singh	11 12 0	.....	2 2 4
3534	Ditto ...	735 10 11	.....	1a. 19g. 3c. 2d.	Darsan Rai	91 8 9	.....	35 7 6
3534	Ditto ...	735 10 11	.....	16g. 2c. 6r. 6p.	Naunidh Rai	37 15 4	.....	3 7 0
3534	Ditto ...	735 10 11	.....	10g. 2c 1k.	Jai Ram Singh	24 8 0	.....	6 3 9
3534	Ditto ...	735 10 11	.....	2a. 3g. 1k. 6r. 2p. ...	Manorath Singh	99 1 6	.....	1 10 0
3534	Ditto ...	735 10 11	.....	6g. 3c. 1k. 2d. 12r. 1p.	Ram Dhian Singh	15 5 0	.....	7 11 1
3534	Ditto ...	735 10 11	.....	2a. 8g. 1k. 2d. 8r. 12p.	Ram Saran Singh and Jago Kuer	110 7 0	.....	7 3 2
3534	Ditto ...	735 10 11	.....	4g. 2c. 1k. 14r. 6p. ...	Ram Saran Singh	10 10 0	.....	2 10 6
3559	Chak Narain, pergunnah Hajeepore.	511 4 7	.....	2a. 19g. 2c. 8r. 8p. ...	Ganga Prasad	95 1 6	.....	28 4 0
3559	Ditto ...	511 4 7	.....	1a. 5g. 5r. 4p.	Mossamat Pana Kuer ...	39 15 8	.....	12 2 6
3559	Ditto ...	511 4 7	.....	1a. 9g. 1c. 2k. 1d. 7r. 2p.	Hurbux Singh and Girjabux Sing .	47 2 0	.....	18 13 0
3559	Ditto ...	511 4 7	.....	1a. 4g. 3c. 2k. 2d. 8r. 4p.	Ramgopal Singh, the present purchaser Nundun Lall.	39 15 1	.....	37 6 2
3559	Ditto ...	511 4 7	.....	10g.	Tulsee Singh	15 15 8	.....	2 1 6
3559	Ditto ...	511 4 7	.....	7a. 6g. 1k. 1d. 7r. 6p.	Kirut Singh	233 7 10	.....	35 3 3
3603	Tatehpore, Shehbaspore, pergunnah Hajeepore.	645 10 8	.....	4a.	Mahanth Raghu Nath Dass.	161 6 8	.....	5 13 6
3603	Ditto ...	645 10 8	.....	4a.	Ditto ...	161 6 8	.....	1 3 7
603	Ditto ...	645 10 8	.....	1a. 6g. 2c. 2k. 6r. 6p....	Gopal Lal	53 12 11	.....	27 14 11
3602	Ditto ...	645 10 8	.....	2a. 18g. 1c. 1k. 3r. 3p.	Maha Deb Lal and Saligram Prasad.	107 9 10	.....	17 2 6
3602	Ditto ...	645 10 8	.....	18g. 2c. 1k. 10r. ...	Chuturbhuj Sahai	37 10 9	.....	16 2 9
3605	Kurmopore, pergunnah Hajeepore.	636 6 11	.....	11a. 3c....	Gudar Singh	401 7 8	.....	12 2 4
3617	Gobindpore Gokhula, pergunnah Hajeepore.	836 6 11	.....	1a. 3c. 1d. 6r. 9p. ...	Ram Bux Singh	54 6 0	.....	22 13 9
3617	Ditto ...	836 6 11	.....	1a. 4g. 3c. 1k. 1d. 1r. 1p.	Doarka Prasad	65 0 0	.....	12 14 0
3617	Ditto ...	836 6 11	.....	3g. 1c. 8r. 12p. ...	Ram Saran Lal	8 0 0	.....	1 8 0
3617	Ditto ...	836 6 11	.....	16g. 2c. 1k. 3r. 2p. ...	Khobharee Singh	43 6 6	.....	4 0 0
3617	Ditto ...	836 6 11	.....	8g. 1c. 1k. 2d. 8r. 14p.	Naunit Lal	23 8 0	.....	7 7 0
3617	Ditto ...	836 6 11	.....	2g. 3c. 1k. 1d. 6r. 4p. ..	Nand Kumar Lal	7 8 0	.....	7 4 6
3617	Ditto ...	836 6 11	.....	14g. 1k. 1d. 10r. ...	Mossamat Jamuna Kuer	37 10 0	.....	27 10 0
3617	Ditto ...	836 6 11	.....	1a. 18g. 2c. 1k. 1d. 10r.	Sri Dhar Narain	87 12 2	.....	23 2 11
3619	Govindpore, pergunnah Hajeepore.	836 6 11	.....	3a. 12g. 3c. 1k. 17r. ...	Doolhin Gulab Kuer ..	294 7 11	.....	8 3 3
3619	Ditto ...	836 6 11	.....	1g. 2c. 2d.	Sarabjeet Lal	6 4 7	.....	9 0 11
3619	Ditto ...	836 6 11	.....	2g. 3c. 2k. 2d.	Ramnath L	12 0 3	.....	17 4 6
3619	Ditto ...	836 6 11	.....	3a. 16g. 1c. 1k. 1d. 2r.	Gulab Kuer and Muluk Rani Kuer and others.	308 10 8½	.....	51 3 6
3641	Nawanagar, pergunnah Hajeepore.	791 0 0	.....	1a. 4g.	Gopal Lal	59 5 0	.....	28 5 9
3641	Ditto ...	791 0 0	.....	2a.	Bisesur Sahai, Chuturbhuj Sahai and others.	98 14 0	.....	42 13 4
3801	Jagdispore Beli, pergunnah Hajeepore.	537 6 1	The whole estate.	.....	Naunit Lal, Radhe Krishen and others.	.....	122 11 10	.....
4167	Bhikhanpore, pergunnah Morwah Khurd.	597 6 11	Ditto...	.....	Sayed Mohammad Ashraff Husain.	.....	13 3 2	.....
4208	Narawan, pergunnah Morwah Khurd.	1,729 9 6	.....	14g. 2c. 10r.	Mossamat Jaimangal Kuer and others.	78 7 6	.....	44 13 7
4559	Meenapore, pergunnah Morwah Kalan.	932 9 8	The whole estate.	.....	Sheo Narain Panday ...	.....	28 9 7	.....
4814	Parri Adhawan, pergunnah Mahla Tirhut.	516 11 9	Ditto...	.....	Rai Durga Sahai, Rai Janz Bahadur and others.	.....	30 13 0	.....
5408	Sheriffpore, pergunnah Nanpore.	506 9 1	Ditto...	.....	Sher Bahadur Sahee. ...	.....	88 1 7	.....
5477	Manikpore, pergunnah Nanpore.	597 12 8	.....	9a. 6g. 2c. 2k.	Kunj Behari Thakur ...	348 11 1	.....	80 8 3
5615	Pokhrara Ch. Nai, pergunnah Bisara.	864 14 0	The whole estate.	.....	Bijay Narain Singh ...	.....	50 5 9	.....
5626	Paterha Jairam, pergunnah Bisara.	525 8 0	.....	10a. 18g. 2c. 1k. ...	Kali Charan Singh ...	.....	.....	27 13 11
6867	Basarh, pergunnah Ruttee.	956 2 3	The whole estate.	.....	Ambik Singh and others...	.....	33 6 3	.....
7031	Keshunpur Bahbungawan, pergunnah Ruttee.	988 5 9	.....	6a. 5g. 2c. 1d. 3r. ...	Mohanth Raghu Nath Dass	368 3 9	.....	58 6 10
7070	Mohabatpur, pergunnah Ruttee.	739 6 11	.....	3 a. 2g. 2c.	Hurgobind Saran ...	143 1 5	.....	36 9 7
7079	Murwa Pakar, pergunnah Ruttee.	726 13 0	The whole estate.	.....	Raghubans Sahai and Harihar Prasad.	.....	3 8 10	.....

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
7099	Hussaipore, pergunnah Ruttee.	1,089 6 5	.....	3a. 6g. 2c. 2d. 17r. 10p.	Mussamat Badhraj Kuer	236 4 11	.....	123 11 11
7391	Hussanipore, pergunnah Saraisa.	545 1 1	.....	5g. 1c. 1k.	Bansi Chaudhry ...	9 9 9	.....	24 9 9
7455	Sarmastpore, pergunnah Saraisa.	550 11 6	.....	4a.	Nand Keshore Sahai ...	137 10 10½	.....	43 0 6
7455	Ditto ...	550 11 6	.....	0g. 2c. 2k.	Mossamat Deeprani Kuer	12 10 11	.....	3 15 7
7455	Ditto ...	550 11 6	.....	5a.	Mossamat Muga Kuer ...	104 15 6	.....	35 15 3
7520	Kurmauti, pergunnah Saraisa.	1,370 1 9	.....	4a. 3c. 2k. 15r. ...	Mossamat Lilabatti Kwuer.	333 1 11	.....	26 4 5
7520	Ditto ...	1,370 1 9	.....	1a. 1g. 3c.	Beni Singh and others ...	123 8 0	.....	6 5 11
7527	Mahsoundh, pergunnah Saraisa.	2,894 13 6	.....	1g. 1c. 2k. 1d. ...	Bhairo Singh	113 8 0	.....	29 4 6
7527	Ditto ...	2,894 13 6	.....	4a. 15g. 1k. 1d. 18r. 13p. 4kan.	Hirday Narain Chaudhry, Shankar Prasad Chaudhry and others.	860 8 4	.....	15 1 2
7815	Furrukhpur, perguhnah Tilak Chaundh.	1,117 9 9	.....	12a. 18g. 1k. 2d. ...	Brij Keshore Lal Mahtha	902 7 6	.....	34 13 8
9219	Peer Hari, pergunnah Burail.	509 6 0	.....	1a. 17g. 2c.	Chuturbhuj Sahai ...	59 10 0	.....	36 14 1
9462	Erasi Beshee Nasuhrar, pergunnah Gedhesand.	865 5 0	.....	1a. 6g. 2c. 2k.	Mangal Prasad Singh ...	72 3 2	.....	2 5 6
9462	Ditto ...	865 5 0	.....	2a. 13g. 1c. 1k. 1d. ...	Debi Dut Singh	144 5 4	.....	45 2 8
9462	Ditto ...	865 5 0	.....	5a. 8g. 2c. 1k. 2d. ...	Rachhpal Singh	288 7 0	.....	1 14 10
9462	Ditto ...	865 5 0	.....	6a. 13g. 1c. 1k. ...	Brahamdeo Narain and others.	360 6 6	.....	102 9 3
10031	Gobindpore, pergunnah Hajeepore.	1,063 12 9	.....	2a. 13g. 2c. 1k. 7r. 6p.	Kesho Narayan	177 4 8	.....	12 8 4
10031	Ditto ...	1,063 12 9	.....	1a. 15g. 2c. 1k. 2d. 15r.	Sheo Saran Singh	118 8 0	.....	12 9 8
10570	Gopeepore, pergunnah Mahila Tirhut.	2,250 6 10	The whole estate.	.....	Goshaeen Methura Nath Jee and others.	.....	17 14 3	.....
10809	Bhagwanpore, pergunnah Nisamudinpur.	1,514 5 6	Ditto...	.....	Awadh Kuer and Sant Protap Sinha.	.....	223 1 6	.....
11864	Rampur Karari Barari, pergunnah Hajipore.	856 0 0	.....	2a.	Kuldeep Narain	107 0 0	.....	33 7 9
11930	Sukwarpur, pergunnah Hajipore.	1,478 13 3	.....	1a. 3g. 1k. 1d. 10r. ...	Debee Prasad	105 8 9	.....	5 4 10
11930	Ditto ...	1,478 13 3	.....	13a. 6g. 2c. 1k. 1d. ...	Sajeewan Dube	1,232 1 3	.....	313 6 1
11937	Bahrampore Dfara, pergunnah Azimabad.	1,703 0 0	The whole estate.	.....	Jagan Lal Bhagat	.....	278 4 10	.....

Mozufferpore Collectorate, the 28th November 1889. E. B. HARRIS, Covtd. Dy. Collr., for Collr.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Burdwan will be put for sale at the Collector's Office of that district on the 3rd January 1890 for arrears of revenue and other demands, due on the 28th September 1889, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share, or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A P.	Rs. A. P.	Rs. A. P.
101	Chandpur, pergunnah Amerabad.	1,740 8 3	Will be sold	.....	Nistarini Gupta, wife of Brojosunder Mullick, and others.	.....	660 4 3	.....
158	Samudra Gari, pergunnah Satsolka.	2,710 8 11	Ditto ...	.....	Wooma Churn Nundy ...	.....	490 13 6	.....
5174	Salkuni, pergunnah Burdwan.	1,698 8 5	.....	The parent estate, the sudder jumma of which is Rs. 1,256-5-7, will be sold. The shares of this estate (1) belonging to Issur Chundra Roy and others, the sudder jumma of which is Rs. 303-15-2½, and (II) belonging to Gora Chund Roy and others, the sudder jumma of which is Rs. 133-3-7½, for which separate accounts have been opened, will not be sold.	Sheik Asesm Ullah and others.	1,256 5 7	.....	139 6 6

H. LEE, Offg. Collector.

Burdwan Collectorate, the 26th November 1889.

NOTICE is hereby given that the undermentioned plots of the Nizamut lakhraj State lands situated in the district of Burdwan, Nos. 72 to 75 will be put up to sale on the spot by the Deputy Collector at the Burdwan Collectorate, and No. 89 by the Sub-divisional Officer of Culna, on Monday, the 27th January 1890, corresponding to 15th Magh 1296 B. S.

The purchasers will be subject to the following conditions of sale:—

Conditions of Sale.

1. The lands to be sold revenue-free to the highest bidder above the upset price, which will be fixed for each plot at the time of sale.

2. The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and the purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3. If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid down at once.

4. If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the lands to be again put up to sale at the risk of the defaulting purchasers, after issue of advertisement, as in the case of original sale.

5. The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mouzah.	Pergunnah.	Approximate area in bigahs.	Boundaries.	REMARKS.
				B. K. CH.		
72	Jaigirdagra	Ukhari ...	Shamurshahi.	7 5 7	East of the Bhagar jote lands of Saroo Patan; south and west of jote lands of Budhu Mirdha; south of jote lands of Rasud Mirdha and of the Bhagar jote lands of Saroo Patan.	*Plot I.*—Jote of Sakir Mandal and of Nihar Bibi, wife of Edu Mandal of Nariaram.
73	Ditto ...	Ditto ...	Ditto ...	10 9 15	North of jote lands of Pitambar Charal, Kedar Chowdhury, Shek Karoo, and Shek Tooraj; west of jote lands of Hara Mirdha, Dohar Mirdha, Kedar Chowdhury and Manik Mirdha; south of jote lands of Sova Mirdha, Haroo Mirdha, Sakauddin Mirdha, Jamman Mirdha, Tarku Shek; east of jote lands of Ulfoo Mandal, Tarku Shek, Karoo Shek, and of Bhagar jote lands of Saroo Shek; south and east of jote lands of Waz Shek.	*Plot II.*—Do do.
74	Ditto	Ditto ...	Ditto ...	2 13 11	North of jote lands of Manik Mirdha; east of jote lands of Sona Mirdha and Dolaf Khan; south of jote lands of Alivarsy Mirdha; west of jote lands of Aidu Chowdhury.	*Plot III.*—Jote of Takai Mandal of Nariagram.
75	Ditto ...	Ditto ...	Ditto ..	4 13 14	North of the chowkidari chakran lands of Tincuri Hari; east of jote lands of Sakauddin Mirdha, Hara Mirdha, Sonaulla Mirdha, and Ronea Lal Charal; south of jote lands of Sonaullah Mirdha; west of the chowkidari chakran lands of Gourub Khan, Patan and Ramdhan Bagdi.	*Plot IV.* Jote of Sakir Mandal of Nariaram.
89	Dakadda	Shyambati	Karajpur...	5 15 12	South of the jote lands of Deb Nath Pal and Kunja Mandal; east of the lakhraj jote lands of Deb Nath Pal; north of the lakhraj jote lands and of the barren land of Deb Nath Pal; west of a public road.	Jote of Sita Nath Pal and Deb Nath Pal o Shyambati.

Burdwan Collectorate, the December 1889. KEDAR NATH DUTT, for Officiating Collector.

NOTICE is hereby given, under sections 6, 7, and 13 of Act XI of 1859, that the undermentioned estates or shares of est in the district of Pubna will be put up for sale at the Collector's Office of that district on the 10th January 1 corresponding with 27th Poos 1296 B. E., for arrears of revenue and other demands for the kist of September 1 which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate accoun kept for such share, and the other share or shares in the estate are excluded from the sale.

Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, the specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.	REMARKS.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.	
175	Taraf Shampur, pergunnah Amirabad.	3,156 9 0 Police— 5 1 0	.....	Ijmali share.	Kashi Nath Das, Kailash Chandra Ghosh and others.	1,935 5 0 Police— 3 1 0	.....	8 7 0	The following shares which are n arrears are exempted from sale— Revenue. P Rs. A.P. Rs. Ataroonessa, wife of Moulvi Sayidud-din Ahmed .. 450 15 0 0 Gurusharan Dutta and others ... 779 5 0 1
127	Aliarpur, pergunnah Katar Mohalls.	3,129 0 0 Police— 14 1 0	The entire mehal is to be sold.	.....	Jayat Chandra Bhaduri and others.	.....	2 8 0	.....	
330	Krandoho Bohoti, pergunnah Boro-bazar.	854 6 0	.....	Ijmali share.	Amirannessa Khatun, mother and guardian of Moulvi Abdul Hai and others.	701 3 0	.....	42 2 6	The following shares which are n arrears are exempted from sale— Rs. Janhebi Choudhurani ... 42 Mohima Chandra Jeardar 27 1 Shares in arrears for which sep notices have been issued in co quence of their sudder juma l less than Rs. 500. Reve Rs. Ekabbar Fakir ... ... 27 1 Rohimuddin Munshi and others 55

Pubna Collectorate, the 18th December 1889. W. FIDDIAN, Collecto

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859 and Act VII (B.C.) of 1868, that the undermentioned estates, or shares of estates, in the district of Mymensingh will be put up for sale at the Collector's office of that district on 7th January 1890 for arrears of revenue for the kist of September 1889 and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
13	Zemindari hissa 1 anna, pergunnah Atfia.	702 13 0	.....	5a. 12g. 2c. of ijmali share ...	Hafez Mahamed Ali Khan.	47 1 4	..	10 12 0
25	Taluk Amtala, pergunnah Tarap Bowkhanda.	1,201 1 0	Whole ...	.....	R. W. Hallow and others.	.....	9 13 0	....
70	Zemindari pergunnah Joyanshye.	10,525 14 0	.....	2a. 5g. 2c. 6d. share for which a separate account has been opened.	P. N. Pogose ...	1,503 12 0	.....	333 15 0
66	Zemindari, pergunnah Hossenshye.	45,457 15 0	.....	Ijmali share exclusive of the separate account opened under section 10, Act XI of 1859, and section 70 of Act VII of 1876.	Sharat Chandra Roy Chowdhury.	3,856 10 0	.. ...	103 1 0
66	Ditto ditto ...	45,457 15 0	.....	Hissa 4 annas separated under section 10 of Act XI of 1859.	Mr. Aratoon and others.	11,214 2 0	.	706 4 0
90	Zemindari hissa 4a. 4g. 10g. with Bejabetta taluks, pergunnah Nassirugial.	7,197 10 0	.....	Ijmali share exclusive of the separate accounts opened under sections 10 and 11 of Act XI of 1859 and section 70 of Act VII of 1876.	Mahamed Mofeder Roheman.	880 2 0	... ..	39 13 0
96	Ditto ditto ...	7,197 10 0	.....	Hissa 1a. 6g. 2c. 2k. of Sreram-pur separated under section 70 of Act VII of 1876.	Durga Keshore Acharge Chowdhury.	8 2 0	... .	3 14 0
96	Ditto ditto ...	7,197 10 0	.....	Hissa 4a. 18g. 1c. share of kismat Chapila Kanda and 5a 15g. share of kismat Raj Nagar separated under section 70 of Act VII of 1876.	Padma Nath Sen Roy and others	14 6 0	....	6 4 0
116	Taluk Newayali, hissa 8a. tappeh Ranbhowal.	2,638 15 0	.....	Ijmali share exclusive of the separate account opened under section 70 of Act VII of 1876.	Raga Surga Kanth Acharge Bahadoor and others.	615 4 0	.....	50 7 0
116	Ditto ditto ...	2,638 15 0	.. ...	Separate share opened under section 70 of Act VII of 1876.	Mahamed Doulat Sircar.	5 0 0	...	1 0 0
116	Ditto ditto ...	2,638 15 0	.....,	Ditto ditto ...	Shekh Jamir ...	4 13 0	.....	1 13 0
124	Pamdabeg, hissa 13a. 6g. 2c. 2k., tappeh Hasradi.	1,706 2 0	.....	7a. 5g. share of kismat Patnabhanga, 6a. 5g. of Nagor Hasradi, 2a. of Birmoshua, 8g. of Chakla Mahabalpur, and 16a. share of the remaining mouzahs of the estate.	Sharajannessa Bibi and others.	358 15 0	.....	40 13 0
1761	Taluk Rup Chamra Ratna Gorbha Mosumder, pergunnah Hossenshye.	627 5 0	.....	Ijmali share exclusive of the separate account opened under section 10 of Act XI of 1859 and section 70 of Act VII of 1876.	Jogat Moyi Debia and others.	240 11 0	....	17 7 0
4971	Chur Hastpur ...	518 9 0	.....	5a. 13g. 1c. 1k. of ijmali share ...	Deno Nath Chocraburtty.	183 9 0	.....	7 2 0
6179	Joar Jagat Chur, pergunnah Bardakhat, tappeh Kurikhye.	754 8 0	.....	1a. share for which a separate account has been opened.	Ram Keshab Shaha and others.	47 3 0	.....	11 10 0
7503	Taluk Nurunessa Khanem with ijmali mouzah Tarktea Dagar, tappeh Ranbhowal.	1,208 0 0	Whole	.....	Administrator-General of Bengal.	.....	173 14 8	.... .
				2nd Class Estate.				
5013	Chur Shak Chura, tappeh Ranbhowal.	511 0 0	.....	15a. 17g. of ijmali share ...	Goloke Chandra Bhattacharjée.	506 4 0	.. ...	117 0 0

Mymensingh Collectorate, the 14th November 1889

JUGGOBUNDHOO KHAN, for Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the dis of Tipperah will be put up for sale at the Collector's Office of that district on 7th January 1890 for arrears of revenue and c demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9	10
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.	REMARKS.
		Rs. A. P.				Rs. A. P. K.	Rs. A. P.	Rs. A. P. K.	
20	Kismat 1*a.* 6*g.* 2*c.* 1*k.* 4*d.*, pergunnah Bardakhat.	13,319 4 9	.....	3*a.* 11½*c.* Kharija.	Srimati Barni Khanam and others.	2,508 0 8 2½	.....	663 3 7 5 due up to Bhadra 1296 B.S.	Accounts are rated under tion 10 of A of 1859.
36	Kismat 3*a.*, pergunnah Chowdhagaon.	1,360 0 6	.....	4*a.* not separated under Act XI of 1859.	Ambika Charan Lashker and others.	340 0 0 17½	.....	84 1 6 13½ due up to Bhadra 1296 B.S.	Twelve share have separated section 1
238	Talook Ramdhan Majumder, pergunnah Mohabutpur.	1,189 13 10	.....	10*a.* 13*g.* 1*c.* 1*k.* not separated under Act XI of 1859.	Alam Rajah *alias* Idhan Gazi Chowdry and others.	793 3 11 0	.....	52 7 4 0 due up to Bhadra 1296 B.S.	Act XI of The remai annas w sold.
372	Mouzah Ahamudpur, pergunnah Bardakhat.	1,228 6 0	.....	10*a.* 13*g.* 1*c.* 1*k.* not separated under Act XI of 1859.	Ishan Chandra Ray and others.	818 14 8 0	.....	134 12 4 0 due for kist August 1889-90.	
401	Jowar Bishara, pergunnah Bardakhat.	3,141 3 0	Whole...	.....	Ditto ...	.....	344 11 4 due for kist August 1889-90.	.....	
440	Mouzah Korbanpur, pergunnah Bardakhat.	976 14 0	.....	6*a.* 7*g.* 2*c.* Kharija	Ditto ...	406 1 0 0	.....	44 9 0 0 due for kist August 1889-90.	Accounts sep under sect of Act XI o
1933	Jowar Tin Chitta, Hissa 10*a.* 13*g.* 1*c.* 1*k.*, pergunnah Bardakhat.	668 12 3	Whole...	.....	Durga Charan Das Majumdar and others.	.....	95 9 3 due for kist August 1889.	.....	Meadi taluk for 18 yea 1287 to 130
1935	Mouzah Ganger Coat, pergunnah Bardakhat, hissa 10*a.* 13*g.* 1*c.* 1*k.*, pergunnah Bardakhat.	895 0 0	Ditto ...	.....	Braja Nath Roy Chowdry and others.	.....	23 4 8 due for kist August 1889.	.....	Meadi taluk for 17 yea 1288 to 130
1933	Jowar Shingula, hissa 10*a.* 13*g.* 1*c.* 1*k.*, pergunnah Bardakhat.	1,204 0 0	Ditto ...	.....	Srimati Muktakushi Gupta and others.	.....	38 3 0 due for kist August 1889.	.....	Meadi taluk for 12 yea 1291 to 130
1932	Mouzah Deara Chairparah, pergunnah Bardakhat.	1,451 1 3	Ditto ...	.....	Kally Das Bhadra and others.	.....	144 1 10 due for kist August 1889.	.....	Ditto.
1953	Jowar Rasullabad, hissa 10*a.* 13*g.* 1*c.* 1*k.*, pergunnah Bardakhat.	3,969 14 11	Ditto ...	.....	Kamala Kanta Podder and others.	.....	620 4 10 due for kist August 1889.	.....	Meadi taluk for 13 yea 1292 to 130
1930	Chur Goshaipur, No. 318, pergunnah Sarail, resumed under Regulation II of 1819.	805 0 0	.....	8*a.* 8*g.* not separated under Act XI of 1859.	Baboo Ananda Mohan Bardhan and others.	171 1 0 0	.....	6 1 4 17½ due for kist August 1889.	Meadi proj taluk—sett 14 years fr to 1304 B.S.
1945	Chur Nagarer Kandi, No. 311, pergunnah Utter Sahapur, resumed under Regulation II of 1819.	1,296 10 9	Whole...	.....	Doctor George Manook and others.	.....	Rs. A. P. Arrear of 1294-95 B.S. ... 956 2 5 Malikana ... 65 8 1 1,023 10 6 Arrear of 1296 B.S. ... ... 373 0 3 Due up to kist August 1296 B.S. Malikana ... 12 6 9 385 7 0 Total ... 1,409 1 6	.....	Meadi proj taluk sett 11 years 1294 to 130

Tipperah Collectorate, the 27th November 1889.

R. T. GREER, Officiating Collecto

Notice.

WANTED temporarily the services of a Nagri Interpreter, possessing a thorough knowledge of Marwari book-keeping. Salary Rs. 60 per mensem.

S. J. KILBY, Collector.

Income-tax Office, dated Calcutta, the 30th December 1889.

Notice.

WANTED a Civil Court Ameen for the district of Manbhoom on a salary of Rs. 50 per mensem

Candidates must possess a thorough knowledge of English, Bengali, and Surveying, besides holding a diploma of having passed the junior grade Pleadership examination as required by the High Court's Circular No. 24 of November 1858.

Applications will be received up to the 10th proximo.

E. N. BAKER, Deputy Commissioner, Manbhoom.

Manbhoom, Deputy Commr.'s Office, the 23rd December 1889.

Notice.

WANTED an Overseer for the Dinagepore Municipality. Salary Rs. 45 and horse allowance Rs. 10 a month. Passed Overseers of the Public Works Department, with experience in municipal works, are only required to apply. Applications will be received by the undersigned up to 25th January 1890.

SITAKANT MOOKERJEE, Vice-Chairman.

Dinagepore, the 27th December 1889. (3406 - 3)

New Beerbhoom Coal Company, "Limited."

NOTICE is hereby given that the Thirty-third Ordinary General Meeting of the Shareholders of the above Company will be held at the Office of the Company, 1, Hastings Street, at noon on Saturday, the 4th January 1890, for the purpose of receiving the Directors' Report, passing the accounts for the Half-year ending 31st October 1889, declaring a dividend, electing Directors, and for the transaction of any other business that may be brought forward.

The share transfer books will be closed from 21st instant to 4th proximo, both days inclusive.

A. R. McINTOSH, & Co., Managing Agents.

1, Hastings Street, Calcutta, the 16th December 1889. (3378 - 3)

Notice.

I, GIRIJAMANI DEBYA of Saydabad, Hotarpara, in the town of Berhampore, district Moorshedabad, police-station Sujaganj, do hereby declare that I have appointed my dear Baboo Sita Kanta Mukharji, son of late Baboo Kamala Kanta Mookharji, my sole general agent and manager for all my properties in this and Dinagepore and other districts to the entire exclusion of all others, and I hereby declare that I shall not be responsible for the doings of any other person than those of Baboo Sita Kanta Mukharji.

SREEMATTY GIRIJAMANI DEBYA.
SITA KANTA MUKHARJI, Am-Mukhtar.
Zemindar.

(3368—3)

Calcutta Municipality.

BYE-ELECTION UNDER ACT II (B.C.) OF 1888.

DECLARATION of result of bye-election under section 19.

Bye-election of Ward No. II—One Commissioner to be elected.

Name.	Residence.	Remarks.
Dr. U. K. Dutt ...	337, Upper Chitpore Road.	Withdrew at the commencement of the poll
Baboo Chundy Lall Singh.	116, Baniatola Street	Elected.

H. L. HARRISON, Chairman of the Corporation of Calcutta. (3407—1)

In the Court of the Subordinate Judge of Furreedpore.

EXECUTION CASE No. 78 OF 1889.

Upendra Lall Mookhapadhya, decree-holder, *versus* Jati Prasad Mookhopadhya, Anookul Prasad Mookhopadhya, Jadookul Prasad Mookhopadhya, sons and heirs of Sarada Prasad Mookhopadhya, deceased, judgment-debtors.

TO be sold in the above case by the Nazir of the District Judge's Court at Furreedpore, at 12 o'clock on the 20th of January 1890, the right, title, and interest of the judgment-debtors for the satisfaction of decree for Rs. 1,142-5-4 :—

1. Seventeen gandas 3 karas and 1 donti share of the estate, bearing No. 115 on the revenue roll of the Dacca Collectorate, and situate within the jurisdiction of the registry office and sub-registry office and police-station Furreedpore, in pergunnah Patpashar, and in kishamats Tepakhala, Bhajandanga, Sadipur, Godadhardangi, Charhooshni, Amirabad, Gadadhardangi, Charhooshni, Shaktabad, char reformed in the diluviated site of Hasigange, Toolagram, Raykelee, Khashkandi, Tepakhala, char reformed in the diluviated site of Kharakanda, Mamoodnagar, Hazinagar, and within the jurisdiction of police-station Ainpur kishamat Ainpur, Shakhar, Gotti, Bishnoodi, Azia Moozurdia, and also in district Dacca, registry office Dacca, sub-registry office and police-station Manikgunge, kishamats Badhera, Khabaspur, Krishnapur, Nabogram, Kathalia, Dirghachatra, Pooroolia, Hatani Harania, Monakamadhupur, Katshagara, Ornakta, Challia, Egarachree, Pootiail, Disil, and in the police-station and sub-registry office Nawabgunge, kishamat Sholabazoo, and in police-station sub-registry office Harirampur, kishamats Notakhola, Kabilpur, Rastampur, Brahmankanda, Potogram, Kharia, Patankandi, Madhupur, Gabirpur, Bhliachak, Bidirkandi, Chilimpur, Haglakandi, Pawni, Paikaruia, Mohalapara, Mazlishpur, Sajandia, Diabari, Tenia, Jhigaltia Koomarkooti, Paragram, Pachdhara, Gauribardiachar, Byashdi, Bahirchar, Bashara, Bahalatoli.

The annual revenue payable to Government for the entire estate being Rs. 10,768-0-0¾.

KHETTER PROSAD MUKERJEE, Offg. Subordinate Judge.

Furreedpore, the 28th December 1889. (3409—1)

Notice.

IT is hereby notified, under section 5 of the Indian Treasure Trove Act VI of 1878, that on the 28th October 1889, treasure consisting of one silver girdle, weighing 31 tolas, and two silver knife-sheaths, weighing together 6 tolas, and valued at about Rs. 35, was found in an earthen pot by Payaningal Unichennan while digging up the ground floor of his house (which was being renewed) in Puthentheruvu in Neduva Amsam and Desam of the Ernad taluk, Malabar district, in the presidency of Madras.

2. All persons claiming the said treasure or any part thereof are hereby required to appear personally or by agent before the Collector of Malabar at his office at Calicut on the 7th May 1890, in order to the matter being enquired into and determined in accordance with the provisions of the Act.

H. M. WINTERBOTHAM, Collector.

Malabar Collector's Office, Calicut, the 7th December 1889.

AKSHAY KUMAR BHUTTACHARYYA intends to be enrolled as a Vakil of the High Court, Calcutta.

(3347—4)

Notification

THE Zamindari Dâk Tax in the district of the 24-Pergunnahs for the year 1890-91 is fixed at the rate of eight annas per cent. per annum on the sudder jumma of estates paying a revenue amounting to Rs. 50 and above.

The amount due for each estate is payable in two instalments, the first being due on the 1st June 1890, and the 2nd on the 16th December 1890.

A. FORBES, Magistrate of 24-Pergunnahs.

Notice under Section 30 of Act XIV of 1882.

NOTICE is hereby given that on the thirteenth day of June last, Mooraly Dhur Sen, residing at No. 69-4, Bhowani Churn Dutt's Lane, Kulutollah, in the Town of Calcutta, an attorney and rakeel of the High Court of Judicature at Fort William in Bengal, carrying on business as such at No. 7, Church Lane, in Calcutta aforesaid, instituted a suit in such Court in its Ordinary Original Civil Jurisdiction against Doorgasundari Dassee, commonly called Rani Doorgasundari Dassee, residing at the Rajbaree, in the village of Andool, in the district of Howrah, in her own right and in her right as the surviving executrix of the last Will and Testament of Bejai Keshav Roy, commonly called Rajah Bejai Keshav Roy of the Rajbaree aforesaid, Hindoo zemindar, deceased, and (with the permission of the Court) against Khetter Krishna Mitter, residing at Andool aforesaid, Hindoo inhabitant, on behalf of himself and all other persons who on the death of the said Rani Doorgasundari Dassee may become the heirs of the said Rajah Bejai Keshav Roy, deceased, for a declaration that the said Mooraly Dhur Sen is entitled to be paid out of the estate of the said Rajah Bejai Keshav Roy, deceased, the sum of rupees thirty-eight thousand and thirty-four and annas six, being the balance due to him for work and labour done and moneys paid for and on account of the said Rani Doorgasundari Dassee in her capacities as the surviving executrix of the Will, and as the surviving widow of the said deceased, and that the immoveable property belonging to the estate of the said deceased is validly charged with the payment of the said sum of rupees thirty-eight thousand and thirty-four and annas six, and for an order that the said Rani Doorgasundari Dassee do out of the estate of the said deceased, and out of her own funds, pay to the said Mooraly Dhur Sen the said sum of rupees thirty-eight thousand and thirty four and annas six with interest and costs of suit by a short date, and that in default thereof the said immoveable property and certain jewels belonging to the said Rani Doorgasundari Dassee, and which are now with the said Mooraly Dhur Sen, be sold under the direction of the Court, and the claim of the said Mooraly Dhur Sen be satisfied out of the sale proceeds (the house No. 2, Banstollah Street, being sold subject to the mortgage of one Woomacanto Sen), and in case of any deficiency, and the said Rani Doorgasundari Dassee not admitting assets of the said estate sufficient to pay the same, then for administration of the estate of the said deceased and for the appointment (if necessary) of a Receiver to take charge of the said immoveable property.

Dated this twenty-eighth day of November, one thousand eight hundred and eighty-nine.

By order of the Court.

R. BELCHAMBERS, Registrar.

Jogendro Nath Sen, Attorney. (3348—1)

Notice.

Bhaugulpur District Board.

IT is hereby notified that under section 46 of the Local Self-Government Act III (B.C.) of 1885, the District Board of Bhaugulpur have, by a resolution passed at a meeting held on the 7th December 1889, determined to levy road cess for the year 1890-91 at the maximum rate, viz. six pies in the rupee on the annual value of land.

A. A. WACE, Chairman.

Road Cess Notification.

DISTRICT BOGRA.

IT is hereby notified for general information that under section 46, Act III (B.C.) of 1885, and section 38, Act IX (B.C.) of 1880, the District Board of Bogra have, at an adjourned Special Meeting held on the 28th December 1889, determined that the road cess in the district, for the cess year 1890-91 (from 1st April 1890 to 31st March 1891), shall be levied at the maximum rate, viz. one-half anna on each rupee of the annual value and annual net profits as described in section 6, Act IX (B.C.) of 1880.

H. G. SHARP, Chairman, District Board of Bogra.

Bogra, the 30th December 1889.

WANTED a Native Doctor, on Rs. 30 a month, for the Colgong Municipal Dispensary. Applications with copies of testimonials and diploma will be received by the undersigned up to 20th January 1890.

(3411—3) A. A. WACE, Magistrate.

POSTAL NOTICES.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	7th Jan.	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets)	6th „ ...	Ditto.
Mauritius, Mahé (Seychelles), Mayotte, Nossi Be and Réunion.	7th „ ...	Ditto.
Zanzibar, Mozambique, Delagoa Bay, Natal and Cape Colonies.	7th „ ...	Ditto.
Ceylon, Straits Settlements, Netherland-India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	13th „ ...	Ditto.
Australia, New Zealand, and Tasmania.	13th „ ...	Ditto.
Colombo	8th „ ...	Per P. & O. str. *Rohilla*.
Straits, China and Japan ...	7th „ ...	Per str. *A. Apear*.
Rangoon and Moulmein ...	7th „ ...	Ditto *Chanda*.
Ditto ditto ...	3rd „ ...	Ditto *Rajpootana*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	1st „ ...	Ditto *Pachamba*.
Ditto ditto ...	8th „ ...	Ditto *Comrilla*.

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

On the day of despatch of the Mail for Europe, the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 8-30 P.M., and late letters and papers will be received up to 9 P.M. On other days the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 7 P.M., and foreign letters and papers fully prepaid, bearing an extra stamp of four annas, will be received up to 7-30 P.M. for despatch by any Foreign Mails despatched the same night.

JOHN OWENS, Offg. Presidency Postmaster.

General Post Office, the 31st December 1889.

Unclaimed Letters held in the Calcutta General Post Office on 31st December 1889.

Brown, A.
Cohen, A. M.
Hearsey, Captain A. M.
Lamden, G.
MacGregor, A.
Mitchell, T. C. A.
Murray, C.
Sinclair, Hamilton & Co.
Tines, Herren.
Thompson, G. T.
Turnbull, J.
Wroughton, W. R. & Co.

Letters marked Care of "Post Office."

Andrades, P. A.
Annfield, F.
Atkinson, F. S.
Barker, F. W.
Barnes, W.
Barrington, H. E. W.
Bates, Miss E. K.
Bather, H. R.
Baxter, Mrs.
Belitski, R
Bennett, J. J. T.
Berkeley, C. M.
Boland, J.
Bolton, J. M. L.
Brownlow, Miss.
Brown, W.
Bruce R. G.
Burrows, C. J.
Carrapaett, Mr.
Carpendale, W. M.
Carroll. J.
Charley, R.
Chatterton, J.
Comar, Mrs. A.
Cooper, H. J.
Cooper, W.
Corfuld, Capt.
Cornelius, H.
Courage, R.
Courtney, F. S.
Culbard, Mrs.
Davis, Mrs. G.
Dickson, Mrs. E.
Donatella, A.
Doughty, Mr.
Drakeford, A.
Dunlo, Viscount.
Elliott, K.
Filleul, Rev. S. E. V.
Fisk, F. M.
Fletcher, Neil.
Fowler, Miss.
Fraiser, H. C.
Francis, A. M.
Gage, Major.
Gellett, Cecil S.
Gibb, C.
Glover, W. E.
Godwin, George.
Gracewood, Geo.
Gray, James
Greve, E. C.

Letters marked care of "Post Office."

Griffin, Miss.
Hamilton, J. R.
Hamion, Alexes.
Hardy, Mrs. M.
Hawksworth, Mrs.
Herklotts, A.
Heseltine, H. H.
Hewett, A. B.
Higgins, C. C.
Hilton, R. W.
Hodge, Mrs. George.
Hosack, D. D. F.
Hosie, J.
Hulton, Mrs. E.
Keane, J. J.
Keisler, Dr. F. L.
Keith, Surgeon-Major J. F.
Keogh, Mrs. M. C.
Laehs, R.
Lamb, E. G.
Landie, Miss E.
Latham, Mrs.
Livermore, H. A.
Leigh, Mrs.
Livesay, T.
Lloyd, Willis.
Maitland, A.
Major, A.
Mathewson, F.
McAdoo, Mr.
McKenzie, Mrs. D.
McNair, Miss.
Menzies, C.
Meyer, A. T.
Miller, G.
Morshead, L.
Murphy, John.
Ogden, J.
Palmer, Mrs. M.
Partridge, Guard.
Percival, Percy.
Platts, Mrs. S. K.
Powell, F.
Pronter, Miss.
Remmington, Capt. F. A.
Rennard, J. R.
Revie, S.
Ricket, Mrs.
Robins, J.
Rogerson, Miss A.
Rubie, Phil C.
Salomon, C.
Sano, T.
Shwartz, L.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sissm, Rev. W. B.
Smith, M. O.
Steinhart, Mr.
Taylor, C.
Thomas. G. T.
Thompson and Co.
Tienes, Richard.
Tomkyns, Geo.
Waddell, Alex.
Walter, F.
Watson, Andrew.
Westmacott, H. H.
Williamson, C.
Willoughby, Hon. G. H. D.
Woodhouse, G.

Registered Letters.

Aitkin, D,
Bennett, J. J. T.
Edwards, C.
Eglinton, C. A.
Gibbs, Chas.
Guiseppe, Celestini.
Hogens, Charles.
Houghton, D. W.
MacLeod, D. J.
Marsland, W,
Scott, J, D.
Wallace, Miss H.
Wallace, Mrs. W. V.
Westmacott, F. H.
Whittaker, Hariet.

Unclaimed Letters held in the Barrackpore Post Office on the 20th December 1889.

Ashburner, Geo.
Boulmer, Capt.
Brown, Miss.
Brown, Miss Edith.
Cowie, J,
Cock, C.
Feddy, Miss C. S.
Fergusson, H. F.
Hitah, E.
Howatson, Mrs.
Howatson, Mrs. F.
King, Peter W.
Lindsay, Esq.
Ricket, E. W.
Rydquist, C. F.
Stuart, C. H.
Taylor, A. E.
Thompson, H. D.

JOHN OWENS,
Offg. Presidency Postmaster, Calcutta.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 27th December 1889.

Name of river.	Reach of river.	Least depth of water soundings.	Remarks.
		Ft. In.	
Bhagirati.	Entrance from Ganges ...	1 9	At mouth entrance practically closed.
	Thence to Nurpur	2 0	Tiktikipara.
	From Nurpur to Jungipur ...	2 6	Nurpore.
	,, Jungipur to Berhampur	1 9	Berhampore.
	,, Berhampur to Cutwa ...	2 6	Sihpore.
	,, Cutwa to Nuddea ...	3 0	Nidos.
Bhyrub-Jellinghi.	Entrance from Ganges ...	3 6	
	Thence to Akriganj	3 0	
	Akriganj to junction of the Bhyrub and Jellinghi ...	4 0	Junction.
	Thence to Patkabari	5 6	Patkabari.
	Patkabari to Nuddea	5 0	Punditpore.
Mathabanga.	Entrance from Ganges ...	3 0	
	Thence to Chuypara ...	1 3	Sircarpara.
	From Chuypara to Shikarpur	1 9	Pregpore.
	,, Shikarpur to Boalia ...	2 0	Sampore.
	,, Boalia to Chuadanga ...	3 3	Sialuari.
	,, Chuadanga to Kissengunj and Hanskhali...	3 6	Bastupore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A. M.	Feet.	Feet.	
Ganges.	Sahebganj ...	28-12-89	6	0'66	63'66	
	Rampore Boalia	28-12-89	12	3'50	45'50	
	Entrance of Bhagirati ...	28-12-89	7	4'85	49'66	
	Entrance of Bhyrub-Jellinghi ..	28-12-89	...	3'54	16'90	
	Entrance of Matabanga.	28-12-89	...	3'54	...	
Bhagirati...	Berhampur ...	30-12-89	12	3'84	37'65	
Jellingni ...	Kishnaghur ...	27-12-89	...	5'25	14'14	
	Saroopgunge ...	28-12-89	6	4'84	9'14	
Matabanga	Hanskhali ...	27-12-89	...	4'96	15'81	

PURNA CHANDRA BOSE,
for Exe. Engr., Nuddea Rivers Division.

Berhampore, the 30th December 1889.

AT the Meteoroiogical Office, No. 5, Russell Street, the following official publications:—

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Ditto	ditto	1872	...	,, 3 0	,,
Ditto	ditto	1873	...	,, 3 0	,,
Ditto	ditto	1874	...	,, 3 0	,,
Administration Report of	1870-71	...	,,	0 4	,,
Ditto	ditto	1871-72	...	,, 0 4	,,
Ditto	ditto	1872-73	...	,, 0 4	,,
Ditto	ditto	1873-74	...	,, 0 4	,,
Ditto	ditto	1874-75	...	,, 0 4	,,
A table of the average monthly and annual rainfall at 98 Stations in Northern India	...	...	,,	0 4	,,
Report of the Midnapore and Burdwan cyclone of the 15th and 16th October 1874	...	...	,,	2 8	,,

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JOHN ELIOT, M.A., *Meteorological Reporter to the Govt. of Bengal.*

CALCUTTA, the 26th August 1875.

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2nd.—Bengal Daily Report containing observations taken at 37 meteorological stations, and transmitted to Calcutta by weather telegrams, with a brief summary of the weather in Bengal during the preceding 24 hours. The report giving the 10 A.M. observations of each day is printed in time for the evening mail. This report for the present will only be published during the south-west monsoon, *i.e.*, from May 15th to November 15th. Price Rs. 2-8 per mensem, including postage.

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ALEX. PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

Meteorological Office, Bengal, the 17th March 1886.

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The 24th February 1886.

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Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal assembled for the purpose of making Laws and Regulations under the provision of the Act of Parliament 24 and 25 Vic., cap. 67.

THE Council met at the Council Chamber on Saturday, the 21st December 1889.

Present:

The HON'BLE SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant Governor of Bengal, *presiding*.

The HON'BLE SIR CHARLES PAUL, K.C.I.E., *Advocate-General*.

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The HON'BLE RAJA RAMESHWAR SING BAHADUR

NEW MEMBER.

The Hon'ble F. B. Peacock took his seat in Council.

STATEMENT OF THE COURSE OF BUSINESS.

His Honour the President said:—"I hesitated about calling you together before, for, until the Report of the Select Committee on the Calcutta Port Bill was in our hands, I really had nothing to lay before you, and even now the programme of business which I have to ask you to consider is a very short one, and I do not think it ought to detain us over many meetings. The first item in to-day's programme is in connection with the Rules for the conduct of business. You will recollect that on two or three occasions last year we found ourselves inconvenienced by the existing Rules; and, with the assistance of Mr. Reily, I have gone through them, and I venture now to circulate a paper for your consideration. You have that paper before you, and I do not think I need further revert to the points contained in it. But I propose to ask a Select Committee to consider these amendments, and any others which may occur to them, for improving the working of the Council.

"The next item is an amendment of the Bengal Vaccination Act, 1880, and Act II, 1887. This is a purely formal matter. The rules under which vaccination is now conducted in Calcutta are based upon the Act of 1880, in which the definition of 'Calcutta' is the old definition conterminous with the original jurisdiction of the Calcutta High Court. Since then the boundaries of Calcutta have been extended by the inclusion within it of the Suburbs: it is therefore necessary to alter the definition in accordance with the terms of the new definition in the Calcutta Municipal Consolidation Act, 1888.

"The alterations made in the Calcutta Port Bill, which has been carefully considered by the Select Committee, will be explained to you by the Hon'ble Sir Henry Harrison, the Mover of the Bill, in the motion which he has to make to-day. It is the only Bill before the Council in which it seems to me there will be any room for debate, and I have no doubt it will have your careful consideration."

RULES FOR THE CONDUCT OF BUSINESS.

His Honour the President moved that a Select Committee, consisting of the Hon'ble Sir Charles Paul, the Hon'ble Messrs. Nolan and Allen, the Hon'ble Sir Henry Harrison, and the Hon'ble Dr. Rash Behary Ghose, be appointed to consider and amend the rules for the conduct of business at the meetings of the Council.

The Motion was put and agreed to.

BENGAL VACCINATION BILL.

The Hon'ble Sir Henry Harrison moved for leave to introduce a Bill to amend the Bengal Vaccination Act, 1880, and Act II, 1887. He said:—

"This Bill is a purely formal one. The present Act provides three areas for which different rules may be prescribed, viz., the old Town of Calcutta, the late Municipality of the Suburbs, and the rest of Bengal to which the Act may be extended. But since the passing of the new Municipal Act, the Town of Calcutta, as well as a large portion of the Suburban area, have been placed under the same administration, whilst the rest of the old Suburban area is assimilated with all the other municipalities in Bengal. It is therefore desirable that the definitions in the Vaccination Act should be so altered that instead of three areas, there should be only two, viz., that of the amalgamated Town of Calcutta, and that portion of the Suburbs which was formerly in the Suburban Municipality, but is now split up into separate municipalities, in conjunction with all other portions of the Province to which the Act has been extended, or may from time to time be extended. The Bill seeks to legalize these new definitions."

The Motion was put and agreed to.

CALCUTTA AND SUBURBAN POLICE SUPERANNUATION FUNDS BILL.

The Hon'ble SIR HENRY HARRISON presented the Report of the Select Committee on the Bill to consolidate the Calcutta and the Suburban Police Superannuation Funds. He said:—

"This Bill has been before the Council for some time, and the Select Committee in preparing its report have not found it necessary to make any material changes; the amendments which they have proposed being little else than verbal: therefore it is not necessary for me to detain the Council to explain the report further."

CALCUTTA PORT BILL.

The Hon'ble SIR HENRY HARRISON presented the Report of the Select Committee on the Bill to consolidate and amend the law relating to the Port of Calcutta, and to the appointment of Commissioners for the said Port. He said:—

"This measure has received the best attention of the Select Committee, and they have proposed certain changes which are worthy of attention, although the substance of the measure remains unrouched.

"The first important change proposed is to give one additional member to the Bengal Chamber of Commerce, the number of members having been increased from 13 to 15. It was said that the Chamber of Commerce was not sufficiently represented by four members, and that it was desirable that the number should be increased to five, so that the five branches of trade in Calcutta might be represented. This has been included in the Bill as amended by the Select Committee, and at the same time inasmuch as the Corporation of Calcutta would probably elect one native gentleman to represent them, and as the body which represents the commercial interests of the native community would also probably elect one, it was thought unnecessary to retain the provision that two of the members of the Port Commissioners must be natives.

"The next important amendment which the Select Committee have proposed is the introduction of sections regarding the valuation of the Port Trust property for the purposes of municipal assessment. Recently a question arose as to the proper assessment of the Dock property pending the completion of the Docks, and the Port Commissioners thought it right to consult the Hon'ble the Advocate-General as to the valuation proposed. In giving his opinion on the question referred to him, the Hon'ble the Advocate-General drew attention to the fact that the present Calcutta Municipal Act did not contemplate the valuation of property such as the Docks, that it was hardly adapted for that purpose, and that it was very uncertain how the Courts would interpret the law; and he suggested that it would be wise to introduce a short Act for the purpose of deciding this question.

"It was thought by the Select Committee that the amendment and consolidation of the Port Trust Act would afford the best opportunity for doing so, especially as there was a precedent in the case of Bombay, where for many years past the Port Trust Act has contained provisions regulating the valuation of the Port Trust property.

"The Select Committee have accordingly introduced several new sections embodying the proposals which they have to lay before the Council. The most important changes which they have proposed are that the Local Government, in preference to any Court of Law, should be the arbiter between the parties in the case of their not jointly agreeing to a valuation, and that a reduction of 10 per cent. should be allowed on the amount payable by an ordinary owner in consideration of the special circumstances of the Port Trust property, which in many respects entitles it to consideration in respect of municipal rating. The other consideration is that the true profit made by the Port Trust as the owner of property is that which they have to earn in order to pay interest upon the capital sunk in constructing the Docks and other works, and therefore the best and fairest method to follow is to take this interest as being the income earned by the Port Trust as an owner of property, and to treat it in the same way as capital invested in other parts of the town

is treated, viz., to take 5 per cent., which is substantially the interest which the Port Trust is paying, although they are paying various rates of interest, as the annual value upon which the municipal assessment should be fixed.

"In regard to the submission of the annual budget, we have introduced a clause making it obligatory on the Port Commissioners to submit it before the close of the preceding year. This has always been done, but, as a matter of fact, the Bill as it stood, as has been pointed out by the Government of India, did not make it obligatory on the Port Commissioners to do so, and therefore, so far as the law is concerned, this omission has been supplied, and the period within which the Local Government should pass orders on the budget has been extended from two to three months; two months being considered too short a period.

"Then the next section which has attracted attention is section 76 of the Bill (now section 85), regarding the method of dealing with private wharves and jetties outside the limits of the Port which may hereafter be brought within it. In regard to this matter one of our Colleagues has prepared a carefully written minute of dissent which has been concurred in by another Member of the Committee. As that minute explains the matter at issue between us, it is not necessary for me, in presenting this Report, to make any lengthened observations upon it; the dissent being in the hands of the Members.

"Then in sections 92 to 96 we have thought it necessary to increase the powers of the Local Government in dealing with the scale of charges. Hitherto the Lieutenant-Governor had power in the first instance, when a scale of charges was submitted to him, to approve or disapprove, or to modify it; but the scale having been once approved, there might be a difficulty at any future time, if considered advisable, in exercising the power of modifying it. Questions do arise at times, especially such questions as the tramway charges, which affect the public outside very largely, in which charges once sanctioned might at a later period become injudicious; and in order that the Government might have the full right as it were to arbitrate between the Port Trust and other bodies who may be interested, such as Railway companies, the Bill has been so modified as to enable the Local Government at any time to modify any scale of charges and require it to be altered in accordance with the interests of the public at large.

"These are the only changes of importance which the Select Committee has made in the Bill; the others being for the most part verbal alterations or alterations which explain themselves."

The Council adjourned to Saturday, the 4th January, 1890.

C. H. REILY,

Assistant Secretary to the Govt. of Bengal,
Legislative Department.

CALCUTTA;
The 31st December, 1889.

HORSE AND CATTLE SHOW AT BOMBAY IN HONOUR OF THE VISIT OF H. R. H. PRINCE ALBERT VICTOR OF WALES.

The 30th December, 1889.—The following circulars, issued by the Committee of the Horse and Cattle Show to be held at Bombay in honour of the visit of H. R. H. Prince Albert Victor of Wales, are published for general information.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Government of Bengal.

GRAND FETE IN HONOUR OF THE VISIT OF H. R. H. PRINCE ALBERT VICTOR OF WALES.

Patrons.

H. E. THE GOVERNOR.
H. R. H. THE COMMANDER-IN-CHIEF.
H. E. THE NAVAL COMMANDER-IN-CHIEF.
THE HON'BLE THE CHIEF JUSTICE AND THE JUDGES OF THE HIGH COURT.

THE MUNICIPAL CORPORATION FOR THE CITY OF BOMBAY AND THE PRINCES AND CHIEFS OF WESTERN INDIA.

6, *Apollo Street, Bombay,*
December 1889.

SIR,

WE are directed by the Committee of the Fête to be held in honour of the visit of H. R. H. Prince Albert Victor of Wales to ask your assistance in providing a show of the best Horses in the whole of India on the occasion of His Royal Highness's return to Bombay in March next. It is proposed to divide the classes into the following, each class being again subdivided according to the amount of support received :—

English thorough-breds and half-breds.
Australian and other Colonials.
Arabs.
Persians and Country breds.
Harness Horses, Hunters, Chargers, Hacks } of all sorts.

The Committee hope you will accord them your support by exhibiting as many as possible of each class, and, in order that the necessary arrangements can be made, will let them know as soon as possible how many animals and of what class you will be able to send.

We have the honour to be,

SIR,

Your most obedient servants,

H. M. PHIPSON,
J. H. STEEL,
J. J. B. BENSON,
H. C. BURDER,

Joint Honorary Secretaries to the Horse and Cattle Show Committee.

On the other side will be found the names of the Committee of the Horse and Cattle Show.

Chairman.

BRIG.-GENERAL W. T. BUDGEN.

Committee.

Col. Rawlins
Col. H. L. Nutt.
Major J. Humphrey.
Col. F. J. Wise.
F. Stockinger, Esq.
Pryce Weedon, Esq.
Dr. A. C. Gaye.
H. H. Akbar Shah.
Framji Dinshaw Petit, Esq.
T. M. Filgate, Esq.
Piercy Benn, Esq.
Dinshaw B. Lam, Esq.
Damodar Goculdas, Esq.
Umar bin Jamal Vuyani, Esq.
Vanmalidas Parshottum, Esq.
Reg. Gilbert, Esq.
Capt. J. Hext, R.N.
Fazulbhai Visram, Esq.
Major Webb.
Tribhowandas M. Nathubhai, Esq.
Ali bin Amir, Esq.
Sulleman Abdool Wahad, Esq.
Esau bin Curtas, Esq.
K. M. Shroff, Esq.
J. L. Symons, Esq.
N. S. Symons, Esq.
G. A. Kittredge, Esq.
C. L. Weber, Esq.
Goverdhandas D. Tejpal, Esq.
Jalbhai Ardeshir Sett, Esq.
Mansukram Surajram, Esq.
Capt. A. Phayre.
Vet.-Surg. J. Anderson.
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A. M. Gubbay, Esq.
S. A. Nathan, Esq.
M. M. Bhownuggree, C.I.E.

Honorary Secretaries.

H. C. Burder, Esq.
J. H. Steel, Esq., A.V.D.
J. J. B. Benson, Esq.
H. M. Phipson, Esq.

TEXT-BOOKS FOR VERNACULAR MEDICAL SCHOOLS.

GENERAL DEPARTMENT.

Calcutta, the 30th December, 1889.

RESOLUTION.

READ—

A letter from the Director of Public Instruction, No. 6937, dated the 13th December, 1889, and its enclosure, regarding text-books for Vernacular Medical Schools.

Read again—

Government Resolution, dated the 13th December, 1880, on the same subject.

The Director of Public Instruction has recommended the adoption of (1) "The Practice of Medicine" in Urdu by Assistant Surgeon N. C. Chakravarti, and (2) Honorary Surgeon Rahim Khan, Khan Bahadur's "Physiology," also in Urdu, as text-books in the Patna Medical School. The Lieutenant-Governor accepts the recommendation, but at the same time reserves to Government the right to substitute hereafter for the former work a translation, should one be made and approved, of Roberts' Hand-book of Medicine.

ORDER.—Ordered, that a copy of this Resolution be forwarded to the Director of Public Instruction for information.

Ordered also, that a copy of this Resolution be published in the *Calcutta Gazette.*

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Govt. of Bengal.

BHADOI AND WINTER RICE CROPS IN BENGAL, 1889.

The 31st December, 1889.—The following papers are published for general information.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,
Secretary to the Govt. of Bengal.

FORECAST OF THE OUTTURN OF THE WINTER RICE CROP IN BENGAL, 1889.

1. *Character of rainfall as affecting the crop.*—The distribution of rainfall most favourable to the winter rice crop is when premonitory showers fall in May or early in June. The rain in the end of June and in July should be heavy: then should come an interval of comparatively fair weather, in which weeding operations may be successfully prosecuted. The September rains must be heavy, shading off into fine weather with October showers. On the sufficiency of the September rains, more than of any other month, depends the character of the winter rice crop—the chief harvest in these provinces. In May and the early part of June of the present year, when the paddy lands are usually prepared and sown, there was a general deficiency of rain in Central and in many parts of Eastern Bengal, in all the districts of the Patna Division except Patna and Durbhunga, in Maldah, the Sudder subdivisions of Pooree and Balasore, and in Hazaribagh. It is reported that this deficiency retarded the cultivation of rice land, or prevented the sowing of early varieties of rice in the Cutwa and Culna subdivisions of Burdwan, Midnapore, Hooghly, the Sudder subdivision of Howrah, Baraset and Basirhat subdivisions in the 24-Pergunnahs, the Sudder, Chooadanga and Ranaghat subdivisions in Nuddea, the Sudder and Bongong subdivisions in Jessore, the Sudder and Lalbagh subdivisions in Moorshedabad, Khoolna, Dacca, the Serajgunge subdivision in Pubna, Backergunge, Tipperah and Noakhally; also in the Sudder subdivisions of Balasore and Pooree.

2. In July, August, and the beginning of September, when the seedlings are usually transplanted, and paddy is in full growth, the crop is reported to have been damaged by deficiency of rain in many parts of Central Bengal, and unfortunately many of these places were the same that had been affected by deficiency of rain at sowing time. The tracts specially affected in this way are the Culna and Cutwa subdivisions in Burdwan, the Sudder and Lalbagh subdivisions in Moorshedabad, the Sudder, Chooadanga, and Ranaghat subdivisions in Nuddea, the Bongong and Sudder subdivisions in Jessore. The crop also suffered somewhat from deficiency of rain at this period in Patna, Chumparun, South Bhagulpore, Maldah, and the Sonthal Pergunnahs; in the Sudder subdivision of Balasore, in Hazaribagh, and in the Palamow subdivision of Lohardugga. It suffered, on the other hand, from excess of rain during the same months in Rungpore, Mymensingh, Julpigoree, and North Bhagulpore.

3. The third critical period in the cultivation of paddy extends over the latter part of September and the month of October, when the crop is in flower, and requires showers to enable it to mature. In Central and Eastern Bengal the rainfall was favourable during this period. But want of rain was more or less felt in all the districts of the Patna Division, in Monghyr and South Bhagulpore, in Palamow, Govindpore (Manbhoom), and in Singbhoom. A cyclonic storm swept over the Orissa coast on the 20th November, which was followed by heavy rain in Orissa, rather heavy rain in South-West and East Bengal, and moderate but general rainfall over the remainder of the province. This unusual fall is reported to have caused damage to the rice crop in Pooree, and in the Balasore, Cuttack, and Singbhoom districts, it may be said generally that the unusual rains of November injured the early varieties of rice where they were then ripening, but either did no harm to, or benefited, the later varieties.

4. *Floods.*—Floods caused loss in the Meherpore subdivision in Nuddea, the Sudder, Lalbagh, and Jungipore subdivisions in Moorshedabad, the Gaibanda subdivision in Rungpore, Pubna, the Munshigunge and Maniokgunge subdivisions in Dacca, and parts of Furreedpore; also in the Sudder and Dinapore subdivisions in Patna, the Sudder and Hajeepore subdivisions in Mozufferpore, the Sewan subdivision in Sarun, and the Sudder subdivision of Purneah, and in Pooree. In parts of the Contai subdivision, in Midnapore, some damage was caused by defective drainage.

5. *Insects.*—Damage by insects is reported only from Backergunge.

Chairman.

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2. In July, August, and the beginning of September, when the seedlings are usually transplanted, and paddy is in full growth, the crop is reported to have been damaged by deficiency of rain in many parts of Central Bengal, and unfortunately many of these places were the same that had been affected by deficiency of rain at sowing time. The tracts specially affected in this way are the Culna and Cutwa subdivisions in Burdwan, the Sudder and Lalbagh subdivisions in Moorshedabad, the Sudder, Chooadanga, and Ranaghat subdivisions in Nuddea, the Bongong and Sudder subdivisions in Jessore. The crop also suffered somewhat from deficiency of rain at this period in Patna, Chumparun, South Bhagulpore, Maldah, and the Sonthal Pergunnahs; in the Sudder subdivision of Balasore, in Hazaribagh, and in the Palamow subdivision of Lohardugga. It suffered, on the other hand, from excess of rain during the same months in Rungpore, Mymensingh, Julpigoree, and North Bhagulpore.

3. The third critical period in the cultivation of paddy extends over the latter part of September and the month of October, when the crop is in flower, and requires showers to enable it to mature. In Central and Eastern Bengal the rainfall was favourable during this period. But want of rain was more or less felt in all the districts of the Patna Division, in Monghyr and South Bhagulpore, in Palamow, Govindpore (Manbhoom), and in Singbhoom. A cyclonic storm swept over the Orissa coast on the 20th November, which was followed by heavy rain in Orissa, rather heavy rain in South-West and East Bengal, and moderate but general rainfall over the remainder of the province. This unusual fall is reported to have caused damage to the rice crop in Pooree, and in the Balasore, Cuttack, and Singbhoom districts, it may be said generally that the unusual rains of November injured the early varieties of rice where they were then ripening, but either did no harm to, or benefited, the later varieties.

4. *Floods.*—Floods caused loss in the Meherpore subdivision in Nuddea, the Sudder, Lalbagh, and Jungipore subdivisions in Moorshedabad, the Gaibanda subdivision in Rungpore, Pubna, the Munshigunge and Maniekgunge subdivisions in Dacca, and parts of Furreedpore; also in the Sudder and Dinapore subdivisions in Patna, the Sudder and Hajeepore subdivisions in Mozufferpore, the Sewan subdivision in Sarun, and the Sudder subdivision of Purneah, and in Pooree. In parts of the Contai subdivision, in Midnapore, some damage was caused by defective drainage.

5. *Insects.*—Damage by insects is reported only from Backergunge.

6. *Distressed areas.*—An 8-anna crop is believed to be sufficient to enable the people to tide over a year of short harvest; the outturn of the current year, as estimated by Collectors, and the estimated outturn of last year in the tracts of seriously deficient harvest, are—

Place.	Estimated outturn this year in annas.	Outturn of last year in annas.
Burdwan—		
Cutwa	4	10
Culna	7	10
Sudder	9	10
Hooghly—		
Sudder	8	13
Nuddea—		
Sudder	8	5
Chooadanga	8	12
Ranaghat	8	6
Jessore—		
Bongong	10	8
Moorshedabad—		
Sudder	8	9
Lalbagh	10	10
Balasore—		
Sudder	9½	9
Lohardugga—		
Palamow	10	10

7. It will be observed that the areas of bad harvest in Central Bengal (Burdwan, Hooghly, Nuddea, Jessore, 24-Pergunnahs, and Moorshedabad) are all situated in a block, in close proximity to one another. In some of them the harvest was short last year, and in none was it what might be called a good one, so that there cannot be large stores of grain in stock; but all these areas enjoy special facilities for importation, and being close to Calcutta and other manufacturing centres, the inhabitants of them are comparatively prosperous. There is reason to believe that the outturn in Cutwa and Culna has been under-estimated. Though there is cause for exercise of vigilance on the part of the local authorities in the subdivisions named above, it may yet be hoped that there will be no actual distress.

8. In most of the chief rice-growing districts an average, and in some more than an average, crop will be reaped. Looking to the vast extent of country under rice in Bengal, aggregating over fifty-two thousand square miles, and to the widely different conditions of soil, some highly and some lowly situated; and having regard to the varying conditions of climate which prevail in different parts of these provinces, it must always be expected that the crop will suffer in some particular tracts, either from deficiency of rainfall on the one hand, or from excess of rain and floods on the other. The present year is not exceptional in this respect. For the province as a whole, it may be said that the rice crop is far better than that of last year, and that on the whole an average, or nearly an average, crop may be expected.

9. In the statements annexed the estimated outturn for each district is given, and a detailed examination of the statistics of rainfall in each district is made with special reference to the reported estimated outturn. These estimates have been prepared by Collectors of districts after consulting zemindars, European residents, and other local reporters. They have not, however, it is necessary to repeat, any pretensions to statistical accuracy.

10. Following the nomenclature prescribed by the Government of India, 20 annas is taken to represent a bumper crop, 16 annas an average, and 12 annas three-fourths of an average crop.

M. FINUCANE,
Director of the Dept. of Land Records and Agriculture, Bengal.

CALCUTTA,
The 24th December 1889.

STATEMENT I.—*Estimated outturn of winter Rice crop now being reaped.*

1	2	3	4	5	6	7	REMARKS BY THE AGRICULTURAL DEPARTMENT, BENGAL.
DISTRICT.	Sub-division.	Total area of sub-division in square miles.	Total area estimated to be under cultivation in square miles.	Estimated area under winter rice, aman or hymanti, in square miles.	Estimated outturn of this year's winter rice crop expressed in annas.*	Outturn of winter rice of previous year expressed in annas.	
Burdwan	Sudder	1,542	908	486	9 annas	10 annas	*Burdwan.*—In the Sudder sub-division the rainfall was sufficient in May, June, and July: it was very deficient in August (the actual rainfall being only 5·39 against the normal fall of 12·38 inches), and this deficiency largely interfered with transplanting operations. In September the rainfall was sufficient, and the ryots must have tried to complete the transplanting of lands that could not be planted in the preceding month; but unfortunately there followed dry weather in October with a fall of only 1·44 inches against the normal of 4·40 inches. The early varieties of paddy which ripen in November were injuriously affected by this drought, and still more so by the unusually plentiful showers which fell in the first and third weeks of November. The late varieties which mature in December must have been affected by insufficiency of rain in October, but the late rains of November instead of being injurious to them, would appear to have been beneficial, and partly counteracted the evil effects of short rain in October. The Collector's return of a 9-anna crop for the Sudder sub-division appears to be justified by a consideration of the statistics of rainfall.
	Raneegunge	671	398	352	13 ,, ...	10 ,, ...	
	Cutwa	382	265	88	4 ,, ...	10 ,, ...	
	Culna	438	350	175	7 ,, ...	10 ,, ...	
	District Total ...	2,697	2,006	1,101	8 to 10 annas ...	10 annas	In the Cutwa sub-division the rainfall was very deficient in May and in the first-half of June, but was normal in the last half of June and in July. It is probable that want of early rain interfered with the preparation of land for broadcasted paddy. The transplanting season (August and September) was characterized by short rains (13·91 inches against the normal fall of 20·89 inches). Thus the season was unfavourable to both broadcasted and transplanted paddy. In October the rainfall was also slightly deficient (2·51 inches against 3·85 inches). The unusually heavy rains of November undoubtedly injured the early varieties which were then ready for the sickle, while they may have benefited the later varieties. The Collector's estimate of 4 annas appears to be unduly low. In the adjoining districts of Nuddea and Moorshedabad the estimated outturn is nowhere below 8 annas. It is therefore probable that in Cutwa the outturn has been somewhat under-estimated. The actual outturn will probably be 6 to 8 annas. There is cause for exercise of vigilance on part of the authorities in this and the Culna sub-division.
							In the Culna sub-division the character of the rainfall was analogous to that in the Sudder sub-division, with this exception that it was more deficient in July and August at the time of transplanting in the former sub-division than in the latter. A low outturn of 7 annas for Culna is therefore reasonable.
							In the Raneegunge sub-division the character of the rainfall has been uniformly favorable excepting in August, which had a slightly deficient rainfall. In October the fall was deficient, but the deficiency cannot have done much harm, as there was sufficient rainfall in September and plentiful rain fell early in November. A full average crop is likely to be reaped. The Collector's return is 13 annas. The recent rains in November do not appear to have affected the paddy crop, although abnormally heavy (9·33 inches against 0·13 inch). Taking the Burdwan district as a whole, it would appear that the rainfall has been more or less unfavourable to transplanted paddy except in the Raneegunge sub-division, and also to broadcasted paddy in the Cutwa sub-division. The late rains of November appear to have slightly improved the prospects of the crop. Not more than a 10-anna crop, as the Collector estimates, can be reasonably expected for whole district. The area under rice in Culna and Cutwa, which appears to be seriously affected, bears a small proportion to the total rice area of the district (263 miles against 1,101 miles).
Bankoora	Sudder	1,921	670	570	12 annas	10 annas	Deficiency of rainfall in the month of Sravan (July-August) or at the time of transplantation has affected the outturn this year, whereas the short outturn of the last year was due to scanty rainfall in September and October 1888.
	Bishenpore	700	350	290	14 ,, ...	8 ,, ...	
	District Total ...	2,621	1,020	860	13 annas	9 annas	

* 20 annas represents a bumper crop, 16 annas an average crop, and 12 annas a three-fourths of an average crop.

1	2	3	4	5	6	7	
District.	Sub-division.	Total area of sub-division in square miles.	Total area estimated to be under cultivation in square miles.	Estimated area under winter rice, aman or hymanti, in square miles.	Estimated outturn of this year's winter rice crop expressed in annas.*	Outturn of winter rice of previous year expressed in annas.	Remarks by the Agricultural Department, Bengal.
Beerbhoom	Sudder	1,106	777	604	.....	10 annas	The rainfall was generally favourable to the rice crop in this district. Though somewhat deficient in August (8·96 as against normal 13·77), it was yet sufficient for the transplanting operations. In October the rainfall in the Rampore Hât subdivision was less than the normal, being only 0·64 against 3·69; but as there was copious rain in September and again in November, the crop did not suffer. An excellent outturn may therefore be expected. Taking 16 annas to represent an average crop, the outturn of this year is estimated at 18 annas.
	Rampore Hât	648	458	324	.....	10 ,, ...	
	District Total ...	1,756	1,235	928	18 annas	10 annas	
Midnapore	Sudder	3,252	1,767	1,242	14 annas	13 annas	*Midnapore.*—In May the rainfall was somewhat deficient (2·45 inches against 5·05 inches); but since then the season has been generally favourable, the fall of each month being quite sufficient, and closely agreeing with the normal. In August the fall was somewhat below the normal, but yet sufficient. The comparatively short outturn is attributed in the Sudder, Ghatal, and Tumlook sub-divisions to short rains in May and the early part of June. The Collector estimates the outturn at 15 annas. A more than average crop is expected in the Contai sub-division, where owing to floods the crop was very deficient during the past three years.
	Contai	881	710	641	17 ,, ...	8 ,, ...	
	Ghattal	366	228	206	14 ,, ...	8 ,, ...	
	Tumlook	620	465	433	14 ,, ...	10 ,, ...	
	District Total ...	5,119	3,170	2,522	About 15 annas ...	About 10 annas ...	
Hooghly	Sudder	442	276½	221	8 annas	13 annas	*Hooghly.*—The rainfall was much below the average in May and early June, but was favourable at other periods. The character of the rainfall appears to have been the same in all three sub-divisions. The Collector estimates the outturn in the Sudder sub-division at 8 annas, while he gives 12 and 14 annas in the Serampore and Jehanabad sub-divisions respectively, and the district outturn he estimates at 10 annas of an average crop. The reason of the difference in the estimated outturns of the various sub-divisions is not apparent. The outturn of the whole district is probably under-estimated.
	Serampore	343	250	157	12 ,, ...	10 to 12 annas ...	
	Jehanabad	438	283	131	14 ,, ...	12 annas	
	Howrah	171	103	88	14 ,, ...	9 ,, ...	
	Ulluberiah	303	200	150	14 ,, ...	8 ,, ...	
	District Total ...	1,697	1,090½	747	10 annas	10½ annas	
24-Pergunnahs	Sudder and amalgamated part of Suburbs, including late Barripore subdivision.	1,070	717	585	15 annas	8 annas	The rainfall has been generally favourable. The crop is reported to have been slightly damaged by the late rain in November.
	Diamond Harbour... ...	513	453	443	15 ,, ...	6 ,, ...	
	Baraset	892	243	182	15 ,, ...	12 ,, ...	
	Basirhat	80	439	309	15 ,, ...	12 ,, ...	
	Barrackpore	42	12	6	15 ,, ...	9 ,, ...	
	Dum-Dum	58	31	27	15 ,, ...	8 ,, ...	
	District Total ...	2,603	1,895	1,552	15 annas	9 annas	
Khoolna	Sudder	1572·40	899	317	.....	10 annas	Rainfall was deficient in May, being ·99 inch against normal 6·61. This deficiency to some extent interfered with the preliminary operations of cultivation.
	Satkhira	1273·88	449	300	.....		
	Bagirhat	1508·63	550	300	.....		
	Area of boundary khals and rivers of Sunderbunds in this district.	499	...	...	.....		
	District Total ...	†4849·91	1,358	917	13 annas	10 annas.	

Nuddea	Sudder	761	494	159	8 annas	5 annas	*Nuddea.*—The Collector returns an 8-anna crop for the Sudder, Chuadanga, and Ranaghat sub-divisions, and a 12-anna crop for the Meherpore and Kushtea sub-divisions. The conditions of rainfall in the Sudder and Chuadanga sub-divisions were the same as in the Cutwa sub-division of Moorshedabad, namely, great deficiency in May and early June at the time of preparing the rice lands, and again in August and September at the time of transplantation. In May there was only a fall of 1·51 inches against 6·26 inches in the Sudder, and 1·95 inches against 7·56 inches in the Chuadanga sub-division; and in August and September there were 13·18 inches against 21·39 inches in the former, and July and August, 15·31 inches against 22·77 inches in the latter. The deficiency of rainfall at these critical periods must have seriously affected the crop. An estimate of an 8-anna crop in the Sudder sub-division seems to be reasonable, but a slightly higher outturn is likely to be obtained in the Chuadanga sub-division.
	Chuadanga	497	273	60	8 ,, ...	12 ,, ...	
	Kushtea	558	413	104	12 ,, ...	7 ,, ...	
	Meherpore	627	500	63	12 ,, ...	About 12 annas ..	
	Ranaghat	427	250	64	8 ,, ...	6 annas	
	District Total ...	2,750	1,930	449	About 10 annas ...	About 10 annas ..	The statistics of rainfall recorded at Ranaghat Station show some deficiency in May; but since then, there does not appear to have been want of rain. In June, September, and October the rainfall was in excess of the normal. The Collector remarks that the crop was injuriously affected by want of rain at sowing time, and also at the time of transplantation: the rainfall statistics do not bear out the latter statement. If the distribution of rainfall over the sub-division is to be judged by the fall recorded at Ranaghat, the Collector's estimate of 6 annas would appear below the mark; but looking to the reported prospects of the rice crop in the neighbouring sub-divisions of Culna, the Sudder sub-divisions of Nuddea and Chuadanga, a better crop than 8 annas in the Ranaghat sub-division cannot, probably, be looked for. The distribution of rainfall in the remaining two sub-divisions—Meherpore and Kushtea—was favourable to the rice crop except in May when the fall was short of the normal; but the deficiency was made up by ample rain in June. In Kushtea there had been deficiency of rain in October, which was compensated for by the showers which fell in the first week of November. The Collector's estimate of 12 annas is fully borne out by the rainfall statistics. In the Meherpore sub-division a full average crop, or at any rate a 14-anna crop, could have been reaped but for damage caused by floods. A ten-anna crop for the Nuddea district as a whole may be accepted. The Collector in a recent telegram estimates the outturn for the whole district at 8 annas, reducing the previous estimate by two annas.
Jessore	Sudder	889	475	260	16 annas	16 annas	The conditions of rainfall in the Bongong sub-division were unfavourable to the rice crop. The fall in May was very deficient, being only 1·23 inches against a normal fall of 5·42 inches. It was again very deficient in August and September, being only 10·14 inches against a normal fall of 21·31 inches. Under these circumstances more than a 10-anna crop as estimated by the district officer cannot be looked for. In the Sudder sub-division the conditions of rainfall were similar to those obtaining in Bongong, but somewhat more favourable. In May there were only 2·14 inches out of a normal fall of 7·23 inches, and in August only 7·17 against 11·76 inches. The Collector's estimate of a 16-anna crop, therefore, seems to be much above the mark: 12-annas seems to be a more reasonable estimate. In the remaining sub-divisions of Narail, Jhenidah, and Magoora, the season proved favourable on the whole, and a full average crop may be expected.
	Bongong	649	389	259	10 ,, ...	8 ,, ...	
	Narail	487	365	273·9	15 ,, ...	15 ,, ...	
	Magoora	425	268	128	16 ,, ...	9 ,, ...	
	Jhenidah	475	317	160	16 ,, ...	12 ,, ...	
	District Total ...	2,925	1,814	1020·9	14 annas	12 annas	
Moorshedabad	Sudder	767	576	84	8 annas	10 annas	The Collector estimates the rice crop in the Sudder and Lalbag sub-divisions at 8 annas and 10 annas respectively. He attributes the short crop to want of rain at the ploughing and sowing time (*i.e.* May and June), and to subsequent damage by floods. There can be no doubt that disastrous floods caused damage in many parts of these sub-divisions; but the statistics of rainfall do not bear out the statement that there was deficient rain in May and June. At Berhampore 7·74 inches of rain fell in May against the average fall of 4·95 inches, and 10·12 inches fell in June against the average of 9·29 inches. At Lalbagh 5·39 inches in May and 5·78 inches in June were recorded against 4·84 inches and 8·16 inches respectively. The rainfall recorded at Lalbagh in June fell somewhat short of the average, but with the plentiful rain of the preceding month it should have been sufficient for the purpose of cultivation. While the rainfall of May and June appears to have been quite sufficient, the rainfall in August at the time of transplanting the paddy seedlings, and in October, when the paddy was in flower and was in need of moisture, was insufficient in both the Sudder and Lalbagh sub-divisions, as shown by the following figures:—
	Lalbag	572	223	204	10 ,, ...	10 ,, ...	
	Jangipore	508	444	63	19 ,, ...	12 ,, ...	
	Kandi	513	409	307	18 ,, ...	12 ,, ...	
	District Total ...	2,159	1,652	658	14 annas	11 annas	

	August.		October.	
	Inches.	Inches.	Inches.	Inches.
Lalbagh	7·36 against	12·71	6·07 against	10·91
Sudder	2·43 against	4·26	1·31 against	5·20

It is not stated over what area the damage was caused by floods.
In the remaining two sub-divisions, the Collector estimates the yield at 18 annas, which may be accepted, seeing that the rainfall was all that could be desired.
The first estimate of the rice-crop for the district as a whole was 13½ annas; but this has been recently reduced to 12 annas. This may be due to losses caused by the abnormal rains of November, but is not so stated.

* 21 annas represents a bumper crop, 16 annas an average crop, and 12 annas a three fourths of an average crop.
This includes Sunderbans, 2773·91 square miles, appertaining to this district.

1	2	3	4	5	6	7	8
District.	Sub-division.	Total area of sub-division in square miles.	Total area estimated to be under cultivation in square miles.	Estimated area under winter rice, aman or hymanti- in square miles.	Estimated outturn of this year's winter rice crop expressed in annas.*	Outturn of winter rice of previous year expressed in annas.	Remarks by the Agricultural Department, Bengal.
Dinagepore	Sudder	3,251	1,950	1,450	16 annas	6 annas	
	Thakurgaon	867	650	500	16 ,, ...	6 ,, ...	
	District Total ...	4,118	2,600	1,950	16 annas	6 annas	
Rajshahye	Sudder	944	585	336	17 annas	14 annas	The rainfall appears to have been wholly favourable except in May when it was deficient. A full average crop may be expected in Dinagepore, and more than an average crop in Rajshahye.
	Nattore	817	591	578	14 ,, ...	14 ,, ...	
	Nowgong	603	500	300	20 ,, ...	12 ,, ...	
	District Total ...	2,364	1,676	1,214	17 annas	13 annas	
Rungpore	Sudder	1,151	900	675	16 annas	10 annas	The distribution of rainfall was on the whole favourable. The rainfall in May and October was short of the normal of this district, but was yet sufficient. Full average crops are expected in the Sudder and Kurigram sub-divisions. In the Nilphamari sub-division the crop was somewhat damaged by excessive rainfall in June, July, and August, and in the Gaibanda sub-division the overflowing of the Brahmhaputra caused some loss to rice growing on char lands.
	Nilphamari	638	480	360	12 ,, ...	12 ,, ...	
	Kurigram	937	700	500	16 ,, ...	14 ,, ...	
	Gaibanda	760	570	440	14 ,, ...	10 ,, ...	
	District Total ...	3,486	2,650	1,975	16 annas	About 11 annas ...	
Bogra	Bogra	1,462	913	560	17 annas	10 annas	The rainfall was sufficient and timely. More than an average crop is expected.
Pubna	Sudder	890	667	356	12 annas	12 annas	In this district the distribution of rainfall was favourable, and full average crops might have been reaped but for loss caused by the overflowing of the Ganges (Padma). As it is, a 13-anna crop is expected.
	Serajgunge	957	718	218	14 ,, ...	12 ,, ...	
	District Total ...	1,847	1,385	574	13 annas	12 annas	
Darjeeling	Kurseong	185	12	.....	.....	12 annas	The rainfall was favourable, except that it was slightly deficient in May and in October. The district officer estimates 14½ annas for the whole district.
	Silliguree	253	174	94	15 annas	10 ,, ...	
	Kalimpong	728	89	16	14 ,, ...	14 ,, ...	
	Darjeeling						
	District Total ...	1,164	275	110	14½ annas	12 annas	
Julpigoree	Bykantpore Pergunnah ...	447	296	160	12 annas	10 annas	The Deputy Commissioner at first estimated the outturn at 13 annas for the district as a whole, but in reply to a recent telegram has increased the estimate to 14 annas. This improvement is probably due to the rain which fell in November. The rainfall was in excess of the normal in June and July. This, the Deputy Commissioner reports, did good to the paddy crop in two tehsil circles, while it is reported to have produced the opposite result in the Mynagori circle.
	Boda Pergunnah	462·72	295	180	12 ,, ...	8 ,, ...	
	Patgram ,, ...	88·88	75	45	12 ,, ...	8 ,, ...	
	Mynagori Tehsil	334	203	128	10 ,, ...	11 ,, ...	
	Fallacota ,, ...	742	320	240	12 ,, ...	12 ,, ...	
	Alipore ,, ...	517	260	170	12 ,, ...	6 ,, ...	
	Bhulka Sub-tehsil	138	50	45	10 ,, ...	12 ,, ...	
	District Total ...	2351·60	1,421	968	About 14 annas	9½ annas	

Dacca	Sudder	1,366	633	462	14 annas	16 annas	The distribution of rainfall was favourable to the winter rice crop throughout the district. But the Collector's estimate is 2 annas below the average. Among the causes for the deficient outturn are given want of rain at the time of sowing. This is not borne out by the statistics of rainfall. In May and June the mean rainfall of the district was 8·16 inches and 21·53 inches against the average of 5·70 inches and 12·91 inches respectively. There was, however, a deficient fall in April (2·48 inches against 4·50 inches), that may have interfered with the preparation and sowing of the low lands which require to be sown very early in the season. Early rise of the rivers and high floods to some extent injured the crop; the abnormal rains of November also caused damage to the extent of one-anna in each subdivision.
	Manickgunge	489	366	320	14 ,, ...	14 ,, ...	
	Munshigunge	491	200	60	12 ,, ...	16 ,, ...	
	Narainsunge	641	350	90	16 ,, ...	12 ,, ...	
	District Total* ...	2,727	1,549	912	13 to 14 annas... ...	14½ annas.	
Furreedpore	Sudder Sub-division ...	860	602	451½	14 annas	14 annas	The Collector's first estimate was between 13 and 14 annas for the whole district; his later return gives a 12-anna crop. In submitting his previous estimate, the Collector remarked that the sudden rise of water after sowing caused some damage, which was, however, more than compensated for by the late rains in the beginning of November. Assuming this to have been the case, it is not yet clear why the rice-crop should fall below the average. There was a slight deficiency of rainfall in April and May as compared with the normal falls of those months, which may have caused some injury. The Collector's estimate is probably under the mark.
	Madaripur	979	652	440	14 ,, ...	14 ,,	
	Goalundo	928	321	214	12 ,, ...	12 ,,	
	District Total ...	2,267	1,575	1,105½	More than 13 annas ..	More than 13 annas.	
Backergunge	Barisal	1,111	650	450	16 annas	15 annas	The rainfall was sufficient and seasonable excepting in May, when it was short of the normal (3·8 inches against 7·8 inches). This deficiency and attacks of insects caused slight injury. The Collector's first return was 15½ annas for the whole district; his present return is 16 annas. An average crop may be expected.
	Perozepur	692	500	370	14 ,, ...	12 ,,	
	Patuakhali	1,231	510	350	16 ,, ...	12 ,,	
	Bhola	615	400	250	16 ,, ...	13 ,,	
	District Total ...	3,649	2,050	1,420	About 16 annas ...	About 12 annas.	
Mymensingh	Sudder	1,849	1,061	375	18 annas	16 annas	Throughout the whole district there was considerable excess of rainfall over the normal in every month between June and October. The excess was specially marked in the Netrokona and the Sudder sub-divisions. To this the Collector attributes the short outturn (12 annas) in the Netrokona sub-division. In the rest of the district the excess rainfall is not stated to have caused any damage, but considering that rain fell at Mymensingh on 28 days out of 30 in June and on 27 days out of 31 in July, it appears probable that excessive rainfall did some damage to the crop.
	Attia	1,061	780	351	16 ,, ...	16 ,,	
	Jamalpore	1,244	830	415	14 ,, ...	12 ,,	
	Netrokona	1,389	694	500	12 ,, ...	16 ,,	
	Kissoregunge	744	350	175	14 ,, ...	12 ,,	
	District Total ...	6,287	3,715	1,605	16 annas ...	14 annas.	The Collector's first estimate was 15 annas for the whole district; his subsequent estimate is a 16-anna crop. On the whole an average crop may be expected.
Tipperah	Brahmanberiah	769	553·68	359·892	19 annas	} 14 annas	The rainfall was seasonable and sufficient, although somewhat short of the normal in May, July and August.
	Chandpore	580	415	500	18 ,, ...		
	Commillah or Sudder Subdivision.	1,142	856·5	599·55	16 ,, ...		The Collector at first estimated the outturn at 18 annas, but owing to the abnormal rains of the latter end of November has reduced his estimate to 16 annas. More than an average crop may be expected.
	District Total ...	2,491	1825·18	1259·442	18 annas	14 annas.	
Noakholly	Sudder	1,298	1,000	800	....	} 15 annas	The rainfall closely agreed with the normal in every month excepting May, when it was deficient. To this deficiency the Collector at first attributed loss to the extent of 3 annas, but he has now raised his estimate to 18 annas. A crop above the average may be expected.
	Fenny	343	280	216	.....		
	District Total ...	1,641	1,280	1,016	18 annas	15 annas.	
Chittagong	Sudder	1,630	611·25	382	16 annas	} 13 annas	The rainfall was good and timely, and a full average crop is expected.
	Cox's Bazar	937	633·68	466	16 ,, ...		
	District Total ...	2,567	1244·93	848	16 annas	13 annas.	
Chittagong Hill Tracts	Sudder	3583·5	44·95	7·50	12 annas	} 8 annas	At first the Deputy Commissioner estimated the outturn at 16 annas, but owing to damage caused by the rains of November has reduced his estimate to 12 annas.
	Sungco	1835·5	22·76	4	12 ,, ...		
	District Total ...	5,419	67·71	11·50	12 annas.	8 annas.	

* 20 annas represents a bumper crop, 16 annas an average crop, and 12 annas a three-fourths of an average crop.

1	2	3	4	5	6	7	8
District.	Sub-division.	Total area of sub-division in square miles.	Total area estimated to be under cultivation in square miles.	Estimated area under winter rice, aman or hymanti, in square miles.	Estimated outturn of this year's winter rice crop expressed in annas.*	Outturn of winter rice of previous year expressed in annas.	Remarks by the Agricultural Department, Bengal.
Patna	Sudder	617	457	216	14 annas	10 annas	The rainfall in the Sudder sub-division was seasonable and sufficient. In July there was a slight deficiency (6·84 inches against a normal 11·59 inches), but the fall still sufficient for rice cultivation. A bumper crop would be reaped but for the fact that rain withheld altogether from the 24th of September to the 26th of October, *i.e.*, during the *katiya*, when it was urgently wanted. A 15-anna crop is a reasonable estimate.
	Dinapore	143	116	86	11 ,, ...	5½ ,, ...	In the Dinapore sub-division some damage was done by floods. The rainfall appears to have been slightly deficient in May—·74 inches against 1·61 inches. This may have affected the sowings to a slight extent. There was no rain during the *katiya* which must have further affected the outturn, but the Collector does not notice this fact. Taking the above facts into consideration, viz., damage by flood, slight deficiency of rainfall in May, and drought in October, a 12-anna crop, as estimated by the Collector, may be accepted.
	Barh	526	225	90	12 ,, ...	8 ,, ...	In the Barh sub-division the conditions of rainfall were not altogether favourable. In August and September the fall was much below the average, only 11·86 inches against an average of 17·68 inches. In October want of rain was beginning to be felt, but timely showers fell on the 8th and 11th of the month. The Collector's estimate for this sub-division is a 13-annas crop.
	Behar	793	575	402	11 ,, ...	6 ,, ...	In the Behar sub-division the season was not altogether favourable; the fall was slightly deficient in May, and also in September and October. During the two latter months, 5·48 inches and 0·36 inches were recorded at Behar against the corresponding averages of 6·38 and 3·06 inches respectively. The drought which occurred during the *katiya* was, however, partially relieved by rain on the 11th of October. The conditions of rainfall, so far as they can be judged from the meteorological returns, were only slightly, if at all, more unfavourable in the Behar than in the Barh sub-division. The Collector's estimate is, however, 11 annas for the Behar sub-division, which is 2 annas less than in the Barh sub-division.
	District Total ...	2,079	1,373	794	12 annas	6 annas	The Collector's first estimate for the whole district of Patna was a 13-anna crop; his present return is 12 annas, which may be accepted.
Gya	Sudder	1,859	1,434	968	12 annas	6 annas	Taking the district as a whole, the rainfall was deficient in May (·20 inch against 1·74 inches). This deficiency affected the rice crop to a certain extent. Again there was no rain during the *katiya*. Under the circumstances, a 12-anna crop, as estimated by the Collector, may be expected.
	Aurungabad	1,246	747	336	12 ,, ...	8 ,,	
	Nowada	1,020	765	573	14 ,, ...	7 ,,	
	Jehanabad	607	503	325	12 ,, ...	4 ,,	
	District Total ...	4,712	3,449	2,075	12 to 13 annas ...	6 annas	
Shahabad	Arrah	915	778	389·25	14 annas	12 annas	The rainfall was deficient throughout the district in May and the early part of June, but the want of rain at sowing time is noticed by the Collector only in respect of Arrah and Bhabua sub-divisions. Again, in the latter part of September and in October there was no rain in most parts of the district. About an inch of rain was, however, recorded at Arrah, and a little less than half an inch at Buxar. This probably prevented any loss of crop in the Arrah sub-division. No rain fell at Bhabua till the 22nd October. The Collector's estimate of a 14-anna crop for the entire district may be accepted.
	Buxar	656	563	282	14 ,, ...	12 ,, ...	
	Bhabua	1,301	976	468	14 ,, ...	10 ,, ...	
	Sasseram	2,495	687	374	14 ,, ...	10 ,, ...	
	District Total ...	4,365	3,004	1512·88	14 annas	11 annas	The rains which fell in the 4th week of October and early in November appear to have benefited the crop. In the middle of November, the rainfall exceeded the average at many stations, but was not so heavy as to injure the crop. It is probable that the late varieties of rice which were yet green and fresh were benefited.
Durbhunga	Sudder	1,222	929	595	17 annas	6 annas	A 17-anna crop is expected in this district. The season was, as the Collector observes, very favourable to the rice crop excepting during the *katiya*, when rain was wanting. Some rain fell, however, in the Sudder, Tajpore, and probably in the Madhubani sub-divisions early in October. The abnormal rains which fell in the middle of November over Orissa and Central Bengal were practically not felt in North Behar.
	Tajpore	764	649	211	16 ,, ...	10 ,, ...	
	Madhubani	1,349	1,025	719	18 ,, ...	6 ,, ...	
	District Total ...	3,335	2,603	1,515	17 annas	7 annas.	

Mozufferpur	Mozufferpur	1,218	957·03	602·82	12 annas	8 annas	The rainfall in May was deficient (·61 inch against 2·51 inches). The Collector does not notice whether this affected the rice crop in any way. Subsequently the rainfall was sufficient, and even in excess of the normal till the third week of September, since which time there was no rain till the middle of November. The absence of rain during the *katiya* has affected the crop throughout the district. The damage was further aggravated by floods in the Sudder and Hajeepur sub-divisions. Leaving out of consideration the deficiency in May, which cannot do much harm if closely followed by sufficient rain in June, the rainfall was wholly favourable, and a full average, if not a bumper crop would have been reaped but for the failure of *katiya* rain. The Collector's estimate of the crop at 14 annas appears reasonable. There was very little rain in the middle of November (·11 inch), and it cannot have affected the crop in any extent.
	Hajeepur	771	529·6	204·31	14 ,, ...	8 ,, ...	
	Sitamarhi	1,014	770·64	481	16 ,, ...	4 ,, ...	
	District Total ...	3,003	2257·27	1288·13	14 annas	About 7 annas	
Saran	Sudder	998	849	217	16 annas	8 annas	The conditions of rainfall in Saran were very similar to those in Mozufferpur. The rain which fell in the third week of November appears to have done good to the rice crop, as the Collector's present estimate is a full 15-anna crop.
	Sewan	855	693	255	16 ,, ...	8 ,, ...	
	Gopalgunge	771	563	239	16 ,, ...	13 ,, ...	
	District Total ...	2,623	2,105	711	16 annas	10 annas	
Chumparun	Motihari	1,518	1,022	359	16 annas	6 annas	The conditions of rainfall in Chumparun were similar to those in the two preceding districts. In August, however, the fall was short of the average (6·27 inches against 12·18 inches). This would appear to have interfered with transplanting operations, but no mention of this is made in the reports. Want of rain in October was greatly felt. The Collector's estimate of a 16-anna crop seems to be a little above the mark.
	Bettiah	2,013	1,200	700	16 ,, ...	7 ,, ...	
	District Total ...	3,531	2,222	1,059	16 annas	6½ annas	
Monghyr	Sudder	1,559	1,101	436	12 annas .. .	8 annas	The rainfall in this district was very favourable except at the close of the season. In the last week of September and the whole of October, there was no rain in the district with the exception of Begusarai, where a slight fall (·45 inch) on the 11th and 12th of October must have done good to the crop. The Collector estimates the outturn at 16 annas in this sub-division, and 12 annas and 14 annas respectively in the Sudder and Jamui sub-divisions, the average for the whole district being 14 annas. The fall in November was very slight—only ·12 inch.
	Begusarai	769	577	23	16 ,, ...	8 ,, ...	
	Jamui	1,593	1,062	700	14 ,, ...	9 ,, ...	
	District Total ..	3,921	2,730	1,159	14 annas	About 8 annas	
Bhagulpore	Sudder	936	655	550	11 annas	7 annas	In South Bhagulpore, including the Sudder and Banka sub-divisions, the Collector's estimate is an 11-anna crop. The short harvest is attributed by him to deficiency of rainfall at the time of transplanting. There was a deficient fall in August (6·67 inches against 12·23 inches), which must have affected the crop to a certain extent; but as it was preceded by good rain in July and followed by a copious fall in excess of the normal in September, the loss on this account could not have been as high as 5 annas. There was general absence of rain in the latter part of September and in October, and to this cause the short outturn is mainly due. In North Bhagulpore, including the Madehpura and Soopole sub-divisions, the fall was sufficient in May, but considerably in excess of the normal in June, July, August and September. To this excess the Collector attributes some loss in the Soopole sub-division. In October the fall was sufficient in the Madehpura sub-division, but very deficient in Soopole. A 16-anna crop, as estimated by the Collector may be reaped in Madehpura, but it may be doubted whether a 14-anna crop will be reaped in Soopole.
	Banka	1,185	888	687	11 ,, ...	7 ,, ...	
	Madehpura	872	564	339	More than 16 annas ...	8 ,, ...	
	Soopole	1,275	956	478	14 annas	6 ,, ...	
	District Total ...	4,268	3,065	2,054	More than 13 annas ..	7 annas	
Purneah	Sudder	2,572	1,929	643	12 annas	10 annas	The rainfall was favourable at every stage of paddy cultivation. The general absence of rain during the *katiya*, complained of from most districts of Behar, was not felt in Purneah. In the Sudder sub-division loss to the extent of 4 annas is said to have been done by floods; on the other hand, early floods did good to the crop in the Arrareah sub-division. No rain fell in November in this district. The outturn for the whole district is estimated at 15 annas.
	Kishengunge	1,340	1,005	502	16 ,, ...	8 ,, ...	
	Arrariah	1,044	700	500	18 ,, ...	8 ,, ...	
	District Total ...	4,956	3,634	1,645	15 annas	9 annas	
Maldah	Whole district	1,902	1,268	450	16 annas	16 annas	The rainfall appears to have been very deficient from May to August, only ·70 inch being recorded in May against a normal 4·5 inches, and only 12·7 inches in July and August against 23·53 inches. Although the fall in September was in excess of the normal, the deficiency in the previous months must have seriously affected the crop. The Collector, however, makes no remarks on this point, and estimates the outturn at 16 annas.

* 20 annas represents a bumper crop, 16 annas an average crop, and 12 annas a three-fourths of an average crop.

1	2	3	4	5	6	7	
DISTRICT.	Sub-division.	Total area of sub-division in square miles.	Total area estimated to be under cultivation in square miles.	Estimated area under winter rice, aman or hymanti in square miles.	Estimated outturn of this year's winter rice crop expressed in annas.*	Outturn of winter rice of previous year expressed in annas.	REMARKS BY THE AGRICULTURAL DEPARTMENT, BENGAL.
Southal Pergunnahs ...	Dumka	1,429	708	354	12 annas	....	The rainfall was sufficient and seasonable throughout. In August there was a slight deficiency (8·41 inches against 12·79 inches), but in July and September there was excess of rain. The Deputy Commissioner's remark that the rice crop has suffered from deficiency of rain after transplantation is not borne out by the records of rainfall. In October the rainfall closely agreed with the normal. The Collector estimates the yield at 14 to 15 annas.
	Deoghur	930	259	108	16 ,, ...	.....	
	Godda	966	676	381	13 ,, ...	.....	
	Rajmehal	740	555	409	16 ,, ...	.....	
	Jamtara	696	348	190	13 ,, ...	.....	
	Pakour	683	511	410	16 ,, ...	....	
	District Total ...	5,464	3,057	1,852	14½ annas	12 annas ...	
Cuttack ...	Sudder	989	533	419	16 annas	8 annas	The rainfall appears to have been very seasonable. In September the fall was apparently deficient (5·08 inches against 9·53 inches), but the deficiency was in the latter half of the month when rain was not required.
	Banki	116	52	28	16 ,, ...	8 ,, ...	The rainfall between the 14th and 21st November was abnormally heavy, and a storm occurred on the 28th, which did some harm to gurn rice, but the injury was not serious.
	Kendrapara	1,424	801	640	16 ,, ...	10 ,, ...	In Angul, the Superintendent of the Tributary Mehals estimates the outturn at 12 annas.
	Jajpur	1,104	500	450	16 ,, ...	7 ,, ...	
	Angul	.....	.....	.....	.....	.....	
	District Total ...	3,633	1,886	1,537	16 annas	About 8 annas	
Balasore	Sudder	1,158	670	589	8¼ annas	9 annas	The two sub-divisions of this district have differed greatly in respect of rainfall. In the Bhudruck sub-division, the season was altogether favourable, and a full average crop would be reaped were it not for the occurrence of a cyclone on November 28th. In the Sudder sub-division, on the other hand, the fall, as the Collector remarks, was singularly deficient in the period from June to September, as the following figures still show :—
	Bhudruck	908	720	580	13½ ,, ...	10 ,, ...	

	Actual fall.	Normal fall.
	Inches.	Inches.
June	4·35	8·71
July	4·43	13·83
August	11·31	13·78
September	4·37	12·63
	24·71	48·05

	District Total ...	2,066	1,390	1,169	About 11 annas ...	About 10 annas. ...	Under the circumstances a better crop than 11 annas, as estimated by the Collector, cannot be hoped for. During the November cyclone, 4·55 inches of rain fell in three days. This damaged the crop to the extent of 2 to 3 annas; so that in this sub-division it may be apprehended there may be tightness. Last year also the crop was a short one (9 annas).
Pooree	Sudder	1,530	720·380	506·630	14 annas ...	12 annas	The rainfall was very similar to that of Cuttack. In May the fall was somewhat deficient and late, but the Collector remarks the deficiency was made up by good rainfall afterwards. The excess of rain recorded in October (12·06 against 7·42 inches) affected the early varieties of paddy to some extent as it did in Cuttack.
	Khoorda	990·202	414·560	250·638	14 ,, ...	8 ,, ...	The Collector's first estimate was 16 annas, but the heavy cyclonic showers which fell in November seriously changed the aspect of the harvest. 14·94 inches of rain fell in this month against an average fall of 1·69 inches. The Collector reports that the loss from the heavy rains of November and from submersion of land is 2 annas. If this be correct, the outturn will be 14 annas.
	District Total ...	2520·202	1134·940	757·268	14 annas ..	10 annas.	

Hazaribagh	Giridih	2,446	1,280	675	18 annas	12 annas	A full crop (16 annas) is expected. The rainfall was somewhat deficient in May, otherwise it was uniformly favourable.
	Head-quarters	4,575	2,593	1,711	14 ,, ...	12 ,,	
	District Total ...	7,021	3,873	2,386	16 annas	12 annas.	
Lohardugga	Sudder	7,784	1,673	1,298	14 to 16 annas ...	7½ annas	In the head-quarters' sub-division the estimated outturn is 14 to 16 annas. The rainfall was on the whole favourable. But in the Palamow sub-division the fall was deficient in July, August and September, as the following figures will show :—
	Palamow	4,260	2,130	852	10 annas	10 ,,	
	District Total ...	12,044	3,803	2,150	12½ annas	9 annas.	To this and the absence of rain during the *katiya* is attributed the short harvest estimated at 10 annas. The November rains, which were not heavy (only ·85 inch), did not affect the crop.
Manbhoom	Govindpur	803	289	133	14 annas	12 annas	The rainfall was with slight exceptions favourable. In the Govindpur sub-division, the rainfall was similar to that of the Sudder sub-division, but unlike the latter, Govindpur had insufficient rainfall in October (·37 inch against 4·09 inches). This is said to have caused damage to the extent of 2 annas. In November 2·05 inches of rain fell against ·17 inch normal; but as it was distributed over several days, it did no harm. On the contrary, where rain had been previously short, it probably did some good.
	Sudder	3,344	1,203	553	14 ,, ...	10 ,,	
	District Total ...	4,147	1,492	686	14 annas	11 annas.	
Singbhoom	Kolhan	1,946	973	450	13 annas	14 annas	The rainfall in this district was deficient in July (8·79 inches against 14·99 inches) and also in September (2·81 inches against 6·38 inches). But for this deficiency and the absence of rain in the last week of September and the first week of October, the crop would have been, the Deputy Commissioner says, a bumper one. This does not appear likely, considering the great importance of the September rains. The Deputy Commissioner estimates the outturn for the whole district at 16 annas, which, having regard to the deficient rainfall, appears to be high. Heavy rains (2 to 4 inches) were recorded at several stations in Singbhoom in November. It is not stated whether they injuriously affected the crop.
	Porahat	660	247	150	15 ,, ...	14 ,,	
	Dhalbhum	1,147	573	400	18 ,, ...	14 ,,	
	District Total ...	3,753	1,793	1,000	16 annas	14 annas.	
	GRAND TOTAL FOR THE WHOLE OF BENGAL.	152,919·712	87,556·28	52,023·62	.....	.....	

	Actual fall.	Normal fall.
	Inches.	Inches.
July	7·49	12·56
August	4·33	12·03
September...	6·65	7·95
	21·47	32·54

† 20 annas represents a bumper crop, 16 annas an average crop, and 12 annas a three-fourths of an average crop.

Division.	District.	May.		June.		July.		August.		September.		October.		November.	
		Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.
Burdwan	Burdwan	5·01	3·59	9·23	10·92	11·80	8·43	12·36	5·90	7·87	6·50	4·16	1·77	0·42	6·76
	Bankoora	4·03	3·43	9·56	15·44	13·12	11·20	13·78	8·75	8·53	8·06	3·77	3·61	0·35	3·80
	Beerbhoom	3·40	4·15	9·10	12·23	12·85	10·00	13·67	8·96	9·16	9·67	3·41	0·85	0·21	3·45
	Midnapore	5·05	2·45	9·59	9·58	13·76	8·23	13·25	12·90	8·85	7·14	5·26	3·60	0·48	4·24
	Hooghly	5·34	1·75	9·75	11·73	12·74	9·03	14·21	8·16	8·43	6·16	4·07	3·89	0·35	2·87
	Howrah	5·81	3·68	9·45	13·74	13·13	14·96	14·28	12·30	8·64	5·88	3·65	5·82	0·43	2·26
Presidency ...	24-Pergunnahs... ...	5·79	3·22	9·63	14·84	12·97	11·80	13·72	10·30	9·62	7·47	4·46	7·76	0·40	3·89
	Khoolna	6·61	0·90	12·44	12·20	13·45	10·30	12·48	9·33	9·33	7·56	4·58	10·40	0·48	3·38
	Nuddea	6·35	2·38	9·62	11·27	10·48	8·63	12·19	8·72	8·52	9·58	4·17	4·19	0·39	7·40
	Jessore	7·01	2·67	12·10	13·07	11·55	9·00	11·54	7·75	8·43	7·14	4·45	7·25	0·46	7·08
	Moorshedabad ...	5·21	5·40	9·05	11·09	11·00	10·35	11·79	6·87	9·77	11·40	4·37	1·38	0·28	3·68
Rajshahye ...	Dinagepore	6·45	0·73	13·25	17·41	12·14	10·83	11·67	9·15	11·17	17·21	3·44	1·78	0·18	0·23
	Rajshahye	6·09	1·47	10·26	18·29	11·82	11·77	11·48	5·61	11·26	10·88	4·53	1·99	0·19	2·09
	Runapore	11·24	3·90	21·49	26·26	13·00	16·86	12·35	12·52	13·00	13·01	4·46	1·05	0·18	0·5
	Bogra	7·91	1·08	13·11	23·39	13·69	11·76	11·81	9·42	10·70	17·10	4·34	2·35	0·49	1·05
	Pubna	7·11	5·04	11·32	14·39	10·83	9·10	11·95	8·49	10·27	8·64	4·43	5·00	0·35	5·57
	Darjeeling	7·70	4·84	24·02	29·30	30·30	42·30	26·67	17·56	17·42	14·15	6·10	2·98	0·28	0·61
	Julpigoree	11·96	6·56	29·12	33·61	26·06	38·38	25·91	23·17	23·50	20·12	8·25	1·38	0·10	0·39
Dacca	Dacca	8·70	8·16	12·01	21·52	13·84	14·39	12·38	13·31	10·05	8·21	4·61	7·27	0·61	4·53
	Furreedpore	8·80	3·93	12·61	18·19	12·49	10·74	12·08	10·90	8·68	6·21	4·34	6·23	0·44	6·35
	Backergunge	7·80	3·80	18·66	20·52	18·78	15·04	16·14	16·57	11·36	9·18	5·62	9·90	1·29	2·86
	Mymensingh	9·94	8·6	17·42	26·63	13·55	18·39	14·07	16·65	12·94	15·54	5·32	7·18	0·34	1·78
Chittagong ...	Tipperah	10·21	6·03	17·21	18·09	15·27	10·23	16·37	7·28	11·58	9·51	5·26	8·37	0·79	2·71
	Noakholly	10·05	5·85	24·18	23·56	21·82	22·06	23·49	21·54	16·26	16·59	7·37	6·04	2·36	2·99
	Chittagong	6·54	5·28	26·32	20·75	28·02	28·03	23·48	29·13	14·07	16·68	6·60	5·00	2·06	1·88
	Chittagong Hill Tracts	...	...	...	...	...	...	...	...	...	...	...	...	1·91	4·88
Patna	Patna	2·18	2·24	5·95	11·58	12·12	10·60	10·58	12·88	7·20	8·84	2·97	0·25	0·22	0·19
	Gya	1·74	0·30	5·52	9·29	11·83	10·06	11·71	12·59	6·90	4·45	2·58	0·35	0·23	0·24
	Shahabad	1·30	0·36	5·30	5·03	11·97	10·78	11·40	14·07	7·29	5·23	3·19	1·08	0·26	0·08
	Durbhunga	2·68	1·61	8·00	11·82	11·60	13·88	10·71	11·65	9·25	13·86	2·72	0·22	0·06	0·01
	Mozufferpore	2·51	0·61	7·08	14·00	11·26	13·31	10·11	8·81	8·27	12·41	3·03	Nil	0·07	0·21
	Sarun	1·92	0·09	6·39	8·95	11·41	11·85	10·21	7·58	7·68	10·00	3·76	Nil	0·14	1·04
	Chumparun	2·60	0·95	8·31	17·70	12·12	20·15	12·18	6·27	9·05	15·42	3·46	0·16	0·04	0·67
Bhagulpore ...	Monghyr	2·34	1·00	6·38	9·58	11·89	10·51	11·21	8·07	7·75	11·59	3·13	0·09	0·22	0·10
	North Bhagulpore ...	3·96	1·25	8·71	14·51	11·61	16·25	11·87	15·43	9·76	16·61	3·36	0·66	0·10	Nil
	South Bhagulpore ...	2·64	1·42	7·77	11·89	10·91	10·52	11·23	6·67	7·98	10·21	3·64	0·26	0·18	0·15
	Purneah	5·59	2·57	12·98	20·04	15·47	28·32	14·63	11·54	13·53	21·61	3·43	0·70	0·21	Nil
	Maldah	4·50	0·70	10·00	7·98	11·50	8·70	12·03	4·00	10·52	15·85	3·62	2·06	0·23	0·47
	Sonthal Pergunnahs ..	3·75	2·62	8·59	11·33	12·97	13·81	12·79	8·41	8·06	12·31	3·62	3·48	0·26	1·70
Orissa	Cuttack	3·95	3·34	9·12	13·07	12·20	14·94	12·20	12·67	9·53	5·08	5·69	8·56	1·09	9·85
	Balasore	4·05	4·59	8·25	5·97	12·30	8·63	11·77	10·76	11·25	6·33	5·30	7·93	0·92	6·66
	Pooree	2·76	1·12	7·89	13·03	10·65	11·85	11·40	18·89	9·08	9·97	7·42	13·66	2·04	14·64
Chota Nagpore ...	Hazaribagh	2·38	1·20	7·90	7·13	13·10	11·06	13·07	11·66	8·10	7·06	3·26	2·08	0·28	1·35
	Lohardugga	2·35	1·08	7·00	7·44	12·94	8·08	12·51	12·34	8·94	8·56	2·47	3·41	0·41	0·97
	Manbhoom	3·25	1·87	8·42	10·59	11·53	10·37	12·87	7·83	7·68	7·33	3·66	1·09	0·15	2·05
	Singbhoom	4·17	1·96	8·01	16·37	14·00	8·79	13·78	12·55	8·38	2·81	2·94	3·84	0·24	2·44

RESOLUTION ON THE ADMINISTRATION REPORT OF THE HOOGHLY BRIDGE FOR THE YEAR ENDING THE 31ST MARCH 1889.

GOVERNMENT OF BENGAL—PUBLIC WORKS DEPARTMENT.

Marine.

No. 2907*Mne.*, *Calcutta, the* 30*th December* 1889.

RESOLUTION.

READ—

Administration Report of the Hooghly Bridge for the year ending the 31st March 1889.

Read again—

Public Works (Marine) Proceedings (A) for February 1889, Nos. 4 to 6, being the Administration Report of the Hooghly Bridge for 1887-88, together with the Resolution recorded thereon.

It was stated in the Resolution on the Administration Report of the Bridge for the last year that the Commissioners had paid off the whole of the Bridge debt due to Government. The only liability in the form of debt due from the Bridge Trust is a sum of Rs. 1,77,031, representing the portion of the capital chargeable to the Bridge in respect of the expenditure made from the proceeds of loans raised for the construction or acquisition of certain works and property designed for the joint use of the Port and Bridge Trusts. The annual charge for interest and sinking fund on this account amounts to Rs. 10,856.

2. The following table shows the actual receipts and expenditure of the Bridge during the year 1888-89, as compared with the estimated amounts, and also the actual income and expenditure of the previous nine years:—

Particulars.	1888-89. Estimated.	1888-89. Actual.	1887-88.	1886-87.	1885-86.	1884-85.	1883-84.	1882-83.	1881-82.	1880-81.	1879-80.
Receipts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Receipts from railway traffic ...	1,24,973	1,28,985	2,91,638	4,02,495	3,53,210	2,69,125	3,79,501	3,25,556	3,00,038	2,56,251	2,40,305
Ditto local ditto ...	93,757	94,000	1,27,253	1,40,740	1,40,687	1,28,301	1,22,200	1,11,813	1,10,969	99,907	1,00,348
Ditto hire of steamer *Helvetia* ..	1,000	906	419	489	4.0	446	937	2,219	1,951	2,032	2,218
Receipts from hire of steamer *Howrah* or *Buckland*.	.....	27	132	.....	.....	100	.....	1,841	4,709	6,211	9,786
Interest on Government securities ..	26,566	26,566	24,056	42,098	20,763	22,174	22,174	21,089	12,000	11,062	11,606
Proportion of rent of Head Office ...	523	487	528	528	523	527	574	580	652	652	653
Sale of engines and boilers of steam ferry *Howrah*.	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,537	.....
Miscellaneous	... ..	2,096	512	737	646	814	221	942	1,102	363	310
Proportion of earnings of steam-tug *Hetty*	10,000	8,515	13,038	9,303	11,102	17,372	11,088	21,541	13,256	12,836	.....
Rent of Bridge approach land ...	2,859	3,044	2,693	1,876	2,011	1,557	.....	.....	.....	.....	.....
Total ...	2,59,678	2,64,716	4,60,269	5,98,256	5,30,012	4,60,416	5,36,695	4,85,681	4,54,627	3,93,741	3,74,226
Expenditure.											
Interest on loans	.....	7,650	9,486	48,989	79,899	32,082	64,984	76,070	81,186	84,519	87,852
Proportion of salaries—Control	11,071	10,209	10,308	12,896	12,733	11,459	12,018	10,402	10,560	11,068	10,733
Salaries	33,400	32,501	32,383	32,310	32,254	31,764	31,584	32,114	32,730	32,054	30,948
Working expenses	34, 00	42,798	18,020	14,045	16,872	14,270	13,958	11,467	13,863	19,157	15,954
Repairs	32,500	42,617	38,962	50,078	29,213	47,500	32,187	34,187	32,412	12,315	18,293
Steamer *Howrah* or *Buckland*	18,748	19,751	14,879	15,347	15,404	16,979	13,646	14,983	19,045	23,646	15,653
Proportion of municipal taxes of officers' quarters, storeyard, and police quarters.	7,400	7,952	5,171	3,615	9,930	10,890	8,141	1,499	1,644	1,211	1,474
Miscellaneous	.....	.....	.....	... .	... .	112	1,323	.....	.....	7,080	479
Proportion of establishment, &c., of steam-tug *Hetty*.	10,300	10,560	11,052	12,231	10,932	10,667	11,384	11,290	12,664	8,369	.....
Contribution for overbridge at Howrah ..	.....	.....	.....	... ...	... ..	.....	.....	.....	25,000	.....	.....
Renewals	27,000	25,694	7,846	2,415	7,608	14,623	2,499	2,074	5,648	.....	... .
Proportion of salary of Traffic Manager ...	4,500	4,500	4,500	.....	... ..	... ..	... ..	.....	.....	.....	.....
Total ...	1,78,919	2,04,241	1,52,607	1,87,021	2,14,925	1,90,346	1,01,721	1,94,545	2,34,152	2,00,019	1,81,386
Net revenue ...	... ...	60,475	3,07,662	4,11,235	3,15,087	2,70,070	3,44,974	2,91,136	2,20,475	1,93,722	1,92,840
Grand Total ...	.....	2,04,716	4,60,269	5,98,256	530,012	4,60,416	5,36,695	4,85,681	4,54,627	3,93,741	3,74,226

3. The receipts from railway traffic during the last ten years are analysed in the following statement:—

	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.	1883-84.	1882-83.	1881-82.	1880-81.	1879-80.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Goods at Re. 1 per 100 maunds.	1,26,508	2,73,368	3,84,862	3,36,452	2,71,166	3,60,559	3,09,043	2,94,963	2,42,933	2,27,483
Passengers at 3 pies each ...	1,803	17,469	16,854	16,050	17,403	18,236	15,955	13,574	12,418	12,508
Animals	616	729	721	646	489	86	480	427	298	250
Vehicles	58	72	58	62	67	620	78	74	600	64
Total ...	1,28,985	2,91,638	4,02,495	3,53,210	2,39,125	3,79,501	3,25,556	3,09,038	2,56,250	2,40,305

4. Consequent upon the repayment of the debt due to Government, and the accumulation of the Reserve Fund, very important alterations were made in 1888-89 in the financial administration of the Bridge, resulting in a considerable reduction in the receipts. Previous to the 1st of April 1888, only two staples of traffic to Howrah, coal and wheat, had been exempted from the terminal charge. From that date rice, grain, pulses, seeds and salt were exempted, according to the recommendations made by the Committee appointed by Government in January 1888 to take into consideration the scale of fees and tolls to be adopted to cover the cost of the future maintenance of the Bridge. The Committee estimated that the terminal charges that would continue to be levied on the Bridge after the exemption of the above articles would bring in a revenue of Rs. 1,16,000. The actual figures given above show the income to have been Rs. 1,28,985; but the effect of the abolition was not felt during the first month of the year, as that month showed the payments to credit of the Bridge account of terminal charges levied on goods during March 1888, before the staples named above were exempted. Taking away the amount so collected in March from staples subsequently exempted, the income of the year from this source would be reduced to Rs. 1,14,728.

5. The receipts from local traffic included only the collections of the months from April to December, as the Bridge was declared free for local traffic from the 1st of January 1889.

6. There has been an increase of expenditure under the heads "Working expenses," "Repairs," and "Renewals." Before the Commissioners surrendered the income from local tolls, they considered it advisable to make provision for putting the Bridge in thorough repair, and for completing its equipment

by providing spare mooring material. A sum of Rs. 27,588 was spent on anchors and chains and charged to "Working expenses," and this accounts for the entire excess expenditure under this head; while against the grant for "Repairs," the drafts for cost of 118 out of 250 tons of Johore teak battens were charged off in 1888-89. The balance has since been paid for, and there are now in stock sufficient materials to completely renew the whole wearing surface of the Bridge. The expenditure on account of the maintenance and repair of the ferry steamer *Buckland* and the flat *Howrah* has been in excess of the average, the increase being due to the *Buckland* being fitted with steam steering gear, and the flat *Howrah* having undergone extensive repairs. The large expenditure under the head "Renewals" was due to the fact that the new pontoon provided for in the estimates for 1887-88 was not sent out until late in 1888, and the expenditure had therefore to be met in 1888-89.

7. It will be seen from the statement of receipts and expenditure given above that the net revenue of the year under review amounted to Rs. 60,475, making, with the net revenue of previous years, a total net revenue of Rs. 34,00,503, earned during the fourteen years the Bridge has been open for traffic.

8. The following statement shows how the entire net revenue has been appropriated:—

	To end of 1887-88. Rs.	In 1888-89. Rs.	Total. Rs.
Sinking fund paid to Government on the Bridge debt	22,41,800	.....	22,41,800
Proportion of sinking fund on consolidated loan due to Government for Head Office and officers' quarters paid to Government	9,888	1,045	10,933
Proportion of sinking fund on debenture loans set aside with the Trustees of the Commissioners' Debenture Loan Account	11,944	2,152	14,096
Reserve Fund	5,21,445	2,50,533	7,71,978
Contribution for the following new works as detailed in Report for 1884-85:—			
Flat *Howrah*	20,000		
Reserve Section	8,000		
Tug steamer *Hetty*	1,35,642		
Ferry steamer *Buckland* ...	1,23,374		
Police quarters	16,573		
Office machinery and tools for workshop	13,321		
Gearing for drawbridge	891		
Two iron buoy boats for floating fenders	2,424	.....	3,20,225
	31,05,302	2,53,730	33,59,032
Balance ...			41,471
Total ...			34,00,503

9. In the Resolution on last year's Administration Report allusion was made to some of the recommendations of the Committee appointed to consider the revised scale of tolls and fees to be levied on the Bridge, and to the orders which had been passed on the same. As mentioned, a part of the Committee's scheme was to give out of the balance at credit of the Bridge account a sum of Rs. 2,00,000 as a contribution towards the construction by the Corporation of Calcutta of a new road from the Bridge to Sealdah. This excess balance over the requirements of the Reserve Fund, which had been fixed by Government, after consultation with the Commissioners, at 5½ lakhs of rupees, was due to the continuance of the local tolls and terminal charges after the extinction of the Bridge debt, and the accumulation of the required Reserve Fund, for which purposes those tolls and charges had been framed. The debt was paid off and the fund accumulated by June 1887, but the tolls continued to be charged till the 31st December 1888. The Government of India, however, objected to this contribution, and in consequence of the orders of that Government upon this proposal the addition to the reserve shown in the foregoing statement was made. The Corporation was still of opinion that the construction of this road was absolutely necessary for the purpose of giving greater facilities to the traffic that exists between the two places. The Lieutenant-

Governor has sanctioned the construction of this road, and the Government of India have sanctioned the raising of a loan by the Corporation not exceeding 50 lakhs, by way of debenture, on the security of the rates and taxes levied under Act II (B.C.) of 1888. The improvement which such a road would effect, and the relief it would afford to the Strand Road traffic, north and south of the Bridge, to the advantage of the traffic from the jetties and wharves, were self-evident, and on a fresh representation being made to the Government of India, that Government, though refusing to sanction legislation for the purpose of enabling the Port Commissioners to contribute the sum of Rs. 2,00,000 towards the construction of the road as proposed by the Committee, raised no objection to the Commissioners lending that sum to the Corporation of Calcutta for three years, without interest, for payment of interest on the loan to be raised for the construction of the road. An Act [Act III (B.C.) of 1889] investing the Commissioners with power to lend this amount to the Corporation of Calcutta on the terms stated has accordingly been passed. The other recommendations of the Committee on tolls and fees have been adopted and approved by Government.

10. The Bridge was kept in thorough working order during the year. The new pontoon, referred to in paragraph 6, was received from England, and put together in the Commissioners' dry dock. On completion, the defective pontoon at the west side of the sixty feet opening was drawn out, and the new one fixed in position. On examination of the defective pontoon it was found that there had been no deterioration in the material, and the only cause which could be assigned for its collapse was that the work of putting the pontoons together originally in 1873-74 was distributed over different yards, and there must have been some defective work in the erection of this particular pontoon.

11. On the 13th December 1888, the Hon'ble Sir Charles Elliot, K.C.S.I., C.S., and Colonel R. Home, R.E., C.I.E., inspected the pontoons, superstructure, reserve section, and all spare material in stock. While expressing satisfaction at the condition in which everything was found, they expressed an opinion that provision should be made for further renewal of the pontoons. Although the one mentioned in the last paragraph was the first one to give out in fourteen years, the Commissioners have considered it advisable to appropriate annually a portion of whatever surplus revenue the accounts may show towards the purchase of new pontoons.

12. The Bridge was open for the passage of vessels on 122 occasions, including 20 special Sunday openings. The number of vessels which passed through the opening is given in the following statement:—

	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.	1883-84.	1882-83.	
Sea-going vessels ...	380	331	295	366	403	469	442	413
Inland steamers and flats	878	899	848	1,102	944	733	664	629
Steam tugs	456	397	387	406	342	361	409	359
Port Commissioners' vessels	20	46	56	69	56	58	42	48
Government steamers and flats	7	6	10	6	10	...	...	

13. No sea-going vessels collided with the Bridge in passing through the opening, but there were 91 collisions of other vessels, as compared with 63 during the previous year. One of the most disastrous was that of the Port Commissioners' steamer *Research* which collided with the Bridge on the 25th August 1888, resulting in the loss of two lives and the total loss of the vessel. Fifteen country and cargo-boats sank after collision, and on one of these occasions there was a loss of one life. Three steam launches also collided with the Bridge, two of which sank. The increase in the total number of collisions as compared with that of the preceding year was due to the unusually heavy freshets of the year. On one occasion (August 31st) it was found impossible to open at all on the advertised day, owing to the unusual strength of the tide, the Superintendent reporting that the attempt to open on that occasion was more than running a risk, it meant almost certainty of serious damage.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Bridge Commissioners for information.

Ordered also that this Resolution be published in the Supplement to the *Calcutta Gazette* for general information.

By order of the Lieutenant-Governor of Bengal,

C. W. I. HARRISON,

Offg. Joint-Secretary to the Government of Bengal.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 25th December 1889.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	BENGAL.		
	Western Districts.		
BURDWAN DIVS. 1	Burdwan Dec. 28, '89	Nil	Weather—rather warm. Harvesting of *amun* still going on. *Rubbi* crops not very good. Sugarcane is in good condition. State of potato fair. Prices of common rice :— Srs. Burdwan ... . 14¼ Culna .. .. 13 Cutwa ... ... 14¾ Raneegunge ... ... 16 per rupee
2	Bankoora „ 28, '89	Nil	Weather—hot for the season and occasionally cloudy. Harvesting of *amun* still continues in many places. Other crops doing well. Common rice selling at 21 seers per rupee at Sudder and 17½ seers at Bissenpore.
3	Birbhum „ 28, '89	Nil	Weather—cloudy and rather warm for the season. *Amun* nearly reaped. Sugarcane in fine order. Winter crops doing well. Rice selling at 16 seers per rupee at Soory and 17½ seers at Rampore Hât.
4	Midnapur „ 28, '89	Nil	Weather—has been cloudy and heavy, and drizzling showers reported from the south. The rice harvest is still being gathered, and the outturn is good. Prices of rice :— Srs. Sudder ... ... 15 Contai ... ... Tumluk .. .. 18 Ghatal ... ... 18 per rupee.
5	Hooghly „ 28, '89	Nil	Weather—very clear. Harvesting of *amun* almost completed. Prospects of *rubbi* favourable. Prices of common rice :— Srs. Sudder ... ... 12 Serampore ... ... 11½ Jehanabad ... ... 16 per rupee.
	Howrah „ 28, '89	Nil	Weather—cloudy. *Amun* crop is being harvested. Prospects good. Price of common rice 12 seers per rupee.
	Central Districts.		
PRESIDENCY DIVS. 6	24-Perghs. Dec. 28, '89	Drizzling.	Weather—fine. *Amun* cutting still going on with full vigour; outturn expected to be good. Standing *rubbi* crops doing well.
7	Nuddea „ 28, '89	Nil	Weather—cloudy and warm. *Amun* rice has yielded a fair outturn. The winter crops are doing well.
8	Khoolna „ 28, '89	0·18	Weather—seasonable, cloudy on two days with a little rain. *Amun* harvest continues with good outturn. The cloudy weather did not continue long enough to cause material injury to the winter crops.
	Bagirhat ...	0·31	
	Satkhira ...	0·01	
9	Jessore „ 28, '89	Nil	Weather—cloudy and hot for the season. *Amun* harvesting continues. Cold-weather crops doing fairly well. Prices of rice stationary.
10	Moorshedabad „ 28, '89	Nil	Weather—clear and cold. *Amun* and *kalai* are being harvested. Prospects of *rubbi* good.
RAJSHAHYE DIVS. 11	Dinagepur „ 28, '89	Nil	Weather—colder towards the end of the week. The harvesting of winter rice continues. Mustard and sugarcane promise well except in the Thakurgaon subdivision, where only 8 annas yield of sugarcane is expected.
12	Rajshahye „ 28, '89	Nil	Weather—seasonable. Winter rice is being harvested with good outturn; as also *kalai*. Spring crops coming on well. Sugarcane is but an indifferent crop.
13	Rungpur „ 28, '89	Nil	Weather—seasonable. Harvesting of *amun* still continues. *Rubbi* crops doing well. Prices falling.
14	Bogra „ 28, '89	Nil	Weather—seasonable. Nearly half the *amun* crop has been reaped, with average outturn of 17 annas. All other crops are doing well. The price of common rice varies from 18 to 20 seers a rupee.
15	Pubna „ 28, '89	0·04	Weather—cloudy at times. *Amun* is still being harvested; outturn fair. Sugarcane crop thin. Cold-weather crops fairly abundant. Prices still rather high.
16	Darjeeling „ 28, '89	Nil	Weather—cold. Winter crops doing well. Outturn of *haimanti* paddy in Terai expected to be 14 annas. Prices of common rice :— Srs. Darjeeling ... ... 12 Kurseong ... ... 12 Silliguri ... ... 14 per rupee.
17	Julpigoree „ 28, '89	Nil	Weather—clear and cool. Cutting of *haimanti* rice still going on with a favourable outturn. Prospects of other crops good. Prices have considerably fallen.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded.*			
	Eastern Districts.		
DACCA DIVN. 18	Dacca Dec. 28, '89	Nil	Weather—cool and fine. *Amun* paddy nearly all harvested; outturn on the whole good. Sugarcane and *rubbi* crops on the ground, though late, are doing fairly well Much of these crops has been lost. Fodder is available. Prices of food-grains falling.
19	Furreedpur „ 28, '89	Nil	Weather—rather warm for this time of year. *Amun* crop nearly harvested; outturn 14 annas. *Mung* and *kalai* almost gathered with good outturn. Other *rubbi* crops promise well. *Boro* rice is being sown.
20	Backergunge „ 28, '89	0·44	Weather—rather warm for the time of year. Prospects of crops good. Harvesting of *amun* continues.
21	Mymensingh „ 28, '89	Nil	Weather—seasonable. Gathering of *amun* paddy still continues. Prospects of *rubbi* crops good. Price of common rice stationary.
CHITTAGONG DIVN. 22	Chittagong „ 28, '89	0·71	Weather—cold and seasonable. Harvesting of *amun* still continues. Prices stationary.
23	Noakholly „ 28, '89	0·12	Weather—three days were cloudy with slight rain; too warm for the season. Harvesting of *amun* continues. *Rubbi* crops doing well. Price of rice stationary.
24	Tipperah „ 28, '89	0·08	Weather—cloudy and unseasonably warm. *Amun* paddy is still being cut. Prospects of winter crops good.
25	Chittagong Hill Tracts. „ 27, '89	0·40	Weather—cold with dense fogs during the first four days, and cloudy during the last three days of the week. Drizzling rain on the 26th. Gathering of late plough-paddy still continues. Mustard, tobacco, and chillies progressing.
	Hill Tipperah „ 28, '89	Nil	Weather—seasonable. Gathering of *amun* paddy, cotton, and oilseeds still continues. Chillies and tobacco doing well.
BEHAR.			
PATNA DIVN. 26	Patna „ 28, '89	Nil	Weather—cold Harvesting of paddy still continues. *Rubbi* crops look well, but rain is wanted. Prospects of poppy favourable. Prices of food-grains almost stationary.
27	Gya „ 28, '89	Nil	Weather—cold. Harvesting of paddy going on. Prospects of *rubbi* and poppy favourable. Food-stocks sufficient.
28	Shahabad „ 28, '89	Nil	Weather—cold and seasonable. Reports of paddy and *rubbi* crops favourable. Sugarcane doing well. Prices stationary.
29	Durbhunga „ 29, '89	Nil	Weather—cold nights and mornings. Harvesting of the winter rice almost completed—a crop above average. The prospects of the *rubbi* are favourable, but rain is wanted. The tobacco crop is fair. Poppy reported by the opium officer to be very promising. Common rice ranges from 19 to 23 seers per rupee.
30	Muzufferpur „ 28, '89	Nil	Weather—unusually mild for this time of year. Poppy and *rubbi* crops promise well. Rice harvest almost completed.
31	Sarun „ 28, '89	Nil	Weather—cold and seasonable. Prospects of *rubbi* and poppy crops excellent Sugarcane doing well.
32	Chumparun „ 28, '89	Nil	Weather—cool and fair. Harvesting of *aghani* rice finished. *Rubbi* crops growing well; prospects satisfactory. Poppy looks healthy. Sugarcane is being pressed; probable outturn 10 annas.
BHAGULPORE DIVN. 33	Monghyr „ 28, '89	Nil	Weather—cool and seasonable. Harvesting of winter rice still going on. Prospects of *rubbi* crops and poppy continue promising.
34	Bhagulpur „ 28, '89	Nil	Weather rather too warm and cloudy early in the week; now bright and cool. Rice harvest on low lands is closing. Sugarcane outturn only fair. *Rubbi* crops doing well, but require rain now.
35	Purneah „ 28, '89	Nil	Weather—warm days, cold nights; clouds about. *Aghani* rice is for the most past harvested. Outturn will be about average. Mustard and *kurthi* are being gathered in places. Tobacco and other *rubbi* crops doing well.
36	Maldah „ 28, '89	Slight rain.	Weather—cold and cloudy with slight rain on two days. Harvesting of winter rice continues. *Rubbi* crops doing well. Price of rice ranges from 16 to 19 seers a rupee.
37	Sonthal Perghs. „ 28, '89	Nil	Weather—cloudy and rather warm. No rain. Paddy harvest is going on with good outturn. *Rubbi* crops doing well. A little rain wanted in Gonda.

	No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.				
Orissa Divn.	38	Cuttack Dec. 28, '89	Nil	Weather—cloudy for some days, but now fine. Reaping of *sarad* (late rice) continues. *Biri* is being gathered in some places.
	39	Pooree „ 27, '89	0·17	Weather—cloudy and drizzling. Harvesting of winter rice (late *sarad*) still continues. *Dalua* crop is being sown. Prices of food-grains steady.
	40	Balasore „ 28, '89	Nil	Weather—cloudy and warm. Rice harvest nearly over. *Rabbi* crops doing fairly well.
CHOTA NAGPORE.				
		South-West Frontier Agency.		
Chota Nagpore Divn.	41	Hazaribagh Dec. 28, '89	Nil	Weather—cloudy for some days. Crops in good condition generally. Poppy promising. In thanas Chowparun, Chatra, and Hunterganj the outturn of paddy is reported to be from 8 to 12 annas. Wheat prospects in Chowparun are reported to be from 10 to 14 annas.
	42	Lohardugga „ 28, '89	Nil	Weather—cloudy. Harvesting of paddy still continues. Prospects of *rabbi* at head-quarters good. In south of the Palamow subdivision *rabbi* is slightly damaged by frost.
	43	Singbhoom „ 28, '89	Nil	Weather—cloudy. Crop prospects favourable. Prices stationary.
	44	Manbhoom „ 28, '89	Nil	Weather—seasonable. All crops doing well.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 31st December, 1889.

P. NOLAN,
Secy. to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from 22nd to 28th December 1889.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature. Mean.	Maximum.	Range.	Minimum.	Hygrometry. Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Wind. Prevailing direction.	Miles recorded.	Rain.	Weather.
1889.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Dec.	22nd	129·6	9·2	30·016	65·0	75·9	20·7	55·2	60·5	0·473	57·4	73	N by E, NNE, and N.	55	Nil	Chiefly clear, ≏.
,,	23rd	123·2	3·1	·007	68·1	77·7	18 8	58·9	63·3	·521	60·1	77	NNE and N ..	71	,,	Chiefly clear, ≏.
,,	24th	131·8	4·5	29·968	71·8	79 6	15·4	64·2	66·4	·576	63·0	75	NE and ENE ..	84	,,	Chiefly cloudy, o.
,,	25th	109·7	Nil	·965	71·5	77 0	10·4	66·6	67·7	·628	65·4	82	ENE and E ..	83	0·02	Cloudy, o, g, d.
,,	26th	134 5	7·0	·991	72·0	80·1	14·6	65 5	68·6	·655	66·6	84	ESE and ENE ...	51	0·01	Chiefly cloudy, d, ≏.
,,	27th	133·5	7·6	30·039	71·9	79 6	14·8	64·8	67·8	·629	65·5	81	E by S, NNE and N by E.	56	Nil	Partially cloudy, ≏, —.
,,	28th	132·8	8·9	·036	68 6	78·7	17 3	61·4	63·1	·506	59 3	72	NNE, N and NNW	75	,,	Chiefly clear, ≏.

		Inches.
The mean pressure of the seven days		30·003
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...		30·038
		Hours.
The total number of hours of bright sunshine		40 3
The maximum possible number of hours of sunshine		75·0
		°
The mean temperature of the seven days		69·8
The average temperature of the corresponding period for 24 years, S.-G.'s Office		67·2
The extreme variation of temperature		24·9
The maximum temperature		80 1
		Miles.
The highest velocity of the wind in one hour		10
		lbs.
The highest pressure of wind on one square foot		Not measurable.
		%
The mean relative humidity		78
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office		71
		Inches.
The total fall of rain from 22nd to 28th December 1889	...	0·03
The average fall of the corresponding period for 24 years, S.-G.'s Office	...	0 01
The total fall from 1st January to 28th December 1889	...	57·47
The average fall of the corresponding period for 24 years, S.-G.'s Office	...	63·24

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground

The barometer readings are corrected approximately to those of the standard, Newman's No 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast; ≏ dew; = fog.

C. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;

Calcutta, the 30th December 1889.

Meteorological Report of the Province of Ben

Meteorological Divisions.	District	Representative station.	STATION OBSERVATIONS.													
			Air pressure.			Wind.		Temperature.								
			Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal of week.
Orissa.	Pooree	Pooree ..	30·007	30·020	—	N. Ely.	247	?	?	86·9	22nd Dec.	?	69·9	?	—
		Gopalpore	30·004	30·054	−·065	NNW	274	81·7	21st Dec.	60·0	21, 22 ,,	78·7	66·3	72·5	+4·2
		False Point ..	30·007	30·029	−·077	N	216	78·9	27th ,,	54·0	21st ,,	76·9	63·3	70·1	+4·8
	Cuttack	Cuttack .	29·972	30·037	−·048	North-easterly.	50·3	84·8	27th ,,	56·8	21st, 22nd Dec.	81·9	64·4	73·2	+4·5
	Balasore	Balasore	30·017	30·078	−·035	NNW	91·0	81·3	25th ,,	50·5	21st ,,	79·4	58·9	69·1	+4·7
South-West Bengal.	South-West Midnapore / South 24-Parganahs	Saugor Island	30·030	30·057	−·046	NNE	216	81·7	25th ,,	56·3	22nd ,,	77·1	63·9	70·5	+5·3
	Midnapore	Midnapore ..	29·917	30·075	−·043	N	62·1	81·3	25th ,,	52·2	21st, 22nd Dec.	80·0	59·3	69·7	+4·4
	24-Parganahs ... ... / Howrah ... ... / Hooghly	Calcutta	30·047	30·069	−·038	Northerly	65	80·0	27th ,,	53·3	21st ,,	77·4	60·9	69·2	+5·5
	Burdwan	Burdwan	29·964	30·071	−·046	Calm	27·3	82·1	26th ,,	53·3	21st ,,	79·6	60·7	70·2	+6·0
	Bankoora	Bankoora ...	29·746	30·065	−·040	Calm	51·3	80·6	27th ,,	50·7	21st ,,	78·4	59·0	68·7	+5·0
	Beerbhoom ... .. / West Burdwan	Ranegunge	29·746	30·099	−·020	NW	45·5	80·9	27th ,,	51·9	21st ,,	79·6	58·6	69·1	+5·6
	Moorshedabad	Berhampore...	30·009	30·079	−·032	N	34·2	80·1	26th, 27th Dec.	54·2	21st ,,	78·1	59·6	68·8	+5·2
	Nuddea	Krishnaghur...	30·036	30·105	−·010	NNW	58·3	81·3	26th ,,	50·9	21st ,,	78·8	59·1	68·9	+5·4
	Jessore ... ... / Khoolna	Jessore ...	30·024	30·059	−·035	Calm	30·0	81·2	25th ,,	54·5	21st ,,	78·6	61·6	70·3	+6·5
East Bengal.	Chittagong	Chittagong	29·947	30·040	−·035	North-easterly.	37·2	84·1	24th ,,	56·1	21st ,,	81·7	64·1	72·9	+7·2
	Chittagong Hill Tracts	Demagiri ..	Observations not received.												
	Backergunge	Barrisal	*30·043	30·056	−·008	NNE	41·1	81·8	24th Dec.	55·1	23rd ,,	78·4	60·2	69·3	+5·0
	Noakholly	Noakholly ...	30·005	30·050	—	North-easterly.	76·9	83·0	25th ,,	55·0	21st ,,	79·8	61·7	70·7	—
	Furreedpore	Furreedpore...	30·032	30·074	−·012	Calm	37·9	81·5	25th ,,	55·5	22nd ,,	76·3	61·1	68·8	+5·4
	Dacca	Dacca ...	30·030	30·054	−·031	N ⅓ E	64·0	84·6	24th ,,	55·3	22nd ,,	80·6	61·3	71·0	+5·1
	Tipperah	Commillah ..	30·015	30·052	−·030	N	34·0	83·4	24th ,,	55·0	22nd ,,	79·9	59·9	69·9	+5·4
	Mymensingh	Mymensingh .	30·013	30·074	−·010	Variable	32·0	81·8	24th ,,	55·4	22nd ,,	79·2*	58·9	69·1*	+5·9
North Bengal.	Bogra	Bogra	29·988	30·054	−·005	Calm	17·3	81·3	25th ,,	53·1	22nd, 23rd Dec.	79·1	56·7	67·9	+3·8
	Pubna	Serajgunge ..	30·018	30·067	−·023	North-easterly.	16·6	81·5	27th ,,	52·9	22nd ,,	79·0	57·8	68·4	+5·2
	Rajshahye	Rampor Beauleah.	30·002	30·076	−·011	N & NNE	69·7	79·9	25th ,,	53·7	21st ,,	77·7	53·1	67·9	+6·3
	Maldah	Maldah ...	30·012	30·098	—	NW	78·3	80·5	27th ,,	50·5	22nd ,,	78·2	55·2	66·7	—
	Dinagepore	Dinagepore	29·965	30·093	+·013?	North-easterly.	51·3	80·1	24th, 25th, Dec.	53·2	21st & 27th Dec.	78·7	55·1	66·9	+4·2
	Rungpore	Rungpore	29·973	30·103	−·010	ENE	34·3	79·8	24th ,,	54·0	21st ,,	78·x	55·3	66·8	+4·3
	Julpigoree ... ... / Cooch Behar	Julpigoree ...	29·806	30·111	−·004	Northerly	37·0*	?	?	53·0	23rd & 27th Dec.	?	55·3	?	?
	Darjeeling Hill Tracts ...	Darjeeling	23·035	—	+·008	Variable	68·5	55·2	24th ,,	35·0	26th ,,	54·2	36·9	45·6	+4·3
North Bengal.	Purneah ... / North Bhagulpore ...	Purneah .	29·967	30·102	−·008	Calm	26·5	77·2	25th ,,	49·0	4th ,,	76·1	52·3	64·2	+3·6
	Mozufferpore	Mozufferpore .	Observations suspended.												
South Behar.	Durbhunga ...	Durbhunga .	29·939	30·117	−·004	EsE	30·6	78·4	23rd Dec.	53·9	21st ,,	97·2	54·9	66·0	+4·1
	Chumparun ..	Motihari .	29·876	30·121	+·017	Calm	64·0	77·6	24th ,,	47·9	21st ,,	78·7	49·5	62·6	+3·5
	Sarun ...	Chupra	29·921	30·126	+·026	Northerly	47·0	76·3	25th & 26th Dec.	50·0	27th ,,	75·2	51·7	63·5	+5·9
	Shahabad	Dehree	29·750	30·130	+·002	SsW	111·9	79·8	21st ,,	49·0	21st ,,	77·5	52·6	65·1	+5·2
		Buxar	29·870	30·130	0	Variable	41·2	76·4	21,24,25,27,,	47·4	21st ,,	78·8	51·2	63·5	+3·7
		Arrah	29·908	30·118	+·014	Calm	44·2	77·6	25th ,,	46·3	22nd ,,	76·6	50·1	63·3	+4·0
	Gya ...	Gya	29·722	30·127	−·002	South-westerly.	105·0	80·3	26th ,,	48·5	22nd ,,	77·6	53·4	65·5	+3·5
	Patna ..	Bankipore	29·932	30·127	−·010	SW	56·0	76·8	25th ,,	50·4	21st ,,	76·1	53·6	64·8	+4·4
	South Bhagulpore . / Monghyr . ..	Bhagulpore ..	?	?	?	Variable	32·3	79·3	25th ,,	49·5	21st ,,	77·8	53·3	65·6	+5·4
Chutia Nagpur.	Sonthal Pergunnah ..	Doomka	29·570	30·100	—	NNW	41·8	78·6	27th ,,	48·8	21st ,,	77·0	55·4	66·2	—
	Hazaribagh	Hazaribagh	28·922	30·122	−·011	Calm	117·7	76·1	26th ,,	48·5	22nd ,,	73·9	53·4	63·6	+3·9
	Lohardugga ... ... / Manbhoom	Ranchee	27·884	30·102	−·013	Calm	98·4	77·0	26th ,,	47·9	22nd ,,	73·7	52·9	63·3	+4·2
	Singbhoom	Chyebassa ..	29·303	30·100	—	Calm	27·8	81·0	27th ,,	48·2	22nd ,,	76·6	56·4	67·5	—

* Means of six days.

Explanation.—*Summary.*—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the The *humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The nu are the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the stations in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fall.

the week ending Friday, the 27th of December 1889.

Temperature at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	Of week. Mean for district.	Of week. Normal mean.	District observations. Rainfall. Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since May 15th. Mean for district.	Since May 15th. Normal mean.	Since May 15th. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
66	3·3	0·17	0·35	0·04	0·35	0·84	—0·49	74·88	55·16	+19·72	1·5	0·1	Pooree	Pooree	Orissa.
80	4·1	0·36											Gopalpore ...		
86	6·1	1·04											False Point		
73	6·0	Nil	0·05	0·04	0·05	0·57	—0·52	66·24	51·54	+14·70	0·2	0·1	Cuttack	Cuttack	
83	1·7	0·02	0·02	0·01	0·02	0·28	—0·26	49·89	52·55	—2·66	0·2	0·1	Balasore	Balasore	
89	5·9	0·03	0·04	Nil	0·04	0·34	—0·30	58·43	61·98	—3·55	1·0	0·0	Sangor Island	South-West Midnapore / South 24-Pergunnahs	South-West Bengal.
76	2·6	Nil	Nil	Nil	Nil	0·25	—0·25	46·29	51·00	—4·71	0·0	0·0	Midnapore	Midnapore ...	
87	4·4	0·03	Nil	0·01	Nil	0·29	—0·29	53·38	51·16	+2·22	0·0	0·1	Calcutta	24-Pergunnahs ... / Howrah ... / Hooghly ...	
79	4·3	Nil	Nil	0·01	Nil	0·19	—0·19	43·81	46·29	—2·48	0·0	0·1	Burdwan	Burdwan	
76	3·7	Nil	Nil	0·01	Nil	0·30	—0·30	55·88	52·28	+3·60	0·0	0·1	Bankoora	Bankoora	
81	4·6	Nil	Nil	Nil	Nil	0·13	—0·13	52·44	51·16	+1·28	0·0	0·0	Ranegunge	Beerbhoom ... / West Burdwan ...	
92	4·1	Nil	Nil	Nil	Nil	0·14	—0·14	51·15	49·98	+1·17	0·0	0·0	Berhampore	Moorshedabad ...	
84	3·4	Nil	Nil	0·01	Nil	0·14	—0·14	51·49	48·83	+2·66	0·0	0·1	Krishnaghur	Nuddea	
92	4·1	Nil	0·06	0·02	0·06	0·26	—0·20	53·39	52·64	+0·75	0·4	0·1	Jessore	Jessore ... / Khoolna ...	
87	7·0	0·67		0·05		0·56			112·98			0·1	Chittagong	Chittagong	East Bengal.
				0·08		0·55			80·60			0·1	Demagiri	Chittagong Hill Tracts	
91	2·9	0·22	0·24	0·02	0·24	0·43	—0·19	77·82	76·32	+1·50	1·0	0·1	Barrisal	Backergunge	
85	0·4	0·15	0·26	0·02	0·26	0·81	—0·55	90·29	105·81	—15·52	1·5	0·1	Noakholly	Noakholly	
89	2·3	Nil	0·02	Nil	0·02	0·13	—0·11	60·23	55·39	+4·84	0·3	0·0	Furreedpore	Furreedpore	
87	4·7	Nil	Nil	0·01	Nil	0·25	—0·25	74·59	59·21	+15·38	0·0	0·1	Dacca	Dacca	
88	1·3	Nil	0·02	0·02	0·02	0·37	—0·35	55·45	69·80	—13·35	0·2	0·1	Commillah	Tipperah	
91	3·0	Nil	Nil	0·01	Nil	0·15	—0·15	87·67	67·13	+20·50	0·0	0·1	Mymensingh	Mymensingh	
88	1·4	[illegible]	0·01	Nil	0·01	0·14	—0·13	64·81	56·89	+7·92	0·2	0·0	Bogra	Bogra	North Bengal.
94	3·0	0·13	0·08	0·01	0·08	0·11	—0·03	55·07	52·84	+2·23	1·0	0·1	Serajgunge	Pubna	
84	1·6	Nil	Nil	Nil	Nil	0·13	—0·13	54·30	53·31	+0·99	0·0	0·0	Rampore Beauleah	Rajshahye	
85	1·4	Nil	Nil	Nil	Nil	0·10	0·10	39·70	53·72	—13·90	0·0	0·0	Maldah	Maldah	
84	0·9	Nil	Nil	Nil	Nil	0·18	—0·18	57·37	56·59	+0·78	0·0	0·0	Dinagepore	Dinagepore	
88	0	Nil	Nil	0·01	Nil	0·15	—0·15	85·16	73·69	+11·47	0·0	0·1	Rungpore	Rungpore	
89	0	Nil	Nil	Nil	Nil	0·16	—0·16	117·18	111·19	+5·94	0·0	0·0	Julpigoree	Julpigoree ... / Cooch Behar ...	
65	0·3	Nil	Nil	0·01	Nil	0·29	—0·29	132·75	120·24	+12·51	0·0	0·1	Darjeeling	Darjeeling Hill Tracts	
89	0·7	Nil	Nil	Nil	Nil	0·09	—0·09	74·71	58·10	+16·61	0·0	0·0	Purneah	Purneah ... / North Bhagulpore ...	North Behar.
			Nil	0·01	Nil	0·08	—0·08	48·66	42·57	+6·09	0·0	0·1	Mozufferpore	Mozufferpore	
90	0	Nil	Nil	Nil	Nil	0·08	—0·08	51·84	44·01	+7·83	0·0	0·0	Durbhunga	Durbhunga	
89	0	Nil	Nil	0·02	Nil	0·18	0·18	63·55	46·00	+17·46	0·0	0·1	Motihari	Chumparun	
69	0	Nil	Nil	0·01	Nil	0·15	—0·15	40·13	42·19	—2·06	0·0	0·1	Chupra	Sarun	
81	0·6	Nil											Dehree		
83	0·4	Nil	Nil	0·03	Nil	0·32	—0·32	40·07	39·56	+0·51	0·0	0·1	Saur	Shahabad	South Behar.
85	0·1	Nil											Arrah		
76	2·0	Nil	Nil	0·04	Nil	0·22	—0·22	37·07	40·86	—3·79	0·0	0·1	Gya	Gya	
82	0·6	Nil	Nil	0·01	Nil	0·12	—0·12	43·49	40·75	+2·74	0·0	0·1	Bankipore	Patna	
93	0·3	Nil	Nil	Nil	Nil	0·07	—0·07	42·43	43·04	—0·61	0·0	0·0	Bhagulpore	South Bhagulpore ... / Monghyr ...	
84	0·9	Nil	Nil	Nil	Nil	0·10	—0·10	54·15	50·59	+3·56	0·0	0·0	Soomka	Sonthal Pergunnahs...	
74	3·3	Nil	Nil	0·01	Nil	0·27	—0·27	43·03	50·07	—7·04	0·0	0·1	Hazaribagh	Hazaribagh	Chutia Nagpore.
77	5·4	Nil	Nil	0·02	Nil	0·36	—0·36	44·34	48·58	—4·24	0·0	0·1	Ranchi	Lohardugga	
			Nil	0·01	Nil	0·20	—0·20	38·33	46·42	—8·09	0·0	0·1		Manbhoom	
74	3·0	Nil	Nil	0·01	Nil	0·38	—0·38	48·76	50·78	—2·02	0·0	0·1	Chyebassa	Singhbhoom	

ten years. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
17 years. The means of the district are the numerical average of the rainfall return received in the district, i.e., from total rainfall at the subdivisional

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 27th of December 1889

Meteorological division.	District.	Station.	Rainfall. Saturday, 21st December.	Sunday, 22nd December.	Monday, 23rd December.	Tuesday, 24th December.	Wednesday, 25th December.	Thursday, 26th December.	Friday, 27th December.	Total Number of rainy days.	Total Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 16th May.	Average rainfall from 1st May to date.
Orissa	Pooree	Pooree	.....	.....	.....	0·08	0·04	0·09	.....	3	0·21	0·21	0·74	80·63	81·[illegible]
		Khurdah	.....	.....	.....	.....	...	...	.....	Nil	Nil	Nil	0·52	76·57	56·[illegible]
		Banpur	.....	.....	.....	.....	0·14	.....	.....	1	0·14	0·14	1·20	65·50	48·[illegible]
		False Point	.....	.....	.....	.....	0·65	0·39	.....	2	1·04	1·04	0·82	76·80	63·[illegible]
		Gop											?		
		Pipli											?		
	Cuttack	Jagatsingpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	73·07	46·[illegible]
		Banki	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·87	52·43	49·[illegible]
		Cuttack	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	75·18	56·[illegible]
		Kendrapara	.....	.....	.....	.....	.....	0·26	.....	1	0·26	0·26	0·51	72·03	52·[illegible]
		Jajpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·72	57·64	53·[illegible]
		Dharmsala	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·25	?
		Salipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	?
	Balasore	Chandbali	.....	.....	.....	.....	...	0·12	.....	1	0·12	0·12	0·60	54·64	51·[illegible]
		Bhuddruck	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	57·66	51·[illegible]
		Sorah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	46·05	50·[illegible]
		Balasore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	46·61	57·[illegible]
		Jellasore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	39·59	53·[illegible]
		Baripodah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	54·79	53·[illegible]
South-West Bengal.	Midnapore	Contai	.....	.....	.....	.....	.....	0·05	.....	1	0·05	0·05	0·41	55·13	60·[illegible]
		Sangor Island	.....	.....	.....	.....	.....	0·03	.....	1	0·03	0·03	0·36	56·74	66·[illegible]
		Tumlook	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	49·40	50·[illegible]
		Midnapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	46·26	48·[illegible]
		Ghattal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	43·19	54·[illegible]
		Kukrahaty	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·65	?
		Heria	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	65·06	?
		Bhagwanpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·72	?
		Garbetta	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	?
	24-Pergunnahs	Diamond Harbour	.....	.....	.....	.....	.....	0·04	.....	1	0·04	0·04	0·26	63·41	57·[illegible]
		Canning Town	.....	.....	.....	.....	.....	0·17	.....	1	0·17	0·17	?	57·80	?
		Alipore Jail	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	51·80	55·[illegible]
		Barrackpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	51·79	49·[illegible]
		Dum-Dum	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	64·58	51·[illegible]
		Baraset	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	57·61	49·[illegible]
		Bussorhat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	60·92	54·[illegible]
	Howrah	Howrah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	59·12	51·[illegible]
		Mohesraka (*Ooloberiah*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	54·64	51·[illegible]
	Hooghly	Serampore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	55·27	49·[illegible]
		Hooghly	.....	.....	.....	.....	.....	.....	.....	Nil		Nil	0·20	36·03	47·[illegible]
		Jehanabad	.....	.....	.....	.....	.....	.....	0·03	1	0·03	·03	0·20	41·16	54·[illegible]
	Burdwan	Culna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	41·32	43·[illegible]
		Burdwan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	47·07	47·[illegible]
		Cutwa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	43·11	47·[illegible]
		Raneegunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	55·83	48·[illegible]
		Mankur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·71	?
	Bankoora	Bankoora	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	50·79	51·[illegible]
		Bishenpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	57·49	51·[illegible]
		Mahara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		0·23		51·[illegible]
		Khatra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	65·91	53·[illegible]
		Indas	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·14	?
		Kotalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	?
		Anda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		40·44	?
		Gangajalghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		59·17	?
		Raipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	?
		Sonamukhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		54·83	?
	Beerbhoom	Bh. Soory	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	59·00	53·[illegible]
		Hetampore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	47·07	53·[illegible]
		Rampore Haut	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	47·78	51·[illegible]
		Bolpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·97	?
		Murarai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	?
	Nuddea	Ranaghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	55·80	46·[illegible]
		Kishnaghur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	42·95	45·[illegible]
		Chooadanga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	49·81	50·[illegible]
		Meherpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	53·05	47·[illegible]
		Kooshtea	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	56·91	53·[illegible]
	Khoolna	Satkhira	.....	.....	.....	.....	.....	0·01	.....	1	0·01	0·01	0·30	52·51	54·[illegible]
		Bagirhat	.....	.....	.....	.....	.....	0·31	.....	1	0·31	0·31	0·27	54·00	60·[illegible]
		Khoolna	.....	.....	.....	.....	.....	0·18	.....	1	0·18	0·18	0·32	55·78	54·[illegible]
		Nakipur	.....	.....	.....	.....	.....	0·30	.....	1	0·30	0·30	?		?
	Jessore	Narail	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	49·47	45·[illegible]
		Jessore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	62·35	53·[illegible]
		Jhenidah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	50·56	52·[illegible]
		Magoorah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	50·48	48·[illegible]
		Bongong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	46·01	51·[illegible]
	Moorshedabad	Kandi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	55·38	50·[illegible]
		Berhampore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	46·16	50·[illegible]
		Lalbagh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	47·13	50·[illegible]
		Azimgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11		50·[illegible]
		Jungipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	55·01	48·[illegible]
		Lalgola	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	59·02	50·[illegible]
		Jiagunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·25	?
		Akhriguni	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	42·81	?
		Patkabari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
East Bengal	Chittagong	Cox's Bazar											0·40		135·[illegible]
		Chittagong	.....	.....	.....	.....	.....	0·34	0·37	2	0·71	0·71	0·69	76·42	93·[illegible]
		Kutubdia											?		?
		Satkanya											?		?
	Chittagong Hill Tracts.	Rangamati	.....	.....	.....	.....	.....	0·40	.....	1	0·40	0·40	0·56	63·04	83·[illegible]
		Ruma											0·53		79·[illegible]
	Backergunge	Patuakhally	.....	.....	.....	.....	.....	0·05	.....	1	0·05	0·05	0·51	87·20	67·[illegible]
		Perozepore	.....	.....	.....	.....	.....	0·20	.....	1	0·20	0·20	0·30	72·16	69·[illegible]
		Burrisal	.....	.....	.....	.....	.....	0·44	.....	1	0·44	0·44	0·34	72·62	66·[illegible]
		Bhola	.....	.....	.....	.....	.....	0·27	.....	1	0·27	0·27	0·37	79·26	81·[illegible]

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 27th of December 1889—contd.

Meteorological Division.	District.	Station.	Rainfall. Saturday, 21st December	Sunday, 22nd December.	Monday, 23rd December.	Tuesday, 24th December.	Wednesday, 25th December.	Thursday, 26th December.	Friday, 27th December.	Total Number of rainy days.	Total Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May.	Average rainfall from 15th May to date.
EAST BENGAL—contd.		*Gournaddi*											?		?
		Baushal	.....	.....	.....	.....	.....	0·35	.....	1	0·35	0·35	?	92·89	?
	Noakholly	Noakholly	.....	.....	.....	.....	...	0·12	....	1	0·12	0·12	0·60	102·17	107·16
		Fenny	.....	.....	.....	.....	.....	0·35	0·05	2	0·40	0·40	1·00	78·38	105·99
		Harishpore	.....	.....	.....	.....	...	0·30	.....	1	0·30	0·30	?	82·90	?
		Ramganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	80·75	?
	Furreedpore	Madaripore	.....	.....	.....	.....	.....	0·06	.....	1	0·06	Nil	0·16	60·86	54·94
		Furreedpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	63·80	55·90
		Goalundo	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	56·29	52·52
	Dacca	Munshigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	76·33	69·55
		Dacca	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	78·69	68·04
		Narainguge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	80·36	69·45
		Manickgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	67·99	49·55
		Joydebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	66·61	?
	Hill Tipperah	Agartola	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	44·08	60·90
	Tipperah	Comilla	.....	.....	.....	.....	.....	0·08	.....	1	0·08	0·08	0·45	63·17	75·42
		Chandpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	64·82	75·24
		Brahmunberia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	50·08	60·88
		Ramchandrapore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·14	?
		Nasirnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30·59	?
		Daudkandi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	52·29	?
		Kasba	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	62·41	?
		Laksham	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·09	?
	Mymensingh	Kishoreegunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	69·56	68·34
		Atia (*Tangail*)	.....	.....	.....	.....	0·02	.....	.....	1	0·02	0·02	0·09	61·00	54·97
		Mymensingh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	96·55	73·46
		Jamalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	65·14	61·64
		Netrokona	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	125·93	72·61
		Subornakhali	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·43	?
		Durgapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	149·98	?
		Sherepore Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·09	?
		Dewanganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	56·31	?
NORTH BENGAL.	Rubna	Pubna	.....	.....	.....	.....	0·04	.....	.....	1	0·04	0·04	0·11	49·87	53·26
		Serajgunge	.....	.....	.....	.....	.....	0·13	.....	1	0·13	0·13	0·10	60·26	52·35
	Bogra	Sherepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	62·66	57·03
		Nowkhilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	60·96	53·81
		Bogra	.....	.....	.....	.....	0·03	.....	.....	1	0·03	0·03	0·07	70·63	60·10
		Panchbibi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	64·06	55·49
	Rajshahye	Beauleah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	46·20	52·51
		Nattore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	58·84	54·29
		Naogaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	57·87	50·64
		Lalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	36·72	?
		Manda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·27	?
	Maldah	Maldah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	50·53	51·36
		Chanchal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	38·00	50·17
		Gajol	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·79	?
		Sibganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·77	?
	Dinagepore	Mohadebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	53·63	55·82
		Churamon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	51·82	51·92
		Raigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	52·25	57·25
		Dinagepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	67·84	62·19
		Balcorghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	61·28	50·10
		Thakoorgaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	67·47	?
	Rungpore	Bhawanigunge (*Gyabanda*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	67·55	61·24
		Rungpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	74·41	73·94
		Kurigrám	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	90·07	72·81
		Baidoorga (*Nilphamari*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	87·09	84·03
		Dhipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	79·00	?
	Julpigoree	Julpigoree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	123·27	116·44
		Alipore Door	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·58	?
		Fallacotta	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	127·43	?
		Debiganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	80·92	?
		Bhagatpore (*Nagrakatta*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	138·51	?
	Cooch Behar	Dinhatta	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	98·00	95·72
		Cooch Behar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	125·34	117·87
		Mickligunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	121·37	105·21
		Mathabhanga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	117·63	111·15
	Darjeeling Hill.	Buxa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·01	0·36	191·08	191·56
		Silliguri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	180·71	192·50
		Darjeeling	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	127·87	108·11
		Kalimpong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	91·36	82·66
		Kurseong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	168·29	?
NORTH BEHAR	Purneah	Kissengunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	102·37	89·75
		Arrareah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	79·61	63·24
		Purneah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	63·45	61·13
		Gondwara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Balerempore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Matiari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Kaliaganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	North Bhagulpore.	Maddapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	60·85	49·04
		Soopool	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	67·20	47·68
		Protabganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·85	?
	Durbhunga	Tajpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	43·44	42·58
		Durbhunga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	50·01	45·28
		Madhubani	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	63·11	44·29
		Bahere	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·96	?
		Boshere	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·84	?
	Mozufferpore	Sitamarhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	85·06	42·52
		Mozufferpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	48·41	44·71
		Hajipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	42·52	41·39
		Para	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	37·09	?
		Mahua	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41·02	?
		Sahar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Paprí	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	47·45	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 27th of December 1889—con

Meteorological Division.	District.	Station.	Rainfall. Saturday, 21st December.	Sunday, 22nd December.	Monday, 23rd December.	Tuesday, 24th December.	Wednesday, 25th December.	Thursday, 26th December.	Friday, 27th December.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May.	Aver rain from M to d
North Behar —concluded.	Chumparun...	Motihari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	74·79	
		Bettiah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	52·29	
		Bagaha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·87	
		Burhurwa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	81·70	
	Sarun ...	Gopalgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	38·48	
		Sewan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	44·20	
		Chuprah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	40·74	
South Behar	Shahabad	Buxar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	47·44	
		Dehree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	42·66	
		Bhaboosh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	38·16	
		Sasseram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	29·41	
		Arrah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	42·69	
		Mohaniah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Gya ...	Aurungabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	38·42	
		Gya	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	39·85	
		Nowadah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	39·69	
		Johanabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	38·40	
		Arwal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34·34	
		Dandnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	26·09	
		Sherrghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	29·29	
		Rajauli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17·92	
		PakriBarawan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·90	
	Patna ...	Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	51·49	
		Dinapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	45·53	
		Behar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	41·08	
		Barrh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	35·83	
		Bickram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		43·28	
		Illise	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		35·21	
	Monghyr ...	Begoosarai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	47·02	
		Monghyr	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	41·87	
		Jamui	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 07	38·48	
		Gogri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50·19	
		Sheikpura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·32	
	South Bhagulpore.	Bhagulpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	45 06	
		Banka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	38·34	
		Kolgaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·07	
		Bangaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Sonthal Pergunnahs.	Rajmehal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	50·90	
		Godda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	40·04	
		Pakour	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	73·59	
		Nya Doomka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	50·75	
		Deoghur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	40·40	
		Jamtara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	46·21	
		Mohagama	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50·41	
		Nemihat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·87	
Chutia Nagpur.	Hazaribagh ...	Pachamba (*Giridi*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	38·90	
		Hazaribagh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	40·10	
		Semtararah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	30·24	
		Mahudi Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30		
		Jhoomra Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	43·00	
		Barhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·36	
		Chatra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·04	
		Karagdeha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·35	
		Ramghar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		
	Lohardugga ...	Lohardugga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	45·24	
		Ranchi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	55·61	
		Palamow	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	34·16	
		Silli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33·80	
		Balumat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Hussainabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·40	
		Garwah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28·77	
	Singbhoom	Chrebassa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	46·76	
		Chakradharpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	49·80	
		Ghatsilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·70	
		Baharagora	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·80	
	Manbhoom ...	Purulia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	43·46	
		Gobindpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	33·19	
		Raghunathpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·91	
		Barrabhoom	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·32	
		Jhalda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·42	
		Chas	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·56	

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the r are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the* 31*st December* 1889.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 27TH DECEMBER 1889.

At the close of the previous week weather conditions in Bengal were quite normal for the season, and therefore of ordinary cold weather character. In the Bay also weather was fine except in the extreme south, where along the Madras coast from Cuddalore southwards rain was falling, the conditions being still disturbed as the result of the cyclonic storm which had passed across the extreme south of the peninsula on December 18th, moving in a westerly direction. On the 21st, or the first day of the present week, conditions in Bengal remained unaltered, but skies clouded up heavily over the south of Burma. Drizzling rain commenced over this area, and pressure fell slightly at Diamond Island, while elsewhere it was generally rising. Winds also at the South Burma stations commenced to show distinct indraught towards the south of the Bay, and at Diamond Island, instead of the light winds usual at this season, wind had increased to almost a gale. On this day, therefore, it is clear that weather had became very disturbed over the south of the Bay, and it is probable that a cyclonic storm had commenced to form. On the 22nd the area of stormy weather was still quite in the south of the Bay and probably about Longitude 88° E. The storm, therefore, appeared on this day to have drifted in a westerly direction, and probably the centre of the storm was not further north than Negapatam, or perhaps even than Trincomalee. At this time all the indications appeared to point to the probability that the storm would advance across the extreme south of the peninsula, or even across the north of Ceylon. On the morning of the 23rd, the storm was probably to the east-north-east of Negapatam and at some distance from land, and it was moving slowly in a north-westerly direction. On the 24th it had again advanced in a north-westerly direction, and its centre was probably to the east of Nellore or east-north-east of Madras; while on the morning of the 25th it had come much nearer the land, and its centre was to the south-east of Masulipatam. Even on the morning of the 25th it was apparent that the storm had ceased to intensify, but it was on this date a rather severe storm; but by the morning of the 26th, and particularly from midnight of the 25th, the storm had commenced to fill up rather rapidly. On this date it had become only a barometric depression, but it was accompanied by fairly strong winds, and the position of its centre was decidedly nearer the land than on the previous day, and it was perhaps even a little to the south-west of its previous position. On the morning of the 27th the depression had quite passed inland, the centre crossing the coast apparently between Masulipatam and Nellore during the afternoon or evening of the 26th. The storm in its progress was accompanied by only a moderate barometric depression as indicated by the readings at the coast stations, but it will be observed that the storm centre was at no time very near to any meteorological station while it existed as a severe storm. The strength of the winds in the northern half of the storm was decidedly great, and for two days a gale of wind was blowing at some of the ports on the west coast. No observations from ships which were involved in the storm have yet been received, but it is probable that very severe weather accompanied the northern half of the storm, but winds in the southern half appear to have been comparatively feeble. The rainfall in connection with the storm at the land stations has been also only moderate.

As is usually the case, directly a rather severe storm is formed in the Bay, weather conditions commenced to change in Bengal. Temperature at first began to rise slowly, but from about the 23rd or 24th, when the skies had clouded over quickly, the night temperatures rose very rapidly and became very high. The storm in its north-westerly advance apparently also caused a wave of moist winds from the sea to advance over Bengal, and on about the 24th at many stations the sky was almost overcast, while humidity as well as temperature was high. In Orissa and South-East Bengal, and in parts of South and even North Bengal, so much moisture was thus brought up that light showers commenced to fall at a few stations, and dull and rather gloomy weather obtained for some days,—in fact almost up till the close of the week. For a considerable part of the week under review, therefore, the weather conditions have been almost the reverse of the normal north-east monsoon weather, but with the gradual breaking up of the storm on the 26th, and with its disappearance inland on the 27th, conditions had begun slowly to improve again in Bengal even on the 26th and 27th of the month.

Pressure.—The storm which has been previously described was, even in its nearest advance, so far from Bengal that it had not much practical effect on the pressures recorded, except that at many stations, and particularly at those in the south-west of the province, pressure continued to fall very slowly up to about the 25th; but on the last two days of the week there was a rise, the increase on the 27th being rather rapid. The mean pressure for the week has been almost normal in Behar and North Bengal, but over the southern, and particularly over the south-western, districts there has been a distinct defect. In South Bengal generally the defect has varied from about two to four hundredths of an inch, but at such stations as Gopalpur and False Point, which were nearest to the storm, the defect has equalled about seven hundredths of an inch.

Temperature.—A very large increase in the night temperatures took place during the week, as before recorded, and generally temperature has been rather largely in excess of the normal throughout the week. The excess in the mean temperature has been largest in South-West and East Bengal and South Behar, where it has averaged from five to six degrees. In

Orissa, Chutia Nagpur, and North Bengal, the excess has been from four to five degrees, while the smallest excess of all is nearly four degrees in North Behar. The average mean temperature for the whole province has therefore been almost five degrees in excess of the normal for the week.

This excess has been most largely marked in the minimum or night temperatures. This will be seen clearly in the following table, where the average maximum, mininum and mean temperatures for the week for nine typical stations in different districts of the province are compared with their normal values for the same period. The usual range of temperature during the week in various districts can therefore also be here clearly seen. At such stations as Calcutta, Cuttack, and Burdwan, the average night or minimum temperatures for the week have been no less than about eight degrees in excess of the normal, while at the same stations the day or maximum temperatures have only been about three degrees in excess: —

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 27th December 1889.

	Normal mean maximum temperature for the week ending 27th December.	Actual mean maximum temperature for the week ending 27th December 1889.	Variation of actual mean from the normal.						Variat the r
Cuttack	80·7	81·9	+1·2	56·6	64·4	+7·8	68·7	73·2	+4·5
Calcutta	74·4	77·4	+3·0	52·9	60·9	+8·0	63·7	69·2	+5·5
Dacca	76·7	80·6	+3·9	55·0	61·3	+6·3	65·9	71·0	+5·1
Burdwan	76·0	79·6	+3·6	52·4	60·7	+8·3	64·2	70·2	+6·0
Patna	72·1	76·1	+4·0	48·6	53·6	+5·0	60·4	64·8	+4·4
Gya	74·4	77·6	+3·2	49·5	53·4	+3·9	62·0	65·5	+3·5
Purneah	73·9	76·1	+2·2	47·8	52·3	+5·0	60·6	64·2	+3·6
Hazaribagh	70·7	73·9	+3·2	48·6	53·4	+4·8	59·7	63·6	+3·9
Darjeeling	46·3	54·2	+7·9	35·2	36·9	+1·7	40·8	45·6	+4·8

Rainfall.—Though a few showers have been received in Orissa and South-East Bengal, and at a few stations in South and North Bengal, the amounts received have not been important. The stations in Orissa and East Bengal show an average rainfall of a little more than a tenth of an inch, but the amounts in the other districts have been so small that they have only averaged a hundredth of an inch. False Point received the heaviest fall of about an inch, while the following stations received falls of a fifth of an inch and upwards:— Pooree, Kendrapara, Bagirhat, Nokipur, Chittagong, Rangamati, Perozepore, Burrisal, Bhola, Bauphal, and Fenny.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 27th of December 1889:—

Meteorological Divisions.	Temperature						Rainfall.								
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 15th May.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
Orissa*	84·8	50·5	79·2	63·2	71·2	+4·6	0·12	0·03	+0·09	0·6	0·1	+0·5	0·12	0·53	62·01	53·49
South-West Bengal ...	82·1	50·7	78·6	60·3	69·5	+5·4	0·01	0·01	0	0·2	0·1	+0·1	0·01	0·23	52·37	51·53
East Bengal	84·6	55·0	79·4	61·0	70·2	+5·7	0·13	0·03	+0·10	0·5	0·1	+0·4	0·13	0·35	75·50	73·68
North Bengal	81·5	50·5	78·5	56·4	67·4	+4·7	0·01	Nil	+0·01	0·1	0·0	+0·1	0·01	0·15	73·12	69·85
North Behar	78·4	47·9	76·1	52·1	64·1	+4·3	Nil	0·01	−0·01	0·0	0·1	−0·1	Nil	0·11	57·66	48·16
South Behar	80·3	47·4	76·9	52·8	64·9	+5·2	Nil	0·02	−0·02	0·0	0·1	−0·1	Nil	0·17	44·16	43·30
Chutia Nagpur	77·0*	47·9*	73·8*	53·2*	63·5*	+4·0*	Nil	0·01	−0·01	0·0	0·1	−0·1	Nil	0·28	43·08	43·64

* Pooree, Julpigoree and Chyebassa not included.

Meteorological Office, Bengal; *The 31st December* 1889.

A. Pedler,
Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 22nd to 28th December 1889.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature.						Hygrometry.			Rainfall past 24 hours
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
1889.		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
December ...	22nd ...	30·078	66·5	77·6	22·2	55·4	69·6	63·6	·509	59·5	70	. . .
,, ...	23rd ...	·063	69·0	77·9	17·8	60·1	72·4	65·1	·523	60·2	66	....
,, ...	24th ...	·027	70 8	81·4	21·3	60·1	73·6	66·1	·542	61·2	65	. ....
,, ...	25th ...	·035	72·9	77·9	10·0	67·9	73·6	68·6	·633	65·7	76	. .
,, ...	26th ...	·079	73·9	81·4	15·0	66·4	72·8	69·6	·682	67·8	85	0·05
,, ...	27th ...	·121	72·8	80·4	15·3	65·1	75·6	70·6	·683	67·8	77	..
,, ...	28th ...	·113	71·2	79·9	17·5	62·4	73·6	64·8	·497	58 8	66	.....

		Inches.
The mean 10 A.M. pressure of the seven days		30·074
		°
The mean temperature of the seven days		71·0
The extreme variation of temperature		26·0
The maximum temperature		81·4
		%
The mean 10 A.M. relative humidity of the seven days		72
		Inches.
The total fall of rain from 22nd to 28th December 1889		0 05

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. Little,

For Meteorological Reporter to the Govt. of India.

Meteorological Office, India ;
The 30th December 1889.

MEMORANDUM.

DURING the week ending 14th December 1889, births and deaths were registered in the principal Municipalities in Bengal at the rates, respectively, of 26·9 and 31·6 per 1,000 of population, against 28·4 and 29·6 per 1,000, indicating a falling off in the registration of births against an improvement in that of deaths.

2. The highest proportions of births and deaths were returned from the following Municipalities :—

Births.	Ratio per *mille.*	*Deaths.*	Ratio per *mille.*
Bali	45·6	Narainganj	124·2
Serampore	45·1	Jessore	91·8
Rampore Beauleah	42·0	Utterpara	84·9
Arrah	40·7	Serampore	84·4
Durbhanga	39·3	Poori	83·9
Monghyr	38·9	Hughli and Chinsurah	59·1
Utterpara	37·7	Howrah	40·1
Bhagulpore	37·1	Dacca	38·3
Darjiling	37·0	Gya	35·5
Gya	36·5	Comillah	34·7
Hughli and Chinsurah	34·5	Durbhanga	34·6
Narainganj	33·1	Purneah	34·6
Chupra	31·2	Monghyr	34·4

3. The principal diseases specified in the table appended to this memorandum proved fatal at the rates exhibited below :—

	Ratio per *mille* during the weeks ending—	
	14th December 1889.	7th December 1889
Cholera	4·7	4·9
Small-pox	·2	·3
Fever	13·4	10·8
Bowel-complaints	5·0	4·2
Injury	·4	·4
Other causes	7·9	8·9

ndicating chiefly that, in comparison with the preceding week, the severity of fever has increased considerably, but that the mortality from the diseases classed under the head of "Other causes" has diminished to some extent.

4. While no Municipality suffered much from small-pox or presented a large number of casualties from injury, the following returned conspicuously high death-rates from the rest of the diseases specified in the above table :—

Cholera.	Ratio per *mille.*	*Fever.*	Ratio per *mille.*	*Bowel-complaints.*	Ratio per *mille.*	*Other causes.*	Ratio per *mille.*
Narainganj ...	82·8	Jessore ...	73·5	Utterpara ...	37·7	Narainganj ...	29·0
Poori ...	27·2	Hughli and Chinsurah ...	37·7	Serampore ...	19·6	Serampore ...	23·6
Serampore ...	13·7	Purneah ...	31·2	Poori ...	14·7	Poori ...	18·9
Howrah ...	13·2	Serampore ...	27·5	Hughli and Chinsurah ...	13·1	Dacca ...	13·6
Dacca ...	6·5	Bali ...	21·1	Burdwan ...	12·2	Durbhanga ...	12·6
		Gya ...	20·5	Howrah ...	10·9	Gya ...	11·6
				Monghyr ...	9·9		

5. The death-rates under the heads of *Sex*, *Class* and *Age* stood as follows :—

According to Sex.	Ratio per *mille.*	*According to Class.*	Ratio per *mille.*	*According to Age*	Ratio per *mille.*
Males	33·6	Christians	14·9	Under 1 year ...	178·2
Females	29·5	Hindus	32·8	1 and under 5 years ...	35·2
Ratio of male deaths to every 100 female deaths	122	Mahomedans ...	28·8	5 „ 10 „ ...	20·7
		Budhists	51·4	10 „ 15 „ ...	14·0
		Other classes ...	76·8	15 „ 20 „ ...	23·1
				20 „ 30 „ ...	20·9
				30 „ 40 „ ...	24·3
				40 „ 50 „ ...	27·0
				50 „ 60 „ ...	40·9
				60 years and upwards ...	76·7

The 30th December 1889.

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal

1	2	3			4			5			6	7							8						9	10		11		12
DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—																		
					NUMBER OF—			RATIO PER 1,000 OF POPULATION PER ANNUM.				Disease.														Sex.				
												DEATHS FROM—							RATIO PER 1,000 OF POPULATION PER ANNUM.							DEATHS.		RATIO PER 1,000 OF POPULATION PER ANNUM.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	Males.	Females.	Males.	Females.	Ratio of male deaths to every 100 female deaths.
Burdwan ...	Burdwan	18,663	16,417	34,080	9	2	11	13·7	3·1	16·8	450	...	...	8	8	...	2	18	...	...	12·2	12·2	..	3·1	27·5	41·2	14	4	40·3	13·0	350
Midnapore ...	Midnapore ..	16,927	16,633	33,560	6	3	9	9·3	4·6	13·9	200	1	...	3	4	...	6	14	1·5	...	4·6	6·2	...	9·3	21·7	29·4	9	5	27·6	15·6	180
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	10	11	21	16·4	18·1	34·5	90	2	...	23	8	...	3	36	3·3	...	37·7	13·1	...	4·9	59·1	45·9	21	15	68·9	49·3	140
Serampore ...	Serampore ...	13,559	12,937	26,496	13	10	23	25·5	19·6	45·1	130	7	...	14	10	...	12	43	13·7	...	27·5	19·6	...	23·6	84·4	66·7	22	21	84·4	84·4	104
	Utterpara	3,046	2,464	5,510	3	1	4	28·3	9·4	37·7	300	2	...	2	4	...	1	9	18·9	...	18·9	37·7	...	9·4	84·9	18·9	8	1	136·6	21·1	800
Howrah ..	Howrah	53,153	37,660	90,813	28	21	49	16·0	12·0	28·1	133	23	1	13	19	...	14	70	13·2	·6	7·4	10·9	...	8·0	40·1	38·4	39	31	38·1	42·8	125
	Bali	7,836	6,979	14,815	6	7	13	21·1	24·5	45·6	85	...	...	6	...	...	...	6	...	...	21·1	...	...	...	21·1	35·1	1	5	6·6	37·3	20
Nuddea ..	Kishnaghur ...	13,263	14,214	27,477	6	7	13	11·4	13·2	24·6	85	...	...	8	...	...	3	11	...	...	15·1	...	...	5·7	20·8	5·7	8	3	31·4	11·0	266
	Ranaghat	4,028	4,655	8,683		...	1	6·0	...	6·0	No female birth.	...	...	2	...	...	2	4	...	...	12·0	...	...	12·0	24·0	6·0	3	1	38·7	11·2	300
	Santipore	13,708	15,979	29,687	5	9	14	8·7	15·8	24·5	55	...	...	10	...	...	...	10	...	...	17·5	...	...	...	17·5	22·8	3	7	11·4	22·8	42
Jessore ...	Jessore	4,830	3,665	8,495	2	2	4	12·2	12·2	24·5	100	1	...	12	...	...	2	15	6·1	...	73·5	...	...	12·2	91·8	24·5	7	8	75·4	113·5	87
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	8	8	16	21·0	21·0	42·0	100	...	...	4	...	...	4	8	...	...	10·5	...	...	10·5	21·0	31·5	4	4	19·3	23·0	100
Darjiling ...	Darjiling	4,579	2,439	7,018	1	4	5	7·4	20·6	37·0	25	...	..	2	1	...	...		...	...	14·8	7·4	...	...	22·2	22·2	1	2	11·4	42·6	50
Dacca ...	Dacca	42,782	37,379	80,161	21	21	42	13·6	13·6	27·2	100	10	1	17	10	...	21	59	6·5	·6	11·0	6·5	...	13·6	38·3	37·9	31	28	37·7	39·0	110
	Naraingani ...	7,605	4,956	12,561	3	5	8	12·4	20·7	33·1	60	20	...	3	...	...	7	30	82·8	...	12·4	...	...	29·0	124·2	136·6	25	5	170·9	52·5	500
hittagong ...	Chittagong ...	13,340	8,790	22,130	1	2	3	2·3	4·7	7·0	50	..	...	7	2	...	...	9	...	...	16·4	4·7	...	...	21·1	9·4	6	3	23·4	17·7	200
Tipperah ...	Comillah	8,153	5,353	13,506	...	4	4	...	15·4	15·4	No male birth.	2	...	4	...	..	3	9	7·7	...	15·4	...	...	11·6	34·7	34·7	5	4	31·9	38·9	125
Patna	Patna City ...	78,762	81,475	160,237	22	13	35	7·1	4·2	11·4	169	3	...	14	11	...	10	38	1·0	...	4·5	3·6	...	3·2	12·3	14·3	18	20	11·9	12·8	90
Gya	Gya	38,290	37,831	76,121	27	25	52	18·4	17·1	35·5	108	4	...	30	...	1	17	52	2·7	...	20·5	...	·7	11·6	35·5	38·3	24	28	32·6	38·5	85
Shahabad ..	Arrah	20,960	22,505	43,465	20	14	34	23·9	16·7	40·7	142	...	...	13	1	3	2	19	...	...	15·5	1·2	3·6	2·4	22·7	15·6	9	10	22·3	23·1	90
Mozufferpore	Mozufferpore ...	23,084	19,658	42,742	3	5	8	3·6	6·1	9·7	60	2	...	5	4	1	...	12	2·4	...	6·1	4·9	1·2	...	14·6	14·6	8	4	18·0	10·6	200
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	25	25	50	19·6	19·6	39·3	100	3	...	25	...	...	16	44	2·4	...	19·6	...	...	12·6	34·6	33·8	22	22	33·9	35·4	100
arun	Chupra	25,116	26,554	51,670	21	10	31	21·1	10·1	31·2	210	...	...	6	2	...	6	14	...	...	6·0	2·0	...	6·0	14·1	21·1	7	7	14·5	13·7	100
Bhagulpore ...	Bhagulpore ..	29,640	27,813	57,453	22	19	41	19·9	17·2	37·1	115	3	...	12	...	...	10	25	2·7	...	10·9	...	...	9·0	22·6	15·4	10	15	17·5	28·0	66
Monghyr ..	Monghyr	28,154	29,366	57,520	20	23	43	18·1	20·8	38·9	86	...	...	14	11	3	10	38	...	...	12·7	9·9	2·7	9·0	34·4	33·4	17	21	31·4	37·2	80
Purneah ...	Purneah	8,463	6,553	15,016	6	...	6	20·8	...	20·8	No female birth.	...	...	9	...	...	1	10	...	...	31·2	...	...	3·4	34·6	31·2	9	1	55·3	7·9	900
Poori	Poori	13,247	11,537	24,784	6	4	10	12·6	8·4	21·0	150	13	2	9	7	...	9	40	27·2	4·2	18·9	14·7	...	18·9	83·9	54·6	25	15	98·1	67·6	166
	Total	550,986	510,588	1,061,574	295	255	550	14·4	12·5	26·9	115	96	4	275	102	8	161	646	4·7	·2	13·4	5·0	·4	7·9	31·6	29·6	356	299	33·6	29·5	122

MORTALITY ACCORDING TO—

Class.

DISTRICTS.	NAMES OF MUNICIPALITIES.	DEATHS AMONG—					RATIO PER 1,000 OF POPULATION PER ANNUM.				
		Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan ...	Burdwan	...	12	6	...	...	...	26·3	30·4	...	...
Midnapore ...	Midnapore ...	...	14	...	...	...	...	28·1	...	...	...
Hughli ...	Hughli and Chinsurah	...	27	9	...	...	...	55·5	75·1	...	...
Serampore ...	Serampore ...	...	39	4	...	...	...	80·4	221·7	...	...
	Utterpara	...	7	2	...	...	...	68·3	565·2	...	...
Howrah ...	Howrah	1	54	14	...	1	27·6	41·2	35·5	...	215·8
	Bali	...	6	...	...	...	...	23·3	...	...	...
Nuddea ...	Kishnaghur ...	...	7	4	...	...	...	19·5	25·1	...	...
	Ranaghat	...	3	1	...	...	...	21·3	38·1	...	...
	Santipore	...	8	2	...	...	...	20·1	11·6	...	...
Jessore ...	Jessore	...	7	8	...	...	...	80·7	108·8	...	...
Rajshahye ...	Rampore Beauleah	...	4	4	...	...	...	21·0	21·2	...	...
Darjiling ...	Darjiling	...	3	...	...	...	...	34·0	...	...	...
Dacca	Dacca	...	38	21	...	...	...	49·0	27·8	...	...
	Naraingunj ...	...	22	8	...	...	...	180·9	67·5	...	...
Chittagong ...	Chittagong ...	1	2	4	2	...	65·3	17·9	13·6	433·3	...
Tipperah ...	Comillah	...	3	6	...	...	...	26·2	42·3	...	...
Patna	Patna City ...	...	27	11	...	...	...	11·8	14·0	...	...
Gya ...	Gya	...	39	13	...	...	...	33·8	42·0	...	...
Shahabad ...	Arrah	...	13	6	...	...	...	21·8	25·1	...	...
Mozufferpore...	Mozufferpore ...	...	8	4	...	...	...	13·9	16·7	...	...
Durbhanga ...	Durbhanga ...	...	37	7	...	...	...	39·7	20·7	...	...
Saran	Chupra	...	7	7	...	...	...	9·2	30·6	...	...
Bhagulpore ...	Bhagulpore ...	...	16	9	...	...	...	20·9	27·2	...	...
Monghyr ...	Monghyr	...	33	5	...	...	...	38·4	20·7	...	...
Purneah ...	Purneah	...	3	7	...	...	...	17·0	64·3	...	...
Poori ...	Poori	...	39	1	...	...	...	82·7	247·6	...	...
	TOTAL ...	2	478	163	2	1	14·9	32·8	28·8	51·4	76·8

Age.

DISTRICTS.	NAMES OF MUNICIPALITIES.	DEATHS										RATIO PER 1,000 OF POPULATION PER ANNUM.									
		Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	1	1	2	1	...	2	2	3	2	4	78·8	23·0	44·6	20·7	...	13·1	15·1	35·3	42·4	140·4
Midnapore ...	Midnapore ...	3	...	...	...	2	1	...	3	2	3	210·0	...	...	...	32·9	7·1	...	41·9	50·4	85·2
Hughli ...	Hughli and Chinsurah	6	4	1	...	5	4	6	5	3	3	386·5	93·7	18·0	...	103·6	33·5	54·7	62·3	40·0	75·3
Serampore ...	Serampore ...	7	6	2	2	...	7	7	2	2	8	512·7	172·9	41·4	46·8	...	67·6	73·2	30·8	54·3	290·1
	Utterpara	...	1	..	...	1	...	1	2	4	...	...	123·5	...	...	118·2	...	49·0	148·4	565·2	...
Howrah ...	Howrah	7	5	6	3	3	10	10	8	9	9	176·4	46·9	49·6	23·7	21·3	22·9	27·0	35·4	85·2	124·8
	Bali	...	...	4	...	...	1	...	..	1	...	...	...	195·1	...	...	15·5	...	...	49·6	...
Nuddea ...	Kishnaghur ...	1	1	1	...	1	...	4	...	3	...	104·8	21·1	15·1	...	25·3	...	48·6	...	74·9	...
	Ranaghat	...	1	...	...	...	...	1	2	...	...	...	65·4	...	...	...	...	41·7	103·6	...	...
	Santipore	1	...	1	1	1	...	3	1	...	2	61·5	...	13·8	17·9	23·4	...	36·0	14·8	...	53·6
Jessore ...	Jessore	3	2	...	1	1	2	1	2	2	1	804·1	210·5	...	78·2	71·0	51·6	34·0	99·0	184·7	113·5
Rajshahye ...	Rampore Beauleah	2	...	1	2	...	...	...	2	1	...	256·2	...	25·0	57·7	...	...	...	42·4	41·9	...
Darjiling ...	Darjiling	1	1	...	...	...	1	...	...	...	...	429·8	80·9	...	...	...	26·0	...	...	...	...
Dacca	Dacca	12	3	1	4	2	15	4	5	2	11	323·8	21·2	5·2	26·2	14·2	50·9	17·8	31·0	22·0	102·6
	Naraingunj ...	4	2	...	2	1	5	8	7	...	1	745·5	91·2	...	91·6	49·8	97·4	194·5	261·3	...	79·8
Chittagong ...	Chittagong ...	1	2	2	...	1	1	2	...	...	...	92·4	52·9	41·6	...	21·5	11·2	31·2	...	...	...
Tipperah ...	Comillah	1	...	2	...	1	2	1	1	1	...	175·1	..	63·9	...	41·3	37·7	26·1	39·6	64·9	...
Patna	Patna City ...	4	6	2	...	5	4	1	4	6	6	48·3	21·4	6·2	...	23·3	7·2	2·2	11·0	22·1	22·6
Gya ...	Gya	5	3	4	2	2	5	8	5	6	12	145·3	24·6	29·7	15·5	19·9	17·7	32·7	26·6	47·5	121·2
Shahabad ...	Arrah	1	1	1	1	1	1	3	2	3	5	40·4	11·7	10·1	11·8	16·2	6·6	24·2	22·2	50·4	90·2
Mozufferpore...	Mozufferpore ...	1	2	...	1	1	1	...	2	2	2	54·5	25·7	...	13·1	17·2	6·1	...	20·8	32·0	42·7
Durbhanga ...	Durbhanga ...	7	7	4	2	2	2	4	3	5	8	233·3	47·8	26·6	18·7	25·9	7·8	18·6	21·0	59·3	130·2
Saran	Chupra	1	4	...	...	3	1	...	...	...	5	36·9	40·3	...	...	44·9	5·6	...	...	...	76·4
Bhagulpore ...	Bhagulpore ...	3	3	3	...	1	2	5	...	3	5	130·7	23·8	26·6	...	12·4	9·5	28·0	...	36·6	72·3
Monghyr ...	Monghyr	7	3	3	3	...	8	3	2	...	9	245·1	25·1	22·1	27·2	...	40·2	17·5	16·3	...	130·5
Purneah ...	Purneah	4	1	1	1	...	2	...	...	1	...	735·0	43·0	32·9	43·5	...	31·7	...	...	55·5	...
Poori ...	Poori	4	4	3	...	2	3	8	4	4	3	696·5	115·7	69·6	...	55·9	78·7	102·6	62·6	93·2	96·4
	TOTAL ...	87	63	44	26	36	85	82	65	61	97	178·2	35·2	20·7	14·0	23·1	20·9	24·3	27·0	40·9	76·7

W. H. GREGG, *Dip. Publ. Health, Camb.*,

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 21st December 1889, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 21st December 1889.			Week ending Saturday, the 22nd December 1888.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,615	1,23,283	1,681	1,228	1,62,775	2,168
Jute	343	2,02,650	3,687	274	1,33,875	2,472
Firewood	128	86,850	1,269	179	82,335	1,266
Other articles	996	2,17,070	3,554	1,321	3,23,015	5,345
Total ...	3,082	6,29,853	10,191	3,002	7,02,000	11,251

CIRCULAR AND EASTERN CANALS.

Approximate return of traffic for the week ending Saturday, the 28th December 1889, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 28th December 1889.			Week ending Saturday, the 29th December 1888.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,744	1,59,595	2,298	1,297	3,07,325	2,776
Jute	379	4,00,650	4,168	242	1,36,850	2,458
Firewood	80	46,650	693	156	84,300	1,289
Other articles	1,025	2,56,170	4,042	1,042	1,90,665	2,932
Total ...	3,228	8,63,065	11,199	2,737	7,19,140	9,455

Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of October 1889, as compared with the same month of the previous year.

Staples.	1888.		1889.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1888.	1889.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	693	.....	589	.....	693	589	.....	104
Cotton piece-goods—								
1.—European	49	2	6	.....	51	6	.....	45
Grains—								
2.—Rice	158	709	59	7	867	66	.....	801
4.—Others	8	.....	45	4	8	49	41	.....
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed	.....	.....	5	.....	.....	5	5	.....
b.—Undressed	1	.....	.....	.....	1	.....	.....	1
Jute—								
1.—Raw	.....	6	.....	5	6	5	.....	1
2.—Gunny bags and cloths	19	2	3	.....	21	3	.....	18
Lac—								
1.—Stick	1	.....	.....	1	1	1	.....	.....
Leather, manufactured	8	.....	3	.....	8	3	.....	5
Liquors—								
1.—Beer	1	.....	.....	.....	1	.....	.....	1
Metals—								
4.—Others	1	7	.....	2	8	2	.....	6
Oils—								
1.—Castor	.....	.....	1	.....	.....	1	1	.....
2.—Kerosine	1	2	1	.....	3	1	.....	2
3.—Others	1	.....	1	.....	1	1	.....	.....
Oilseeds—								
1.—Mustard and rape	20	.....	24	.....	20	24	4	.....
6.—Others	39	6	.....	.....	45	.....	.....	45
Provisions—								
1.—Ghee	1	.....	3	.....	1	3	2	.....
2.—Dried fruits and nuts	2	13	.....	.....	15	.....	.....	15
3.—Others	1	3	.....	.....	4	.....	.....	4
Railway plant and rolling-stock	89	21	69	20	110	79	.....	31
Salt	42	1	16	.....	43	16	.....	27
Silk, raw—								
2.—Indian	2	18	.....	15	20	15	.....	5
Silk piece-goods—								
2.—Indian	.....	4	.....	2	4	2	.....	2
Spices—								
2.—Others	1	.....	.....	.....	1	.....	.....	1
Stone and lime	4	.....	.....	1	4	1	.....	3
Sugar—								
1.—Drained	14	.....	3	.....	14	3	.....	11
2.—Undrained	2	.....	4	.....	2	4	2	.....
Tobacco	5	.....	1	1	5	2	.....	3
Timber	.....	.....	3	.....	.....	3	3	.....
All other articles of merchandise	47	14	93	28	61	121	60	.....
Total ...	1,210	808	919	86	2,018	1,005	118	1,131

	Tons.
INCREASE.	
Grains—	
(4) Others	41
This increase is owing to greater import of paddy for high price at Azimganj.	
DECREASE.	
Coal	104
This decrease is due to previous stock not being exhausted.	
Cotton piece-goods—	
(1) European	45
This is due to this traffic being carried by steamers plying between Jeaganj and Calcutta.	
Grains—	
(2) Rice	801
This is due to less export from intermediate stations.	
Jute—	
(2) Gunny-bags and cloths	18
This is due to less export of grains.	
Oilseeds—	
(6) Others	45
This is due to less import for dull market.	
Provisions—	
(2) Dried fruits and nuts	15
Owing to less import of cocoanuts.	
Railway plant and rolling-stock	31
This is due to less materials carried during the month.	
Salt	27
This is due to this traffic being carried by boat.	
Sugar—	
(1) Drained	11
Less imported on account of less demand.	

R. G. MOOKERJEE,
Manager, Nalhati State Railway.

The 27th December 1889.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 21st December 1889, *on* 1,525½ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (details).	Total Traffic Receipts.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	*2,16,540	*2,72,920 6 0	25,51,653 10	6,23,064 3 6	20,511 14 0	9,16,496 7 6	60,276	91,006½	157,282½
Or per mile of railway	.....	178 14 6	.....	408 6 11	13 7 1	600 12 6	.....	.....	.....
For previous 24 weeks of half-year	5,743,047	63,58,121 11 0	5,15,93,130 20	1,10,74,556 6 6	3,88,169 9 5	1,84,20,847 10 11	1,582,388½	1,938,839½	3,521,228½
Total for 24 weeks ...	5,959,587	66,31,042 1 0	5,41,44,783 30	1,22,97,620 10 0	4,08,681 7 5	1,93,37,344 2 5	1,642,664½	2,029,846½	3,678,511
COMPARISON.									
Total for corresponding week of previous year ...	218,724½	2,05,302 3 3	24,51,942 0	6,02,373 3 9	17,552 14 10	10,05,228 5 10	60,256	100,745	173,001
Per mile of railway corresponding week of previous year	.....	193 0 3	.....	453 13 10	11 8 1	658 15 2	.....	.....	.....
Total to corresponding date of previous year	5,801,276½	65,27,214 14 5	5,89,21,207 0	1,25,19,219 12 10	4,32,701 4 2	1,94,79,135 15 5	1,630,408	2,055,901	3,686,309

* The decrease in coaching traffic is due to figures for the corresponding period of 1888 having included earnings on account of troop extra trains.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 22nd December 1888			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,525½	10,05,228	659	1,525½	9,16,496	601	1,525½	3,14,03,841	543	1,525½	3,13,64,099	541	.....	39,742

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 21st December 1889, on 61⅛ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	14,763	8,503 14 0	42,703 30	2,702 4 0	52 13 0	11,318 15 0	1,967	598	2,565
Or per mile of railway	258	149 11 6	746 30	47 3 10	0 14 9	197 14 1	.....	.....	..
For previous 24 weeks of half-year	324,3[illegible]	1,80,322 8 0	*10,16,744 30	*54,263 9 0	†1,577 12 3	2,36,143 13 3	37,936½	17,598	55,524½
Total for 24 weeks ...	339,090	1,88,886 6 0	10,59,248 30	56,965 13 0	1,610 0 3	2,47,462 12 3	39,903½	18,186	58,089½
Comparison									
Total for corresponding week of previous year	13,490	7,319 1 1	25,675 10	1,744 4 0	47 4 3	9,110 9 4	1,751	643	2,394
Per mile of railway corresponding week of previous year ...	236	127 15 3	449 0	30 7 11	0 13 3	159 4 5	.....	.....	.....
Total to corresponding date of previous year	330,887½	1,81,824 4 2	10,30,731 0	59,301 11 0	1,414 4 9	2,42,540 3 11	45,077	17,146	62,813

* Added Mds. 3,310 and Rs. 74 5 0 } on account of supplemental goods and miscellaneous receipts for the last two days of September 1889.
† Ditto „ 579 3 0 }

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883

Receipts for week ending 22nd December 1888.			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57⅓	9,111	159	57⅓	11,319	198	57⅓	3,56,405	164	57⅓	*3,61,463	166	4,998	.....

* Added Rs. 65½ on account of supplemental goods and miscellaneous receipts for the last two days of September 1889.

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 21st December 1889, on 22¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	15,583	3,804 12 0	7,814 30	324 1 0	6 8 0	4,135 5 0	900	130	1,030
Or per mile of railway ...	.....	171 0 0	.....	14 9 0	0 4 8	185 13 8	.....	.. ..	....
For previous 24 weeks of half-year	423,915	1,04,797 6 0	*2,15,847 20	*6,408 0 0	†142 11 6	1,11,408 1 6	22,058	1,932	24,990
Total for 25 weeks ...	439,498	1,08,602 2 0	2,23,662 10	6,732 1 0	149 3 6	1,15,543 6 6	22,958	2,112	25,070
Comparison.									
Total for corresponding week of previous year	15,054½	3,652 4 3	7,[illegible] 20	283 9 0	6 13 3	3,942 10 6	906	62	968
Per mile of railway corresponding week of previous year ...	.....	164 2 4	.....	12 11 11	0 4 11	177 3 2	... ..	.....	... ...
Total to corresponding date of previous year	442,917	1,09,401 15 5	1,27,066 10	5,001 6 0	168 11 6	1,14,632 0 11	23,078	1,210	24,288

* Added maunds 5,714-30 and Rs. 52-8-0 } on account of supplemental goods and miscellaneous receipts for the last two days of September 1889.
† Ditto „ 0-4-0 }

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 22nd December 1888.			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
22¼	3,943	177	22¼	4,135	186	22¼	2,00,079	238	22¼	*1,98,176	234	.....	2,803

* Added Rs. 53 on account of supplemental goods and miscellaneous receipts for the last two days of September 1889.

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 14th December 1889, on 747 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated), including steam-boat.	Total earnings.	Traffic Train-mile run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	141,110	73,860 0 0	7,27,140 0	1,99,640 0 0	18,170 0 0	2,91,670 0 0	21,680	38,818	60,498
Or per mile of railway ...	189	99 0 0	973 0	267 0 0	†4 0 0	370 0 0	.....	.....	.....
For previous 23 weeks of half-year	3,216,534	15,04,720 0 0	1,46,13,400 0	37,09,682 0 0	3,78,545 0 0	*55,92,947 0 0	509,406	671,073	1,181,379
Total for 24 weeks ..	3,357,644	15,78,580 0 0	1,53,40,540 0	39,09,322 0 0	3,96,715 0 0	58,84,617 0 0	531,086	710,791	1,241,877
COMPARISON.									
Total for corresponding week of previous year	124,342	63,290 0 0	6,07,282 0	1,60,365 0 0	17,025 0 0	2,41,280* 0 0	21,266	32,097	53,365
Per mile of railway corresponding period of previous year ...	185	94 0 0	902 0	238 0 0	†4 0 0	336 0 0	.....	.....	.....
Total to corresponding date of previous year	3,283,447	14,78,486 0 0	1,47,63,313 0	37,59,219 0 0	4,03,729 0 0	56,71,434 0 0	496,918	733,809	1,230,787

* Audited up to week ending 26th October 1889.
† Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

Receipts for week ending 15th December 1888.			Receipts for week ending 14th December 1889.			Total receipts from 1st April 1888 to 15th December 1888.			Total receipts from 1st April 1889 to 14th December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
673	2,41,280	358	747	2,91,670	390	673	76,26,906	306	721	*80,29,058	301	3,03,152	...

* Audited up to week ending 26th October 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 14th December 1889, on 125 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	25,370	10,820 0 0	30,470 0	2,360 0 0	290 0 0	13,470 0 0	3,006	2,060	5,07
Or per mile of railway	203	87 0 0	244 0	19 0 0	2 0 0	108 0 0	.....	.....	.....
For previous 23 weeks of half-year	*634,271	2,21,167 0 0	*13,21,440 0	1,19,707 0 0	5,073 0 0	*3,46,007 0 0	82,481	52,306	134,78
Total for 24 weeks ...	659,641	2,31,987 0 0	13,51,910 0	1,22,127 0 0	5,363 0 0	3,59,477 0 0	86,087	54,372	140,45
COMPARISON.									
Total for corresponding week of previous year	24,466	10,028 0 0	47,923 0	2,885 0 0	45 0 0	12,958 0 0	3,606	2,060	5,67
Per mile of railway corresponding period of previous year ..	196	80 0 0	383 0	23 0 0	1 0 0	104 0 0	.....	.....	.....
Total to corresponding date of previous year	642,229	2,12,884 0 0	14,01,005 0	1,38,125 0 0	1,846 0 0	3,52,855 0 0	86,712	59,715	146,42

* Audited up to week ending 26th October 1889.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

Receipts for week ending 15th December 1888.			Receipts for week ending 14th December 1889.			Total receipts from 1st April 1888 to 15th December 1888.			Total receipts from 1st April 1889 to 14th December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	12,958	104	125	13,470	108	125	5,14,657	112	125	*5,39,325	117	24,668	.....

* Audited up to week ending 26th October 1889.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Shahabad will be put up to public and unreserved sale at the Collector's Office of that district on the 11th day of January 1890 for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realised in the same manner as arrears of revenue due on the 28th day of September 1889.

When in columns 5, 7, and 9 of the appended statement is is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9	10
Serial No.	Towji No.	Name of mehal with pergunnah.	Suddor jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the suddor jumma of such share.	If the whole estate is to be sold the arrears due from it.	If only a share is to be sold, the arrears due from it
			Rs. A. P.		A. P. K. M. D.		Rs. A. P.	Rs. A. P.	Rs. A. P.
1	59	Balua, pergunnah Arrah.	5,372 14 3	.....	Narsda Hetampore ... 16 0 0 0 0 Piparpauti Patti Tirpatti ... 16 0 0 0 0 Kewatia ... 16 0 0 0 0 Khulepore Jakhri ... 16 0 0 0 0	Ram Saran Lall ...	1,402 9 5½	.....	4 1 4½
2	62	Bakhorapore, pergunnah Arrah.	2,666 10 8	.....	Bakhorapore ... 1 3 10 0 0	Mohesh Dutt and others.	215 4 5	.....	25 4 5
					Ditto ... 1 4 0 0 0	Shiva Saran Singh and others.	222 3 6½	.....	16 9 6½
3	206	Farhangpore, pergunnah Arrah.	799 3 0	.....	Ditto ... 6 11 11 2 4	Raghoonundon Parsad and others.	1,173 8 1½	.....	251 13 7½
					Mustafapore Bhadwar ... 1 4 0 0 0 Sobhidoomra ... 0 6 0 0 0 Ditto ... 0 6 0 0 15	Jagdam Sahai ..	17 7 4½	.....	17 7 4½
					Siripatpore Chatar 3 9 0 0 0 Mustafapore Bhadwar ... 4 4 0 0 10 Farhangpore ... 0 0 0 0 10 Gothanlabaraoli 10 0 0 0 0	Shia Balak Lall and others.	153 10 8½	.....	8 11 7½
4	208	Ditto	1,592 0 1	.....	Farhangpore ... 3 2 8 0 0 Mustafapore Bhadwar ... 4 0 0 0 0 Siripatpore ... 4 2 0 10 0 Gothanlabaraoli 4 0 0 0 0 Sobhidoomra ... 5 0 0 0 0 Farhangpore ... 1 8 0 0 0	Jugdeo Narayen Singh and others.	409 6 6	.....	24 10 0
					Mustafapore Bhadwar ... 2 0 13 6 0 Gothanlabaraoli 1 8 0 0 0 Sobhidoomra . 2 6 0 0 0 Siripatpore Chatar 1 9 5 12 0	Raj Balam Singh ..	204 5 10½	... ..	9 15 9
5	222	Gyanpore, pergunnah Arrah.	1,706 10 8	.....	Gyanpore 8 0 0 0 0	Raghunandan Prasad Pande.	853 5 4	.....	106 10 6
					Ditto . 8 0 0 0 0	Radha Madho Pershad Pande.	853 5 4	.....	106 10 6
6	396	Mathurapore Sonadis, pergunnah Arrah.	2,266 10 8	.....	Mathurapore Sonadis ... 7 1 7 0 0	Bibi Umat and others	1,574 1 4½	.....	101 15 7½
7	434	Mahoolikhurd, pergunnah Arrah	550 0 0	Whole ...	.....	Ram Saran Singh and others.	.....	0 14 0	.....
8	530	Padoorah, pergunnah Arrah.	1,291 0 0	Do. ...	.....	Madho Pershad and others.	.....	1 2 0	... ..
9	633	Semana Jeo Narayen, pergunnah Arrah.	888 8 6	.....	1 4 0 0 0 2 8 0 0 0	Kali Charun Singh Abiram Singh and others.	74 0 8½ 148 1 5	.....	0 9 8½ 0 7 5
					9 5 1 6 10	Moti Singh and others	523 4 2	.....	3 3 11½
10	771	Taufir Kutwa Rampore, pergunnah Baraligawan.	1,080 0 0	.....	13a.	Jhagroo Pande and others.	877 8 0	... .	12 14 5
11	816	Raipore Binawan, pergunnah Barahgawan.	2,126 3 4	Whole ..	... .	Bhugwan Das and others.	.....	21 9 8	.....
12	1161	Padaria, pergunnah Belara.	1,530 0 0	Do. ...	....	Babu Baijnath Sahai	... ..	0 8 0	.....
13	1576	Bagholwa, pergunnah Chausa.	586 0 0	.....	8a.	Debi Dyal Chobe and others	293 0 0	.....	3 8 0
14	1607	Chilbila Kadipore, pergunnah Chausa.	751 9 6	Whole ...	.....	Ram Nihora Ram and others.	.....	1 10 7	.....
15	1620	Chilabri Patti Bhichook Sahu, pergunnah Chausa.	720 14 7	Do. ...	.....	Dandi Pande and others.	.....	75 0 4	.....
16	1719	Indaurpati Girdhari Singh, pergunnah Chausa.	584 5 7	Do. ...	.....	Isri Rai and others ...	.....	29 0 11	.....
17	1948	Piparadh, pergunnah Chausa.	760 9 5	Do. ...	.....	Bhopat Rai and others	.....	0 11 0	.....
18	2056	Tiwai, pergunnah Chausa.	502 5 3	.....	Tiwai ... 7 9 10 0 0 Do. ... 3 6 10 0 0	Bhairo Rai and others Sheo Dhark Miser and others.	244 11 11½ 111 4 8½	.....	72 3 9 1 2 0
19	2144	Barijoo, pergunnah Chainpore.	704 12 2	.. ...	12a.	Mahabir Prasad and others.	573-10-1-10k	... .	10 10 11
20	2163	Baghi, pergunnah Chainpore.	859 11 9	.	7a. 6p.	Ram Dat Rai and others.	403 0 2½	.....	40 15 0½
21	2165	Bandipore, pergunnah Chainpore.	933 5 4	Whole ...	.....	Baijnath Sahai ..	.....	0 7 8	.....
22	2173	Sahiree Kalan ...	508 10	.....	6a.	Nainal Singh and others	190 12 9½	.....	25 5 0½
23	2188	Bairi Raghoonath, pergunnah Chainpore.	1,325 13 10	Whole ..	. ...	Suraj Narayan Singh and others.	.....	667 6 3	.....
24	2250	Bharkhar, pergunnah Chainpore.	722 6 5	.....	13a. 8p. 11k. 8m. 9d	Dhan Coomar Chund and others.	619 2 4	.....	3 4
25	2317	Chata, pergunnah Chainpore.	709 5 4	Whole.	.....	Mussamut Husseni Bibi and others.	.. .	114 12 5	... ..
26	2332	Darwan Meali, pergunnah Chainpore.	1,066 10 8	.....	4a.	Girdhari Rai and others.	266 10 8	.....	16 0 3½
					3a. 2½p.	Sivabaren Rai and others.	211 1 9½	.....	3 11 3½
27	2337	Dumduma, pergunnah Chainpore.	936 0 5	Whole.	... ..	Samrath Rai and others.	.....	5 5 5	.....
28	2356	Damdwa	804 10 9½	.....	8a. .k.	Girdhari Singh and others.	402 5 4½	.. .	83 3 6½
					5a. 4p.	Parbhoo Singh and others.	268 3 6½	.....	72 11 4½

1	2	3	4	5	6	7	8	9	10
Serial No.	Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
							Rs. A. P.	Rs. A. P.	Rs. A. P.
29	2357	Daudkheli Moharakpore, pergunnah Chainpore.	739 2 1	Whole.	.....	Mohip Narayen Singh and others.	.....	46 10 6	.....
30	2364	Dohrak, pergunnah Chainpore.	1,608 5 3	Do. ...	..... A. P. K. M. D.	Baijnath Sahai ...	... ..	0 0 2	.....
31	2433	Goi, pergunnah Chainpore.	1,444 0 0	.....	Lanka ... ... 2 8 0 0 0 Li ... ... 2 8 0 0 0 Lanka ... ... 2 8 0 0 0 Li ... ... 2 8 0 0 0 Goi ... ... 2 8 5 18 0 Lanka ... ... 2 8 5 18 0 Do. ... .. 10 7 14 2 0 Goi ... ... 13 3 0 14 2 Li 5 4 0 0 0	Ram Saroop Singh. Ram Sabhi Singh and others. Mussamut Lakhpati Koer. Aher Singh and others.	98 13 2 130 3 2 143 2 3 874 2 0	....	66 3 2 3 8 8 7 14 3 876 11 8
32	2519	Hamirpore, pergunnah Chainpore.	608 0 0	Whole	.....	Radha Mohan Prasad	.....	37 14 11	... ..
33	2542	Dulia, pergunnah Chainpore.	611 3 2	Do. ..	.....	Harkhoo Singh and others.	.....	79 2 7	.....
34	2618	Karji, pergunnah Chainpore.	1,122 2 2	.....	Kurji .. 1 6 0 0 0 Kargaon ... 1 6 0 0 0 Rabhniaon ... 1 6 0 0 0 Dubri ... 1 6 0 0 0 Kurji ... 6 0 0 0 0 Kargaon ... 6 0 0 0 0 Rabhniaon ... 6 0 0 0 0 Dubri ... 6 0 0 0 0 Nainpura ... 12 5 6 13 5	Thakoor Dyal Singh and others. Mussamut Janki Koer and others. Zalim Singh and others.	132 4 3½ 793 0 7½ 40 12 5½	....	8 0 0 43 0 7½ 16 2 8½
35	2632	Kaliyanpore, pergunnah Chainpore.	533 5 4	Whole.	... ..	Deo Narayen Singh and others.	.....	154 8 9	. ....
36	2647	Kutas, pergunnah Chainpore.	713 9 7	.....	13a. 4p.	Doman Singh and others.	594 10 7½	.....	240 10 7
37	2761	Majhiarie, pergunnah Chainpore.	1,066 10 8	Whole.	.....	Baijnath Sahai ...	....f.	0 1 4	... .
38	2774	Masaudher, pergunnah Chainpore.	680 4 4	Do. ...	.....	Bal Kishoon Sahai and others.	.....	142 8 7	.....
39	2878	Nawajhouti ...	814 14 11	Do. ...	....	Gopal Sarun Singh and others.	.....	308 0 2	. ....
40	2944	Pariari, pergunnah Chainpore.	1,527 7 6	Do. ..	.....	Radha Mohan Prasad Pande and others.	.....	94 12 6	. ...
41	3051	Sirirampore *alias* Saria.	1,461 1 1	Do. ...	.....	Baijnath Sahai ...	... ..	0 3 4	.....
42	3074	Sondhi, pergunnah Chainpore.	1,036 4 3	.....	Baroona ... ... 16 0 0 0 0 Mujhgoan ... 16 0 0 0 0 Jigna ... ... 16 0 0 0 0 Madanpoora ... 16 0 0 0 0	Lala Seamund and others.	1,606 6 5	.....	25 6 10
43	3102	Shiopore Bhal, pergunnah Chainpore.	907 7 6	.....	2p.	Tilakdhuri Lal ...	10 1 3	.....	2 14 6
44	3178	Tari, pergunnah Chainpore.	869 14 3	...	Tari .. . 4 0 0 0 0 Patti Kasir ... 4 0 0 0 0 Jaddapore ... 4 0 0 0 0 Tari ... ... 9 4 0 0 0 Jadu Kant ... 9 4 0 0 0 Patti Kasir ... 9 4 0 0 0 Jadupore ... 5 4 0 0 0 Sonbersa ... 5 4 0 0 0 Basantpore ... 5 4 0 0 0 Bhugwanpore ... 5 4 0 0 0 Baradiari ... 16 0 0 0 0 Kekarha ... 16 0 0 0 0 Salondha ... 16 0 0 0 0 Ghusna ... 16 0 0 6 0	Debi Dyal Singh ... Gopal Sarun Singh and others.	124 12 5 300 7 0½	....	2 9 3 35 10 5½
45	3634	Kushi Sadhwa, pergunnah Dinara.	1,000 0 0	... .	Kusli ... ... 8 10 13 6 10 Rohi ... ... 8 10 13 6 10 Dasraon 5 4 0 0 0	Ram Sarun Lall and others.	161 4 3½	.....	12 12 4½
46	3639	Khedaoi, pergunnah Dinara.	986 10 8	. . ..	Khadaon Khurd 11 2 8 0 0 Khadaon Kalan 11 2 8 0 0 Dhanchoca ... 11 2 8 0 0 Bhanjandihra .. 11 2 8 0 0	Raghoobir Sarun Thakoor and others.	690 10 4	.....	20 3 4
47	3645	Patti Kamiari, pergunnah Dinara.	1,025 1 1	Whole.	.....	Sona Koer and others.	.....	7 0 5	.....
48	3703	Barodhi, pergunnah Nonore.	2,843 0 0	Do. ...	.....	Madho Pande and others.	.....	4 5 9	.....
49	3707	Nerapore Lasadi, pergunnah Nonore.	2,242 0 0	.....	Lasadi .. ... 16 0 0 0 0 Nirapore Dhamaria. 8 0 0 0 0	Ram Sarun Singh and others.	2,085 8 0	.....	6 3 6
50	3782	Koulo Dehri, pergunnah Nonore.	752 9 8	Whole.	... ..	Lachmi Narayen and others.	.....	104 4 8	.....
51	3843	Mirzapore Atpa ...	645 0 0	.....	8a.	Ditto ...	322 8 0	.....	37 0 0
52	4102	Sandeo, pergunnah Pawar.	1,008 10 8	Whole ...	..	Bisumbher Singh and others.	.....	9 12 3	.....
53	4292	Doman Dehri, pergunnah Piro	666 10 8	Do. ...	.. ...	Budhan Singh and others.	.....	102 8 11	.....
54	4294	Damarua, pergunnah Piro.	900 0 0	Do. ...	.....	Aga Sultan Tafazal Hossain.	.....	112 0 0	.....
55	4509	Makundpore Jamsoodi.	500 0 0	Do. ...	.....	Babnan Ojha and others.	.....	4 7 8	.....
56	4667	Sonbersa, pergunnah Piro.	520 0 0	.....	1p.	Mussamut Moorta Koer.	2 11 4	.....	6 15 2
57	5160	Chundonpore, pergunnah Sasseram.	586 10 8	.....	14a. 4p. 10k.	Makund Pande and others.	527 1 4	.....	6 11 0
58	5633	Mahuari Baraicha.	648 2 2	...	Mahuari .. 16 0 0 0 0 Parasia ... 16 0 0 0 0	Mussamut Bibi Fatma and others.	331 11 9½	.....	41 15 3½
59	5933	Suara Sakhan, pergunnah Sasseram.	718 8 5	.....	8a. 9p. 3k. 16m. 4½d.	Manoo Rai and others.	396 7 0	.....	23 0 10
60	6182	Noorpore Majhouli, pergunnah Arrah.	533 7 5½	Whole.	. ...	Chaudhry Abhiram Singh and others.	.....	0 2 1	.....

Shahabad Collectorate, Arrah, the 22nd December 1889

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1889.			
Dec. 17	2 Cases, 104 in a diamond, A B & Co. outside ...	Order ...	S. S. "Roumania."
,, 17	1 Case, A M in a diamond, J C & S below ..	Ditto ...	Ditto.
,, 17	1 Bale, G R & Co. in a diamond, C R S R outside...	Ditto ...	Ditto.
,, 17	52 Packages iron, C F R Simpson, Esq., Chitnarrah Factory, Tirhoot, Bengal, India, or no mark, care of Messrs K. Hamilton & Co.	Addressed ...	Ditto.
			Ditto.
,, 17	4 Cases, M E B in a triangle, C H L & Co. top ...	Order ...	Ditto.
,, 17	1 Bale, G by Misser N in a circle	Ditto ...	Ditto.
,, 17	2 Kegs, 251 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,, 17	2 Cases, N & Co by 111 in a diamond, L below ...	Ditto ...	Ditto.
,, 17	3 Packages, no mark	Ditto ...	Ditto.
17	1 Case, 327 in a triangle, S S top	Ditto ..	Ditto.
,, 17	1 Case, R. White, Esq., care of Messrs. Jardine, Skinner & Co.	Addressed ...	Ditto.
,, 17	1 Case, W L	Order ...	Ditto.
,, 17	2 Cases, 370 in a diamond, T top	Ditto ...	Ditto.
,, 17	1 Case, Messrs. Schroder, Smidt & Co. ...	Addressed ...	Ditto.
,, 17	2 Packages, Samnugger	Order ...	Ditto.
,, 18	1 Case, 554 in a triangle, C H L & Co top ...	Ditto ...	S. S. "City of London."
,, 18	1 Case, C P	Ditto ...	Ditto.
,, 18	500 Kegs, D in a diamond	Ditto ...	Ditto.
,, 18	2 Packages, D E A S in a block	Ditto ...	Ditto.
,, 18	1 Case, 8505 in a diamond, D U F F outside ...	Ditto ...	Ditto.
,, 18	10 Cases, D by 510 in a triangle, M E B outside ...	Ditto ...	Ditto.
,, 18	5 Cases, D 500 in a triangle, C H L & Co. top ...	Ditto ...	Ditto.
,, 18	1 Case, Miss Gault, care of Miss Pattson, Zenana Mission House, Benares.	Addressed ...	Ditto.
,, 18	3 Cases, 25 in a double triangle, G D F H outside...	Order ...	Ditto.
,, 18	25 Cases, J P V & Co. in a diamond	Ditto ...	Ditto.
,, 18	5 Cases, L O C K E	Ditto ...	Ditto.
,, 18	3 Cases, M E B in a triangle, C H L & Co. top ...	Ditto ...	Ditto.
,, 18	6 Cases, 272 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,, 18	2 Cases, T C by N in a diamond	Ditto ...	Ditto.
,, 18	1 Case, 522 in a diamond, W below	Ditto ...	Ditto.
,, 18	2 Cases, W T & Co.	Ditto ...	Ditto.
,, 18	1 Case, 513 in a diamond, W below	Ditto ...	Ditto.
,, 18	5 Packages, Y in a triangle, C R top	Ditto ...	Ditto.
,, 18	1 Parcel, G & Co. in a block	Ditto ...	Ditto.
,, 18	2 Iron chains, no mark	Ditto ...	Ditto.
,, 18	1 Case, J M in a diamond	Ditto ...	Ditto.
,, 18	6 Packages, B in a triangle, J S top, or no mark ...	Ditto ...	Ditto.
,, 18	1 Case, B B in a diamond, Y P below	Ditto ...	Ditto.
,, 18	1 Case, B in a diamond, J S top	Ditto ...	Ditto.
,, 18	3 Cast iron pipes, M & E	Ditto ...	Ditto.
,, 18	197 E W Pipes, A C S by Samnugger	Ditto ...	Ditto.
,, 19	2 Bundles sheet iron, B by 26 in a block ...	Ditto ...	S. S. "Clan Macpherson."
,, 19	17 Packages, no mark	Ditto ...	Ditto.
,, 19	4 Cases, A K in a diamond, H F top	Ditto ...	Ditto.
,, 19	5 Iron chains, S M	Ditto ...	Ditto.
,, 19	1 Case, S D C	Ditto ...	Ditto.

The 28th December 1889. (3408—1) G. H. SIMMONS, Vice-Chairman.

Statement of the Affairs of the Bank of Bengal for the week ending 23rd December 1889.

LIABILITIES.

	Rs.	A.	P.
Capital paid up	2,00,00,000	0	0
Reserve Fund	58,00,000	0	0
Public Deposits at Head Office ... ... Rs. 84,77,538 10 0			
Ditto ditto at Branches ,, 61,20,827 1 8	1 45,98,365	11	8
Other Deposits at Head Office and Branches	3,41,66,101	7	10
Bank Post Bills, &c.	2,60,278	3	1
Sundries	14,73,606	7	2
Rupees ...	7,62,98,331	13	9

ASSETS.

	Rs.	A
Government Securities	19,87,248	(
Other authorized Investments	74,57,434	1
Loans on Government and other authorized Securities	1,18,35,894	
Accounts of credit on ditto ditto	99,94,037	
Bills discounted and purchased	2,38,25,768	
Balances with other Banks	11,52,084	1
Bullion	2,27,850	1
Dead Stock	12,41,346	1
Stamps	10,987	
Sundries	1,32,5.4	
	5,78,65,826	1
Cash and Currency Notes at Head Office ... Rs. 67,64,456 15 8		
Cash and Currency Notes at Branches ... ... ,, 1,16,68,048 · 0 10	1,84,32,505	(
Rupees · ...	7,62,98,331	1

BANK OF BENGAL,
Calcutta, 27th December 1889.

R. L. BIRD, Chief Accty.
Rate for Demand Loans 6 per cent.
Percentage 36·5.

By order of the Directors,
W. D. CRUICKSHANK,
Secy. and Treasurer.
(3405—1)

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sâl beams and scantlings supplied from this depôt will be as follows:—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 „ „ 2-12 „
23 „ „ 2-14 „
24 „ „ 3 „

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 „ 2-4 „
Under 7 feet „ 2 „

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates:—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates:—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

Amended Notice.

Court of the Additional Subordinate Judge of Rungpore.

PERIODICAL sittings for the year 1890 will be held by this Officer at Julpiguri on the following dates:—

January	27th.	July	24th.
April	7th.	September	15th.
June	2nd.	December	8th.

J. R. HALLETT, District Judge.

Rungpore Judge's Court, the 14th December 1889.

Notice.

THE public are hereby informed that a Fair will be held at Falakata, in the sub-division of Alipur, Western Dooars, district Julpigoree. The Fair will commence on 23rd January 1890 (A.D.) corresponding with 11th Magh 1296 (B.S.), and will continue up to 6th February 1890. Tradesmen, dealers, and others may buy and sell there during this time. Blankets, cloth of sorts, ivory, wool, rhinoseri horns, musk, honey, wax, lac, ponies, and various other articles from Bhootan and Thibet, as also rice, paddy, jute, cotton, tobacco, mustard seed, wheat and other crops, which are grown in the Western Dooars, will be available at the Fair. Falakata is on the left or east bank of the Mujnai river, and within easy reach of Julpigoree and Cooch Behar. A good cart and driving road exists all the way.

Tradesmen and others who may attend the Fair will receive every kindness and assistance from the local officers.

DONALD SUNDER, Sub-divisional Officer, Alipur Dooars.

Alipur, the 10th December 1889.

Notice.

THE public are hereby informed that a Fair will be held at Santrabari, at the foot of the Buxa hills in the sub-division of Alipur, Western Dooars, district Julpigoree. The Fair will commence on 10th January 1890 (A.D.) corresponding with 29th Pous 1296 (B.S.), and will continue up to 20th January 1890. Tradesmen, dealers, and others may buy and sell there during this time. Blankets and cloth of sorts, yak tails, wool, ivory, rhinoseri horns, musk, honey, wax, lac, ponies, and various other articles from Bhootan and Thibet will be available at the Fair. Santrabari is within easy reach of Mogul Hât Railway station and Cooch Behar. A good cart and driving road exists all the way.

Tradesmen and others who may attend the Fair will receive every kindness and assistance from the local officers.

DONALD SUNDER, Sub-divisional Officer, Alipur Dooars.

Alipur, the 7th December 1889.

Notice.

THE public are informed that the Furreedpore Agricultural Exhibition and Mêla for the year 1890 will commence on Monday, the 6th January 1890, corresponding to 23rd Pous 1296 B.S., and continue to 20th January 1890. Tradesmen, shopkeepers and dealers may buy and sell on the Mêla ground from 1st January 1890 till the end of the month.

R. M. WALLER, Magistrate-Collector.

FURREEDPORE, the 11th December 1889.

In the Court of the Subordinate Judge of Hooghly (2nd Court).

RENT EXECUTION CASE No. 61 OF 1889.

T. A. Pearson, Esq, Acting Receiver of the High Court, and Receiver to the Estate of Surath Nath Mallik, decree-holder, *versus* Nagendra Nath Mallik, judgment-debtor.

THE undermentioned properties of the above judgment-debtor will be put up to sale to the highest bid on the 13th January 1890, at 12 o'clock noon, by the Nazir of the District Judge's Court, Hooghly, in his sale-room in the Court-house, for the realization of Rs. 6,156-3-3:—

Plot I.—Two annas share in revenue-free mouzahs Argori, Prosasto and Jhorehat, comprised in Hooghly Collectorate, Taided No. 23983, and situate in pergunnah Mozufferpore, station Domjur, and sub-registry Howrah.

Plot II.—Six bighas revenue-free lands called debtor's *Golap Bag*, containing 2 tanks, one jheel and various sorts of trees, and surrounded on all sides by brick-built walls and situate in Andul, pergunnah Mozufferpore, sub-registry Howrah, and butted and bounded on the east by debtor's vegetable garden, on the west by the Sudder road, on the north by a lane, and on the south by the *Andul Rajbati* and Trailakya Nath Ray's lands.

The upset value given by the decree-holder of each of the above properties is Rs. 200.

KEDAR NATH MAJUMDAR, Subordinate Judge, Hooghly.
(3374 - 3)

LETTERS of Administration (with copy Will and Codicil annexed) of the property and credits of Edward John Morgan, formerly of Oak Cottage, Parkestone, near Poole, in the County of Dorset, but late of Forefield House, in the City of Bath, in the County of Somerset in England, Esquire, deceased, have been granted by the High Court, Calcutta, to G. W. F. Buckland, Esq., of No. 1, Esplanade West, Calcutta, as the Attorney of the executors named in the Will of the deceased. All persons having claim against the deceased are requested to submit same to the Administrator before the 15th day of February next, after which date no claims will be admitted.

J. A. APCAR, Attorney.

Calcutta, 30th November 1889. (3320—3)

WANTED a Municipal Overseer on Rs 35 a month for the Barisal Municipality. Applications, with copies of testimonials, will be received by the undersigned up to 15th January 1890.

DWARKA NATH DUTT, Chairman, Barisal Municipality.

(3373—3)

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 14th December 1889, *on* 86 *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	18,390	5,000 0 0	54,580 0	4,500 0 0	120 0 0	10,520 0 0	2,547	2,281	4,828
Or per mile of railway	214	69 0 0	636 0	52 0 0	1 0 0	122 0 0	.....	.....	.....
For previous 23 weeks of half-year	348,940	1,14,870 0 0	6,64,115 0	56,668 0 0	5,864 0 0	*1,77,403 0 0	57,576	17,856	75,432
Total for 24 weeks ...	367,330	1,20,770 0 0	7,18,695	61,168 0 0	5,984 0 0	1,87,923 0 0	60,123	20,137	80,260
Comparison.									
Total for corresponding week of previous year	14,500	5,178 0 0	18,605 0	1,905 0 0	170 0 0	7,253 0 0	2,510	594	3,104
Per mile of railway corresponding period of previous year	169	60 0 0	216 0	22 0 0	2 0 0	84 0 0	.....	.....	.....
Total to corresponding date of previous year	340,265	1,07,796 0 0	3,61,752 0	28,947 0 0	4,553 0 0	1,41,296 0 0	60,254	15,744	75,998

* Audited up to week ending 26th October 1889.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for week ending 15th December 1888.			Receipts for week ending 14th December 1889.			Total receipts from 1st April 1888 to 15th December 1888.			Total receipts from 1st April 1889 to 14th December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	7,253	84	86	10,520	122	86	2,06,287	65	86	*2,63,089	83	56,802	.....

* Audited up to week ending 26th October 1889.

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.
Approximate earnings for week ending 30th November 1889	8,477
Corresponding week last year	10,829
Decrease	2,352
Receipts from 1st July to 30th November 1889	2,42,105
From 1st July to 1st December 1888	2,64,200
Decrease	22,095

Compared with 1887, there is an increase of Rs. 21,163 for the corresponding period.

	Miles
Miles open week ending 30th November 1889	51
Corresponding week last year	51
	Rs. A. P
Receipts per mile open week ending 30th November 1889	166 3
Corresponding week last year	212 5
Decrease	46 2

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.
Approximate earnings for week ending 7th December 1889	11,451
Corresponding week last year	9,441
Increase	2,010
Receipts from 1st July to 7th December 1889	2,53,856
From 1st July to 8th December 1888	2,73,641
Decrease	19,785

Compared with 1887, there is an increase of Rs. 23,735 for the corresponding period.

	Miles.
Miles open week ending 7th December 1889	51
Corresponding week last year	51
	Rs. A. P.
Receipts per mile open week ending 7th December 1889	224 8 6
Corresponding week last year	185 2 0
Increase	39 6 6

Printed and published by Edwin Morris Lewis, at the Printing Office of the Bengal Secretariat, Writers' Buildings in the City of Calcutta, 1st January 1890.

Babu Nundo Kishore Das, Assistant Superintendent of the Tributary Mehals of Orissa.

Babu Kali Podo Mukerjea, Personal Assistant to the Commissioner of Orissa.

Pandit Lakshmi Shankar Misra, Officiating Inspector of Vernacular Schools in the Benares Division of the N.-W. Provinces.

Kanhya Lal, late Extra Assistant Commissioner in the Amritsar District.

Lala Gur Sahai, Assistant Secretary to the Government of the Punjab in the Public Works Department.

Rai Debi Pershad, Extra Assistant Commissioner in the Central Provinces.

Subedar Dwarka Tewari, of the Nipal Residency Escort.

No. 10 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer upon Sardar Bhagwan Singh of Sohana in the Umballa District the title of Sardar Bahadur as a personal distinction.

No. 11 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Khan Sahib as a personal distinction upon :—

Ratanji Dhunjibhai, Honorary Assistant Engineer of the Bombay Port Trust.

Nagoo Sayajee, Contractor of Bombay.

No. 12 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Rao Sahib as a personal distinction upon :—

Ganesh Gangadhur, Thanadar of the Bavisi Zilla in the Mahi Kantha Agency in the Bombay Presidency.

Mahadaji Ballal Laghate, late Forest Settlement Officer in the Kolhapur State in the Bombay Presidency.

Gangaji Ramji, Senior Hospital Assistant in the Subordinate Medical Department of the Bombay Presidency.

C. Muthuswami, Senior Hospital Assistant in the Madras Army.

No. 3 *E.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Kyet thaye zaung shwe Salwe ya Min upon Maung Saw Hla Pru, Extra Assistant Commissioner in the Kyaukse District, as a personal distinction.

No. 4 *E.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Thuye gaung ngwe Da ya Min upon Maung Antony, Myook of Legaing, Minbu District, as a personal distinction.

No. 5*E*.

His Excellency the Viceroy and Governor-General is pleased to confer the title of Ahmudan gaung Tazeik ya Min as a personal distinction upon :—

Maung Myo, Assistant Superintendent of Police, Rangoon.

Maung Ni, Inspector of Police, Mandalay.

W. J. CUNINGHAM,
Offg. Secretary to the Government of India.

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The Gazette of India

EXTRAORDINARY.

PUBLISHED BY AUTHORITY.

CALCUTTA, WEDNESDAY, JANUARY 1, 1890

MILITARY DEPARTMENT.

NOTIFICATION.

Fort William, the 1st January, 1890.

The QUEEN has been pleased to give orders for the following promotion in the Most Honourable Order of the Bath;—

To be an Ordinary Member of the Military Division of the Second Class, or Knights Commanders of the said Most Honourable Order, *viz.*:—

The Honourable Lieutenant-General GEORGE TOMKYNS CHESNEY, C.B., C.S.I., C.I.E., Royal Engineers, Member of the Council of the Governor-General.

E. H. H. COLLEN,
Secretary to the Government of India.

STAR OF INDIA.

NOTIFICATION.

Fort William, the 1st January, 1890.

No. 1 *S. I.*

His Excellency the Grand Master of the Most Exalted Order of the Star of India is pleased to announce that Her Majesty the QUEEN AND EMPRESS OF INDIA has been graciously pleased to make the following appointments to the said Order:—

To be Companion.

WILLIAM MACKWORTH YOUNG, Esq., Bengal Civil Service, Second Financial Commissioner in the Punjab.

Colonel GEORGE EDWARD LANGHAM SOMERSET SANFORD, C.B., Royal Engineers, Inspector General of Military Works.

Lieutenant-Colonel ROBERT WARBURTON, Bengal Staff Corps, Political Officer in the Khyber.

By Order of the Grand Master,

W. J. CUNINGHAM,
for *Secretary to the Most Exalted Order of the Star of India.*

INDIAN EMPIRE.

NOTIFICATION.

Fort William, the 1st January, 18[illegible]

No. 1 *I.E.*

His Excellency the Grand Master of the Most Eminent Order of the Indian Empire is pleased to announce that Her Majesty the QUEEN AND EMPRESS OF INDIA has been graciously pleased to make the following appointments to the said Order:—

To be a Knight Commander.

Sir ROPER LETHBRIDGE, Knight, C.I.E., M.P.

To be an Extra Knight Commander.

Major-General Sir GEORGE STEWART WHITE, V.C., K.C.B., Commanding the Quetta District.

To be Companions.

Sardar BHAGAT SINGH, Member of the Kapurthala State Council.

Colonel WILLIAM MERRIMAN, Royal Engineers, Superintending Engineer, West of India Coast Defences.

Lieutenant-Colonel WILLIAM PERCIVAL TOMKINS, Royal Engineers, Superintending Engineer, Military Works, in Baluchistan.

Colonel WILLIAM ARTHUR JAMES WALLACE, Royal Engineers, Director of the North-Western Railway, and Commandant of the 3rd Punjab (North-Western Railway) Volunteer Rifle Corps.

HENRY BIDEWELL GRIGG, Esq., M.A., Madras Civil Service, Director of Public Instruction, Madras.

BERTHOLD RIBBENTROP, Esq., Inspector General of Forests.

Brigade-Surgeon GEORGE KING, M.B., F.R.S., Indian Medical Service, Superintendent of the Royal Botanical Gardens, Calcutta.

LANGTON PRENDERGAST WALSH, Esq., Acting Second Assistant Political Resident at Aden, lately Assistant Political Resident at Zaila.

HENRY PAUL TODD-NAYLOR, Esq., Bengal Civil Service, Deputy Commissioner of the Magwé District, Burma.

By Order of the Grand Master,

W. J. CUNINGHAM,
for *Secretary to the Most Eminent Order of the Indian Empire.*

FOREIGN DEPARTMENT.

NOTIFICATIONS.

Fort William, the 1st January, 1890.

No. 1 *I.*

Her Majesty the QUEEN AND EMPRESS OF INDIA has been pleased to confer the honour of Knighthood on the undermentioned gentlemen :—

The Hon'ble FRANK FORBES ADAM, C.I.E., Additional Member of the Council of the Governor of Bombay for making Laws and Regulations, lately Chairman of the Bombay Chamber of Commerce.

ROMESH CHUNDER MITTER, Esq., lately Puisne Judge of the Calcutta High Court.

No. 2 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Maharaja Bahadur as a personal distinction upon :—

Maharaja Sir Jotendro Mohun Tagore, K.C.S.I.

Maharaj Kumar Khittish Chunder Roy of Kishnaghur in the Nuddea District.

No. 3 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Maharaja as a personal distinction upon :—

Raja Mohendro Deo Saont of Athmullik.

No. 4 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Raja as a personal distinction upon :—

Babu Run Bahadur Singh, Zemindar of Ticcaree in the district of Gya.

Babu Jyoti Prosad Gorgu, Zemindar of Maisadul in the district of Midnapore.

No. 1 *E.*

His Excellency the Viceroy and Governor-General is pleased to confer upon Srímati Bhabáni-priyá Baruáni, widow of Rai Protab Chandra Barua, Bahadur, Zemindar of Gauripur, Goalpara district, the title of Rani as a personal distinction.

No. 2 *E.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Nawab as a personal distinction upon :—

Sardar Mehrulla Khan, Chief of the Marri tribe.

Sardar Shabaz Khan, Chief of the Bugti tribe.

No. 5 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer upon Khan Bahadur Hoshangji Jamaspji Dastur, Professor of Persian in the Deccan College, Poona, the title of Shams-ul-ulama as a personal distinction.

No. 6 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Mahamahopadhyaya as a personal distinction upon :—

Pundit Ayodhya Nath Miser Samavedi of Pota in the District of Mozufferpore.

Pundit Krishna Singh, Thakur of Bhoar in Tirhoot.

Pundit Kanhai Lal Jha of Mangraumi in the district of Durbhunga.

No. 7 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Khan Bahadur as a personal distinction upon :—

Mirza Muhammad Ismail Sahib, Agent for Her Highness the Begum Saheba, widow of the late Nawab of the Carnatic.

Maulvi Ahmad, Municipal Commissioner for the town of Calcutta.

Saiyid Muhammad Ajmal, Honorary Magistrate of Barh in the district of Patna.

Ali Jan, Inspector of Police in the North-Western Provinces.

Saiyid Zahid Husain, Deputy Collector of Muzaffernagar in the North Western Provinces.

Mian Ghulam Rasul, merchant, and member of the Municipal Committee of Peshawar.

Aga Ahmad, Ispahani, merchant, Consul for Persia at Rangoon.

Saiyid Najm-ud-din Hussain, Inspector of the Thuggee and Dacoity Department.

No. 8 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Rao Bahadur as a personal distinction upon :—

Rao Sahib Shrikrishna Wasudevji Warlikar, Chief Clerk of the Commander-in-Chief's Office, Bombay.

Thakurdas Kikabhai Dalal, Medical Officer in charge of the Civil Station of Wadhwan in the Bombay Presidency.

Sakharam Baji Baudekar, Karbhari of the Sawantvadi State in the Bombay Presidency.

Rednam Dharma Rao Nayudu, Assistant Commissioner of Salt and Abkari Revenue in the Madras Presidency.

No. 9 *I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Rai Bahadur as a personal distinction upon :—

Babu Mata Din, late Subordinate Judge of Mozufferpore in the Bengal Presidency.

[REGISTERED No. 29.]

No. 2 of 1890.

The Calcutta Gazette.

WEDNESDAY, JANUARY 8, 1890.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 3452A.

GENERAL.—*The 2nd January* 1890.—Mr. J. Windsor, Assistant Magistrate and Collector, Chumparun, is appointed to have charge of the Bettiah sub-division of that district.

The order of the 31st December last, posting Moulvie Mahammad Habibullah, Officiating Deputy Magistrate and Deputy Collector, Midnapore, to the Sudder station of the district of Khoolna, is cancelled.

The 4th January 1890.—Mr. H. F. J. T. Maguire, Officiating Magistrate and Collector, Burdwan, acted in the first grade of Joint-Magistrates and Deputy Collectors from the 1st to the 13th December 1889, both days inclusive.

Mr. Maguire was employed at the Sudder station of the district of the 24-Pergunnahs as Joint-Magistrate and Deputy Collector from the forenoon of the 5th to the afternoon of the 12th December 1889.

The 6th January 1890.—Mr. C. A. Radice, who has recently been appointed to be a member of the Covenanted Civil Service, is appointed to be an Assistant Magistrate and Collector in the Presidency Division, and is posted to the Sudder station of the district of Moorshedabad.

The 7th January 1890.—Mr. H. Lee, Officiating Magistrate and Collector, is allowed leave for eighteen days, under article 291 of the Civil Service Regulations, with effect from the 14th December 1889.

POLICE.—*The 7th January* 1890.—Mr. A. R. G. Hampton, Officiating Assistant Superintendent of Police, Mymensingh, is allowed leave for seven days, under article 273(*a*) of the Civil Service Regulations, with effect from the 27th ultimo.

JAILS.—*The 7th January* 1890.—The services of Surgeon-Major A. S. Lethbridge, Inspector-General of Jails, are placed temporarily at the disposal of the Government of India in the Home Department.

REGISTRATION.—*The 6th January* 1890.—Moulvie Muhammad is appointed to be Rural Sub-Registrar of Iswargunge, in the district of Mymensingh, *vice* Moulvie Mahomed Khurshed.

Munshi Tamizuddin Ahmad is appointed to be Rural Sub-Registrar of Nattore, in the district of Rajshahye, *vice* Moulvie Wakiluddin Ahmad, transferred.

Baboo Raghunath De is appointed on probation for six months to be Joint Sub-Registrar of Raghunathpore, in the district of Midnapore.

The 7th January 1890.—Baboo Monmotho Coomar Bose, Deputy Magistrate and Deputy Collector, Beerbhoom, is also appointed to be Sub-Registrar of Sooree, with effect from the 21st November 1889.

Moulvie Syed Mahammad Faniq is appointed, on probation for six months, to be Rural Sub-Registrar of Bihipore, in the district of Bhagulpore.

Munshi Aminuddeen, Rural Sub-Registrar of Daudkandi, in the district of Tipperah, is appointed to be Rural Sub-Registrar of Chandpore in the same district, *vice* Moulvi Mahammad Ibrahim Hossein, deceased.

Moulvi Bazlur Rahman is appointed to be Rural Sub-Registrar of Daudkandi, in the district of Tipperah.

The following notification is republished from the *Assam Gazette* :—

No. 419.—*The 23rd December* 1889.—Mr. G. A. Patten, Assistant Superintendent of Police, whose services were placed at the disposal of the Chief Commissioner, in Home Department notification No. 836, dated the 5th December 1889, is posted to Dibrugarh and appointed to have charge of the Civil Police of the Lakhimpur district.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT,—(FORESTS.)

NOTIFICATION.

The 6th January, 1890.—With reference to the notification, dated the 22nd October, 1888, proposing the reservation, under section 4 of the Indian Forest Act VII of 1878, of the Ramghur-Sitakund Forest in the district of Chittagong, the Lieutenant-Governor is pleased to appoint Mr. C. G. H. Allen, Covenanted Deputy Collector, to be Forest Settlement Officer, *vice* Baboo Chandra Shekhar Kar, Deputy Magistrate and Deputy Collector.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 6th January, 1890.—Mr. W. H. Lovegrove, who has been appointed by Her Majesty's Secretary of State for India to the Forest Department in Bengal, is appointed to be an Assistant Conservator of Forests of the 3rd grade, and is posted to the Direction Division, Darjeeling.

Mr. Lovegrove reported his arrival in India on the forenoon of the 2nd January, 1890.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 7th January, 1890.—With reference to the Government notification, dated the 31st December, 1889, published at page 4, Part I of the *Calcutta Gazette* of the 1st January, 1890 ordering a survey and record of rights of estate No. 1763, in pergunnah Dakhin Shabazpore, and also of certain lands in estate No. 1764, in the district of Backergunge, Baboo Pyari Mohan Bose is appointed to be Revenue Officer, and is hereby vested with the powers of a Settlement Officer, under Rule 1, Chapter VI of the Rules under the Bengal Tenancy Act VIII of 1885, for the said settlements.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 7th January, 1890.—With reference to the Government notification, dated the 31st December, 1889, published at page 4, Part I of the *Calcutta Gazette* of the 1st January, 1890, ordering a survey of estate No. 1764 in the district of Backergunge, the Lieutenant-Governor is pleased to appoint Baboo Pyari Mohan Bose to be the Superintendent of the survey, under section 4 of the Bengal Survey Act V of 1875.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 1st January, 1890.—The following revised rules for the award of Junior and Senior Scholarships are published for general information :—

JUNIOR SCHOLARSHIP RULES.

ONE HUNDRED AND FIFTY-TWO* Government junior scholarships shall be awarded annually at the University Entrance Examination to successful candidates educated at schools in Bengal.

2. The scholarships shall be of three grades—10 of the first grade, carrying monthly stipends of Rs. 20; 47 of the second grade, carrying monthly stipends of Rs. 15; and 95 of the third grade, carrying monthly stipends of Rs. 10.

3. With the sanction of the Director of Public Instruction, a junior scholarship may be held at any one of the affiliated colleges in Bengal which the holder may select. A Government junior scholarship may also be held in the United Kingdom, subject to the conditions of good conduct and satisfactory progress, but not in other provinces of India

4. Each scholarship shall, subject to good conduct, be tenable for two years, provided the holder is certified by the Principal of his College, at the end of the first year, to have made due progress in a collegiate course of instruction.

5. The holder of a junior scholarship in an institution not under the management of Government shall be liable at any time to be examined by two persons appointed by the Director of Public Instruction and approved by the Principal of the College to which he belongs, and, on proof of unsatisfactory progress, to be deprived of his scholarship.

6. No candidate shall be eligible for a scholarship who has not studied for the whole session previous to the examination in the school to which he belongs at the time of presenting himself at the Entrance Examination, unless he has been transferred within that period with the sanction of the Circle Inspector.

7. The scholarships of the first grade shall be awarded to the ten candidates who obtain the highest aggregate marks.

8. The scholarships of the second and third grades shall, subject to future reconsideration, be allotted to the several Commissionerships in the following proportion :—

					Second grade.	Third grade.
Burdwan Division		...	...	..	6	12
Town of Calcutta		...	...	..	6	11
Presidency	Division	...	...	..	6	12
Rajshahye	ditto	...	...	..	6*	10*
Dacca	ditto	...	...	..	6	12
Chittagong	ditto	...	...	..	2	6
Patna	ditto	...	...	..	6	12
Bhagulpore	ditto	...	...	..	3	9
Orissa	ditto	...	...	..	4	6
Chota Nagpore	ditto	...	...	..	2	5
			Total	...	47	95

* This includes the two special scholarships—one of the second grade and the other of the third—established in 1879 for the benefit of the Rungpore Zillah School.

9. The Commissioner of the Division, in consultation with the Circle Inspector, will notify in the *Calcutta Gazette*, not later than the 1st September of each year, the number of junior scholarships to be allotted to each district at the ensuing examination. This distribution should be confined to third grade scholarships, those of the second grade being awarded to the best students in the division without reference to districts. Scholarships not taken up in the district or division to which they are assigned may be awarded by the Director of Public Instruction, at his discretion, to deserving candidates from other divisions, special regard being had to the requirements of those parts of the country in which it is considered desirable to stimulate the demand for collegiate education.

10. No candidate who is unable to read and write with facility and correctness one of the vernacular languages of Bengal shall be eligible for a junior scholarship.

11. No candidate shall be eligible for a scholarship who does not take up for the Entrance Examination as a second language one of the languages recognized by the University for the First Arts Examination.

12. The holders of scholarships in all Government colleges shall be required to pay the usual monthly fees levied from other students, provided that no scholarship-holder shall be required to pay a higher fee than Rs. 10 a month.

SPECIAL JUNIOR SCHOLARSHIPS FOR MUHAMMADANS.

Twenty scholarships of Rs. 7 a month each, tenable for two years at any college affiliated to the Calcutta University, shall be awarded to Muhammadan students of the Lower Provinces passing the Entrance Examination and failing to obtain any more valuable exhibition.

SPECIAL JUNIOR SCHOLARSHIPS FOR FEMALES.

Three junior scholarships, one of each grade, shall be open annually for competition at the Entrance Examination to female candidates educated in any school in Bengal. They shall be tenable in any collegiate institution approved by the Director of Public Instruction, and shall be awarded on conditions similar to those prescribed for general scholarships.

SENIOR SCHOLARSHIP RULES.

Fifty Government senior scholarships shall be offered annually for competition at the First Examination in Arts to successful candidates educated in any college in Bengal affiliated to the University of Calcutta.

2. These scholarships shall be of two grades—10 of the first grade, carrying monthly stipends of Rs. 25, and 40 of the second grade, carrying monthly stipends of Rs. 20.

3. With the sanction of the Director of Public Instruction, a senior scholarship may be held at any affiliated college in Bengal which may be selected by the holder. A Government senior scholarship may also be held in the United Kingdom, subject to the conditions of good conduct and satisfactory progress, but not in other provinces of India.

4. Each scholarship shall, conditionally on good conduct, be tenable for two years, provided that, at the end of the first year, the holder is certified by the Principal of his College to have made due progress in a collegiate course of instruction.

5. Second-year students alone, *i.e.*, students who present themselves for the First Examination in Arts not more than two years after passing the Entrance Examination, shall be eligible for scholarships.

6. The scholarships of the first grade shall be awarded to the ten candidates who obtain the highest aggregate marks.

7. The forty scholarships of the second grade shall, subject to future reconsideration, be reserved for students at affiliated institutions in different parts of Bengal in the following proportions:—

	Number of scholarships.
Town of Calcutta	10
Presidency Division, outside Calcutta	4
Burdwan Division	8
Rajshahye ditto.	3
Dacca and Chittagong Divisions	7
Patna and Bhagulpore ditto	6
Orissa Division	2
Total ...	40

The scholarships shall be awarded to the candidates from each tract who obtain the highest marks at the examination, and who do not gain scholarships of the first grade, provided that their names appear in the first or second division of the list of passed candidates. Scholarships may, however, be awarded in special cases to candidates from Behar or Orissa who fall below the second division. Scholarships not taken up in the tracts to which they are assigned may be awarded by the Director of Public Instruction, at his discretion, to deserving candidates from other tracts, special regard being had to the requirements of those parts of the country in which it is considered desirable to stimulate the demand for collegiate education.

8. No candidate shall be eligible for a scholarship who has not studied for the whole session previous to the examination in the institution to which he belongs at the time of presenting himself at the First Arts Examination, unless he has been transferred within that period with the sanction of the Director of Public Instruction.

9. The holders of senior scholarships in all Government colleges shall be required to pay the usual monthly fees levied from other students.

SPECIAL SENIOR SCHOLARSHIPS FOR MUHAMMADANS.

Twenty scholarships, tenable for two years—ten of Rs. 10 a month each, and ten of Rs. 7 a month each—shall be awarded on the result of the First Arts Examination to Muhammadans who fail to obtain any more valuable exhibition.

SPECIAL SENIOR SCHOLARSHIPS FOR FEMALES.

Two senior scholarships, one of each grade, shall be open annually for competition at the First Examination in Arts to female candidates educated at any college in Bengal. These scholarships shall be awarded on conditions similar to those laid down for the general senior scholarships, and shall be tenable in any collegiate institution approved by the Director of Public Instruction.

P. NOLAN,
Secretary to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 3453A.

The 6th January 1890.—Under the authority vested in him by the final clause of section 357 of the Code of Criminal Procedure, Act X of 1882, the Lieutenant-Governor empowers Moulvie Ahmad, Deputy Magistrate, Jessore, to take down evidence in criminal cases in the English language.

Mr. C. A. Radice, Assistant Magistrate and Collector, Moorshedabad, is vested with the powers of a Magistrate of the third class.

The 7th January 1890.—Mr. L. Palit, Assistant Magistrate and Collector, Tipperah, is vested with the powers of a Magistrate of the first class.

Mr. J. Windsor, Assistant Magistrate and Collector, Chumparun, is vested with powers under sections 110, 133, 143, 144, 174, 186, 191 (clauses *a* and *b*) and 524 of the Code of Criminal Procedure.

GRANT OF LEAVE TO MUNSIFS.—*The 17th December* 1889.—Baboo Sheo Sarun Lal, Munsif of Lohardugga, in Chota Nagpur, is allowed leave for two months, under article 369 of the Civil Service Regulations, with effect from the 8th January 1890, or from the date on which he may be relieved.

The 20th December 1889.—Baboo Mati Lal Sinha, Munsif of Khoolna, in the district of Jessore, is allowed leave for three months, viz., sixteen days under article 309 of the Civil Service Regulations, and the remaining period under article 306(*b*) of the same Regulations, with effect from the 6th January 1890, or from the date on which he may be relieved.

The 21st December 1889.—Baboo Mati Lal Haldar, Munsif of Jehanabad, in the district of Hooghly, is allowed leave for eight days, under article 306(*b*) of the Civil Service Regulations, in extension of the leave granted to him on the 8th November 1889.

Baboo Raj Narayan Chakravarti, Munsif of Cutwa, in the district of Burdwan, is allowed leave for 45 days, under article 306(*b*) of the Civil Service Regulations, with effect from the 8th January 1890, or from the date on which he may be relieved.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 6th January 1890.—It is hereby notified for general information that the head-quarters of the Tajpur Munsifi, in the district of Durbhanga, have been removed from its present site at Tajpur to Samastipur, and that the Munsifi will henceforth be styled the Samastipur Munsifi.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 6th January 1890.—The Lieutenant-Governor sanctions, with effect from the 15th January, the re-establishment of an outpost at Anantapur within the jurisdiction of thana Soroh, and the abolition of the Kontika outpost subordinate to thana Dhamnagar, in the district of Balasore.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th January 1890.—The Lieutenant-Governor sanctions, with effect from the 15th November 1889, the transfer of the undermentioned villages from the jurisdiction of the Bahawa outpost, in sub-division Rajmehal, to that of thana Pakour, in sub-division Pakour, in the district of the Sonthal Pergunnahs—

No.	Name of village.	No. on village.	Name of pergunnah.
1	Byjnathpur	337	Ambar.
	Kilbilpur or Kilbinagar	336	Do.
	Amalpur or Goganpahari	338	Do.
	Kismat Mankupara	339	Kankjole.
5	Jamshirpur	349	Dashazari.
	Shahpur Arazi or Hansrajpur	348	Kankjole.
	Jamshirpur Arazi	351	Dashazari.
	Mankopara Arazi or Keshopur	352	Kankjole.
	Kismat Shahpur	353	Ditto.
10	Hillalpur Arazi	354	Ditto.
	Badseil or Barasil, &c.	358	Ditto.
	Jyrambati	356	Ditto.
	Hillalpur Kismat	331	Ditto.
	Dhansaria	332	Ditto.
15	Arazi Ilaipur Mow. Kismat Jhoti ...	333	Ditto.
	Arazi Mallaipur	334	Ambar.
17	Dubrajpur	335	Do.

NOTE.—In the above list the names given are those of the villages as demarcated and surveyed by the Revenue Survey Department, and as shown in their maps and records.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[Third Publication.]

NOTIFICATION.

The 18th December 1889.—It is hereby notified that the Lieutenant-Governor authorizes the extension of the provisions of section 34 of Act V of 1861 to the village of Saidpore, in the district of Rungpore, within the boundaries specified below:—

On the North.—A straight line drawn from the Saidpore Rifle Range to Pendu Ram Boiragy's house.

On the South.—A straight line drawn from East Baboo Para to the village road east of Nanku Haolder's Para.

On the East.—A straight line drawn from Pendu Ram Boiragy's house to East Baboo Para.

On the West.—A straight line drawn from the village road east of Nanku Haolder's Para to the high ground for target practice.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

DECLARATION.

The 6th January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the public expense for a public purpose, viz., for construction of a Police outpost under the jurisdiction of the Municipality of Howrah, pergunnah Boro, zilla Hooghly, it is hereby declared that for the above purpose a piece of land measuring, more or less, 2 cottahs 6 chittacks and 15 square feet, bounded on the north by land of Ambica Charan Ghoshal, south by northern drain of Circular Road, east by land of Ambica Charan Ghoshal, and west by land of Ambica Charan Ghoshal, is required within the aforesaid Municipality of Howrah.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

JOHN EDGAR,
Chief Secy to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—BENGAL.

ESTABLISHMENT.

The 6th January 1890.

No. 1.—Mr. G. Mills, Executive Engineer, fourth grade, temporary rank, has been granted by Her Majesty's Secretary of State for India an extension of six months' furlough.

No. 2.—The following notification, issued by the Government of India, Public Works Department, is republished for information:—

No. 406, *the* 30*th December* 1889.—Lala Sheo Nath, Rai Sahib, Assistant Engineer, third grade, State Railways, is promoted to Assistant Engineer, second grade, with effect from the 22nd August 1889.

E. J. MARTIN,
Secy. to the Govt. of Bengal, P. W. Dept.

ESTABLISHMENT.

The 6th January 1890.

No. 3.—Mr. A. H. C. MacCarthy, Assistant Engineer, passed the Lower Standard Examination in Hindustani on the 16th December 1889.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

[Fifth Publication.]

IRRIGATION.

The 9th December 1889.

No. 442.—*Notification.*—In exercise of the powers conferred on him by section 99 of Act III (B.C.) of 1876, the Hon'ble the Lieutenant-Governor proposes to pass the following rule for the Orissa Canals:—

Beali lands in a five-year lease, if not irrigated, are to be exempted from assessment provided "Beali" is not followed by "sarud" or any other *irrigated* crops in the same year.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

PUBLIC WORKS DEPARTMENT.—MARINE.

[First Publication.]

NOTIFICATION No. 1Mne.

The 6th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 1).

BAY OF BENGAL.

BURMA COAST.

The floating light-vessel "Colombo" replaced below Elephant Point.

WITH reference to Notice to Mariners, No. 115, dated the 28th November last, issued by this Office, the Officiating Port Officer of Rangoon has given notice that the floating light-vessel *Colombo* has been replaced off the Spit below Elephant Point, and the schooner *Pharos* removed.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th January* 1890.

[First Publication.]

NOTIFICATION No. 2Mne.

The 6th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 2).

BAY OF BENGAL.

ORISSA COAST.

Inner bar-buoy adrift.

A TELEGRAPHIC communication has been received from the Collector of Customs, Balasore, that the *inner bar-buoy* has drifted out of position.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th January* 1890.

[Second Publication.]

NOTIFICATION No. 206Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 125).

AFRICA—EAST COAST.

MOZAMBIQUE CHANNEL.

Additional soundings north-eastward of St. Lazarus Bank.

WITH reference to Notice to Mariners, No. 67, dated 2nd July last, issued by this office, the British Admiralty has given notice (No. 403 of 1889) that some further soundings have been obtained by H. M. Surveying Ship *Stork* to the north-eastward of the bank as defined in that Notice, which indicate the existence of either another bank, or of an extension of the slope of the St. Lazarus bank for some 30 miles. No sounding less than 320 fathoms was obtained, but until the ground is more thoroughly searched, vessels should avoid passing over this area to the north-eastward of the St. Lazarus bank.

The soundings obtained are as follows:—

(1) Lat. 11° 55′ S., long. 41° 28′ E. ... ... 320 fathoms
(or 9 miles northward of a depth of 1,080 fathoms previously obtained).
(2) Lat. 11° 48½′ S., long. 41° 35$\frac{5}{10}$′ E. ... ... 460 fathoms.
(3) Lat. 11° 38½′ S., long. 41° 39½′ E. ... ... 807 ditto.
(4) Lat. 11° 32′ S., long. 41° 41′ E. ... ... 910 ditto.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcut

PORT OFFICE, *Calcutta, the 21st December* 1889.

[Second Publication.]

NOTIFICATION No. 207Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 126).

AUSTRALIA—EAST COAST.

INNER ROUTE.

Shoal north-eastward of two isles.

THE British Admiralty has given notice (No. 405 of 1889) of the existence of a coral shoal lying about 1½ miles north-eastward of two isles :—

This shoal, with a depth of 6 fathoms, is 8 cables in length within the 10-fathoms line in a north-east and south-west direction ; from the shoalest part, South Direction island bears N. 13° E., distant 11 miles, and cape Flattery summit N. 76° W., distant $7\frac{7}{10}$ miles.

Position, lat. 15° 0′ S., long. 145° 30′ E.

Also the following information concerning g reef and Sand Bank, lying respectively about 5½ and 7 miles eastward of Two isles :—

g reef, as heretofore charted, does not exist.

Sand bank, now named g reef, is 4 cables in length in an east and west direction, with a width of 2½ cables, it is steep-to, and has a small sandy head near its west extreme which dries 6 feet at low water spring tides ; from this head, cape Flattery summit bears N. 83° W., distant $13\frac{5}{10}$ miles, and South Direction island N. 18½° W., distant $10\frac{8}{10}$ miles.

Position, lat. 15° 0½′ S., long 145° 36′ E.

Unsuccessful search for shoal north-west of Look-out point.

FURTHER information has been received that a shoal spit extends in a north-westerly direction from Look-out Point for a distance of 2¼ miles, having a least depth of 6 feet, with the summit of the point bearing S. 45° E., distant 2 miles ; it is steep-to on its eastern edge, the water deepening quickly from 2 to 6 and 7 fathoms ; on the north-western side it deepens more gradually.

The position heretofore given for the 2¼ fathoms shoal is about 8 cables northward of the extreme of the spit, and depths of 6½ to 7½ fathoms, over even ground were obtained around that spot with no sign of shoal water.

Consequent on the foregoing, it is considered that the *Decapolis* grounded on the spit about 2 miles north-west of Look-out point, and the 2¼ fathoms shoal has been removed from the Admiralty Charts.

NOTE.—Cape Flattery summit in line with the red beacon on Sand cay (about 2½ miles south-east of Look-out point), bearing S. 38° E., leads eastward of the shoal ground off Look-out point ; and end of range in line with Round hill, bearing S. 82° W., leads 4 cables northward of it.

By direction of the Government of Bengal,
E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[Second Publication.]

NOTIFICATION No. 208Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 127).

JAPAN.

SIMONOSEKI STRAIT—WESTERN ENTRANCE.

Fixed light on Narusi rock.

THE British Admiralty has given notice (No. 415 of 1889) that on 21st September 1889 a light would be exhibited from the beacon (which has been rebuilt during the present year) on Narusi rock, north side of western entrance to Simonoseki strait :—

The light is a *fixed* white light, visible from the bearing of S. 86°E., through north, to S. 43° W. ; it is elevated 17 feet above high water, and should be seen in clear weather from a distance of three miles.

The beacon, constructed of stone and circular in shape, is painted white.

Position, lat. 33° 54′ 45″ N., long. 130° 54′ 50″ E.

NOTE—The light is kept burning day and night by automatic arrangement without the constant attendance of a keeper. Should the light be extinguished by accident, there may be some delay in re-lighting it.

(*The bearings are Magnetic, and are given from seaward. Variation 4° Westerly in* 1889.)

By direction of the Government of Bengal,
E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[Second Publication.]

NOTIFICATION No. 209Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 129).

ARABIAN SEA.

BOMBAY COAST.

"Chaldea Rock" buoy placed in position.

WITH reference to Notice to Mariners, No. 106, dated 26th October last, the Collector of Salt Revenue, Bombay, through the Director of Indian Marine, has given notice that the *Chaldea Rock* buoy was put in its position on the 3rd ultimo.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 28th December* 1889.

[Third Publication.]

NOTIFICATION No. 205Mne.

The 24th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 128).

BAY OF BENGAL.

BURMA COAST.

Position of a water-logged Burmese boat—dangerous to navigation.

A TELEGRAPHIC communication has been received from the Port Officer of Rangoon that the Commander of the Government steamer *Canning* passed a Burmese boat, water-logged, South 55° East, 8 miles from Krishna light-vessel. Ship-masters are cautioned accordingly.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 23rd December* 1889.

JAIL DEPARTMENT.

No. 12.—*The 4th January* 1890.—Assistant Surgeon Kaliprosanna Kumar made over charge of the Dinagepore Jail to Dr. R. M. Blaker on the forenoon of the 6th December 1889.

No. 13.—*The 4th January* 1890.—Assistant Surgeon Debendra Nath Dey made over charge of the Dinagepore Jail to Mr. N. Warde-Jones on the afternoon of the 18th September 1889.

A. D. LARYMORE,
For Inspector-General of Jails, Bengal.

No. 25.—*The 6th December* 1889.—Mr. C. H. C. Sevenoaks made over charge of the Midnapore Jail to Mr. H. M. Owen on the forenoon of the 20th December 1889.

A. S. LETHBRIDGE,
Inspector-General of Jails, Bengal.

CIVIL MEDICAL DEPARTMENT, BENGAL.

No. 39, *dated the 4th January* 1890.—Assistant Surgeon Jadub Kristo Sen, in medical charge of the Lungleh Hospital, is appointed to be Health Officer, Sitakund Fair, in the Chittagong district.

No. 43, *dated the 4th January* 1890.—Assistant Surgeon Hari Mohun Sen, a Supernumerary at the Presidency, is appointed temporarily to have medical charge of the sub-division at Giridhi, in the Hazaribagh district, during the absence, on leave, of Assistant Surgeon Annada Prosad Mozumdar, or until further orders.

No. 46, *dated the 4th January* 1890.—Assistant Surgeon Nirmul Chunder Gupta, in officiating medical charge of the sub-division at Giridhi, is appointed to have medical charge of the Lungleh Hospital in the Lushai country, *vice* Assistant Surgeon Jadub Kristo Sen, transferred.

A. HILSON, M.D.,
Inspector-General of Civil Hospitals, Bengal.

EDUCATION DEPARTMENT, BENGAL.

Prize Essay for Native Ladies.

THE following subject has been selected for Babu Brajamohan Dutt's Prize of Rs. 40 for the year 1889-90:—

"The present condition of Bengali Women."

The conditions for the award of the prize are—

(1) That the competition be open to all educated women, being natives of Bengal, without regard to age.

(2) That the prize be given for an essay, to be written in either Bengali or Sanskrit.

(3) That the essays be sent to the Central Text-Book Committee for adjudication within six months of the date of advertisement.

(4) That each essay be accompanied by the written declaration of the husband parent, or guardian, of the competitor that, to the best of his belief, she has received no assistance of any kind, direct or indirect, in writing the essay.

Candidates are requested to send their essays, not later than the 30th June 1890, to the Secretary to the Central Text-Book Committee, Office of the Inspector of Schools, Presidency Circle, Calcutta. The envelope containing the essay should be superscribed "Brajamohan Dutt Prize Essay." The name of the successful competitor will be published in the *Calcutta Gazette*.

The winner of the prize in any year may, if she pleases, again compete. If she is adjudged to have sent in the best essay in such subsequent competition, her name will be published in the *Gazette*, but the prize will be awarded to the next eligible candidate.

No prize will be awarded if, in the opinion of the judges, the best essay sent in is not such as to deserve a prize.

A. CROFT,
Director of Public Instruction.

The 28th December 1889.

Examination of Candidates for Pleadership and Mookhtarship in Mofussil Courts subordinate to the High Court.

THE next examination of candidates for Pleadership will be held in the Senate House of the Calcutta University on *Wednesday and Thursday, the 19th and 20th of February* 1890, instead of on Monday and Tuesday, the 24th and 25th of February as originally notified.

The next examination of candidates for Mookhtarship will be held at Calcutta, Patna, Dacca, Cuttack, Gauhati, and Sylhet on *Wednesday and Thursday, the 19th and 20th of February* 1890, instead of on Monday and Tuesday, the 24th and 25th of February as originally notified.

Two papers will be set each day for the Pleadership Examination at 10 A.M. and 2 P.M., respectively, and the two papers for the Mookhtarship candidates will be set on the 19th February at the same hours.

Under no circumstances will any candidate be admitted to the examination-room after these hours.

The candidates will be required to produce at the examination extracts from the Register, which will be furnished to them by the District Judge through whom their applications have been sent to the Board of Examiners.

No candidate will be allowed to enter the examination-room with any memoranda or loose papers of any description (with the exception of the extracts abovementioned).

All writing materials will be provided, with the exception of pens, which the candidates must bring with them.

HENRY T. HYDE,
Secy. to the Board of Exmrs. for Pleadership and Mookhtarship.

ORDERS BY THE VICE-CHANCELLOR AND SYNDICATE OF THE CALCUTTA UNIVERSITY.

The undermentioned Students have passed the Examination for the Degree of M. A.:—

ENGLISH.

CLASS I.

In Order of Merit.

1 Datta, Hirendranath . Presidency College.
2 Ghosh, Jogendrakumar . Dacca College.
3 Khastgir, Hemendralal . Presidency College.
4 Chattopadhyay, Ramanand . . . City College.
5 Muhammad Abbas Ali . Presidency College.
6 Bandyopadhyay, Jyotishchandra . . . Metropolitan Institution.
7 Bal, Sureschandra . . Dacca College.

CLASS II.

In Order of Merit.

1 Kar, Pramathachandra . Presidency College.
2 Maitra, Haridas . . Ditto.
3 Purohit, Gopinath . . Agra College.
4 Bandyopadhyay, Kaliprasanna . . . F. C. of Scotland's Institution and Duff College
5 Das, Abinaschandra . . Presidency College.
6 Raychaudhuri, Tejendranath . . . . Ditto.
7 Kumar, Nrityagopal . . Ditto.

CLASS III.

In Order of Merit.

1 Ghosh, Bipinbihari . . Presidency College.
2 Mukhopadhyay, Gopalchandra . . . Metropolitan Institution.
3 Basu, Nityakrishna . . Ditto.
4 Sarkar, Sureschandra City College.
5 Chattopadhyay, Hemchandra . . . . F. C. of Scotland's Institution and Duff College.
6 Set, Nibaranchandra . Presidency College.
7 Bandyopadhyay, Purnachandra . . . General Assembly's Institution.
8 Mukhopadhyay, Debkisor . Metropolitan Institution.
9 Sen, Akshaykumar . . Dacca College.

MATHEMATICS.

CLASS I.

In Order of Merit.

1 Majumdar, Upendralal . Presidency College.
2 Bandyopadhyay, Haranchandra . . . Ditto.

CLASS II.

In Order of Merit.

1 Mukhopadhyay, Asutosh . Presidency College.
2 Mallik, Matilal . . . Ditto.
adhyay, Jyotiprasad Ditto.
aryya, Munindra- . . . . . Ditto.

CLASS III.

In Order of Merit.

1 Bandyopadhyay, Rakhalmohan . Presidency College.
Saradaprasad . General Assembly's Institution.

LATIN.

CLASS I.

Wheeler, E. M. . . Bishop's College.

SANSKRIT.

CLASS II.

In Order of Merit.

1 Ray, Satischandra . . Sanskrit College.
2 Adhikari, Satkari . . Ditto.

CLASS III.

In Order of Merit.

1 Chakrabarti, Sitalchandra . Sanskrit College.
2 Lahiri, Paresnath . . Teacher.

PERSIAN.

CLASS I.

Zahadur Rahim Zahid . Private Student.

CLASS II.

Syed Shamsul Huda . Private Student.

HISTORY.

CLASS I.

Sen, Binayendranath. . General Assembly's Institution.

CLASS III.

In Order of Merit.

1 Bandyopadhay, Atulkrishna City College.
2 Chandra, Rajchandra . Presidency College.
3 Nehal Chand . . . Agra College.

MENTAL AND MORAL PHILOSOPHY.

CLASS I.

In Order of Merit.

1 Chattopadhyay, Rakhaldas Presidency College.
2 Sen, Mohitchandra . . Ditto.
3 Gupta, Jnanendranath . Ditto.

CLASS II.

In Order of Merit.

1 Sinha, Birchandra . . Teacher.
2 Kundu, Gopikrishna . . Metropolitan Institution.

CLASS III.

Basu, Hariprasad . . Metropolitan Institution.

NATURAL AND PHYSICAL SCIENCE.

(A) CHEMISTRY.

CLASS I.

In Order of Merit.

1 Bhaduri, Kulabhushan . Private Student.
2 Bandyopadhyay, Manmohan . . . . Presidency College.
3 Bhattacharyya, Haripada . Ditto.

CLASS II.

In Order of Merit.

1 Basu, Basantakumar . Presidency College.
2 Sarkar, Syamlal . . Ditto.
3 Bhattacharyya, Kshirodprasad . . . . Ditto.
4 Ray, Annadamohan . . Ditto.
5 Datta, Debendranath . Ditto.

CLASS III.

Datta, Srischandra . . Presidency College.

(B) PHYSICS.

CLASS II.

In Order of Merit.

1 Ray, Mohinimohan . . Presidency College.
2 „ Satischandra . . Ditto.
3 Ghosh, Rasiklal . . Ditto.

(E) PHYSIOLOGY AND ZOOLOGY.

CLASS II.

In Order of Merit.

1 Sarkar, Nilratan . . M. B.
2 Ghosha, Bhupendra Sri . Presidency Colle

CLASS III.

Mitra, Nareschandra . General Assen Institution..

(F) GEOLOGY AND MINERALOGY.

CLASS III.

Basu, Sasibhushan . . City College.

CHARLES H. TAWNEY,
Registr

SENATE HOUSE,
The 26th December, 1889.

High School Examination, 1889.

NAMES of the candidates who passed in all the compulsory subjects at the Final Examination of High Schools held in December 1889—

First Division.

1.	Jocelyne Koch ...	... St. Teresa's School.
2.	Ida Coello ...	... Loretto High School, Entally.
3.	Ida Fink ...	La Martinière for Girls, Calcutta.

Second Division.

1.	Effie Coello ...	... Loretto High School, Entally.
2.	Florence Pereira ...	... Loretto High School, Dhurrumtollah.

A. M. NASH,
Inspector of European Schools, Bengal.

CALCUTTA, *the 2nd January* 1890.

NOTIFICATIONS OF THE BOARD OF REVENUE.

No. 1594B.

NOTICE is hereby given that the Second Sale of Opium, the provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall Street, on Monday, the 3rd February 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. They may be ascertained by reference to the Notification issued on the 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Board of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th February 1890, respectively, that is to say, no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 8th February 1890, and no Bank of Bengal Receipts in full payment of lots will be accepted after 3-30 P.M. of Tuesday, the 18th February 1890.

4th.—In addition to the quantity above advertised for sale, *the following quantities*, more or less, of the opium manufactured at the Patna and Ghazeepore Factories will be brought to sale during the year 1890 about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so:—

DATES.		Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Monday, 3rd March	1890 ...	2,250	2,500	4,750
On or about Wednesday, 2nd April	,, ...	2,250	2,500	4,750
On or about Thursday, 1st May	,, ...	2,250	2,500	4,750
On or about Monday, 2nd June	,, ...	2,250	2,500	4,750
On or about Wednesday, 2nd July	,, ...	2,250	2,500	4,750
On or about Monday, 4th August	,, ...	2,250	2,500	4,750
On or about Monday, 1st September	,, ...	2,250	2,500	4,750
On or about Wednesday, 1st October	,, ...	2,250	2,500	4,750
On or about Monday, 3rd November	,, ...	2,250	2,500	4,750
On or about Monday, 1st December	,, ...	2,250	2,500	4,750
TOTAL	...	22,500	25,000	47,500

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L.P., CALCUTTA, *the 30th December* 1889.

Statement showing the Importation of Salt (private property) in bond and afloat on the River Hooghly, subject to Customs Duty, on the 31st December 1889.

Description of Salt.	Government golahs.	Private golahs.	Afloat.	Total.
	Mds.	Mds.	Mds.	Mds.
Liverpool Punga	8,96,716	.....	3,39,409	12,36,125
Bombay Kurkutch	15,843	.....	.....	15,843
Arabian and Persian Gulfs Kurkutch and Muscat Rock ...	7,28,556	.....	82 213	8,10,769
Aden Kurkutch	88,764	.....	50,213	1,38,977
Hamburg salt	10,311	.....	1,18,681	1,28,992
Total ..	17,40,190	.....	5,90,516	23,30,706

By order of the Board of Revenue, L. P.,
J. SCOBELL ARMSTRONG, *Collector of Customs.*

CUSTOM HOUSE, CALCUTTA, *the 7th January* 1890.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that the following gentlemen have been elected at the recent general elections as members of the several Local Boards in the district of Khulna:—

Local Boards.	Thanas.	Names of members elected.
SUDDER ...	Khulna ...	Baboo Debendra Nath Sen. „ Trailakhanath Chatterjee. „ Prasanna Kumar Singh.
	Batyaghatta ...	Baboo Kanja Behari Chakravarty.
	Paikgatchha ...	Baboo Jogendra Nath Mittra. „ Peari Mohon Banerjee.
	Dumuria ...	Baboo Gadadhur Ghosh. „ Basanta Kumar Haldar.
BAGIRHAT ...	Bagirhat ...	Baboo Gobinda Chundra Mittra. „ Aswini Kumar Roy Choudhury. Kazi Safiuddin. Baboo Fani Bhusan Neogi.
	Rampal ...	Baboo Anango Mohon Roy Choudhury.
	Morrellgunge ...	Baboo Krishto Chunder Ghosh.
	Mollahat ...	Baboo Kalinath Roy.
SATKHIRA ...	Satkhira ...	Baboo Upendra Nath Bose. „ Rajendra Nath Choudhury. Meer Mohammud Ismail.
	Assasoony ...	Baboo Brojo Nath Sadhukhan.
	Kaligunge ...	Baboo Lakhan Chundra Roy. „ Khettra Krishto Bhonjo Choudhury. „ Chintamoni Bhonjo Choudhury.
	Kalarsa ...	Baboo Joygopal Mazumdar. Shaik Jochimuddin Sirdar.
	Magura ...	Baboo Sital Chundra Chattarji.

A. SMITH, *Commissioner.*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the 31st December* 1889.

NOTIFICATION.

IT is hereby notified for general information that at an election held under section 27 o Act III (B.C.) of 1884, on December 30th, 1889, in Ward No. III of the Sherepore Municipality, in the district of Bogra, Baboo Binode Behary Shaha, who ceased to be a Commissioner under section 20 of the Municipal Act, has been re-elected a Commissioner.

HARI MOHAN CHANDRA, *For Commissioner.*

DATED JULPIGOREE, the 4th January 1890.

NOTIFICATION.

The 2nd January 1890.—It is hereby notified for general information that at the bye-election held under section 27, Act III (B.C.) of 1884, in Ward No. I of the Bhagulpore Municipality on the 20th December 1889, Baboo Kanai Lal Singha was elected to be a Municipal Commissioner in the place of Baboo Nund Lal Misser, deceased.

C. N. SINGH, *for Offg. Commissioner.*

NOTIFICATION.

IT is hereby notified for general information that at the bye-election held on the 25th November last in Ward No. I of the Joynagore Municipality, Baboo Kedar Nath Dutta was duly elected Commissioner for that Ward in the place of Baboo Bhoopendra Narain Dutta, who has ceased to be a Commissioner for not attending six consecutive meetings.

A. BHATTACHARJEE, *Personal Assistant, for Commissioner.*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the 31st December* 1889.

NOTIFICATION.

IT is hereby notified for general information that the Commissioners of the Rungpore Municipality at a meeting held on 30th November 1889 have appointed the undermentioned gentlemen as members of the Managing Committee for the Mahigunge and Dhap Dispensaries (class II) in Rungpore under municipal management:—

For the Mahigunge Dispensary.

(1) Baboo Janoki Ballav Sen.
(2) Dr. Mazammal.
(3) Baboo Tarini Prosad Bhattacharjee.
(4) ,, Prosunno Nath Chowdhuri.

For the Dhap Dispensary.

(1) Dr. Chandra Kanta Bose.
(2) Baboo Kamakhya Charan Mukerjee.
(3) ,, Prosunno Kumar Moitra.
(4) ,, Prosunno Nath Chowdhury.

E. E. LOWIS, *Commissioner.*

DATED CAMP RAMPORE BEAULEAH, *the 30th December* 1889.

NOTIFICATION.

IT is hereby notified for general information that Moonshi Bhikari Lal is appointed to be a Member and Secretary of the Burhurwa Dispensary Committee in the district of Chumparun, *vice* Moonshi Kandhji Sahoy, retired.

JOHN BOXWELL, *Offg. Commissioner*

DATED BANKIPORE, *the 4th January* 1890.

The Calcutta Gazette.

WEDNESDAY, JANUARY 8, 1890.

PART IA.

Orders and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following order, issued by the Government of India, in the Home Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION—EDUCATION.

The 1st January 1890.

No. 1.—The Governor-General in Council has been pleased to appoint the Hon'ble Dr. Gooroo Dass Banerjee to be Vice-Chancellor of the University of Calcutta in succession to the Hon'ble Sir W. C. Petheram, KT., Q.C., resigned.

A. P. MACDONNELL,
Secretary to the Govt. of India.

INDIAN EMPIRE.

NOTIFICATION.

Fort William, the 1st January 1890.

No. 1*I. E.*

HIS EXCELLENCY THE GRAND MASTER OF THE MOST EMINENT ORDER OF THE INDIAN EMPIRE is pleased to announce that Her Majesty the Queen and Empress of India has been graciously pleased to make the following appointments to the said Order :—

To be Companions.

* * * * * * *

Brigade-Surgeon George King, M.B., F.R.S., Indian Medical Service, Superintendent of the Royal Botanical Gardens, Calcutta.

* * * * * * *

Henry Paul Todd-Naylor, Esq., Bengal Civil Service, Deputy Commissioner of the Magwé District, Burma.

By order of the Grand Master,

W. J. CUNINGHAM,
for *Secretary to the Most Eminent Order of the Indian Empire.*

FOREIGN DEPARTMENT.

NOTIFICATIONS.

Fort William, the 1st January 1890.

No. 1*I.*

Her Majesty the Queen and Express of India has been pleased to confer the honour of Knighthood on the undermentioned gentlemen :—

* * * * * * *

Romesh Chunder Mitter, Esq., lately Puisne Judge of the Calcutta High Court.

No. 2*I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Maharaja Bahadur as a personal distinction upon—

Maharaja Sir Jotendro Mohun Tagore, K.C.S.I.

Maharaja Kumar Khittish Chunder Roy of Kishnaghur, in the Nuddea district.

No. 3*I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Maharaja as a personal distinction upon :—

Raja Mohendro Deo Saont of Athmullik.

No. 4*I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Raja as a personal distinction upon—

Baboo Run Bahadur Singh, Zemindar of Ticcaree, in the district of Gya.

„ Jyoti Prosad Gorgu, Zemindar of Maisadul, in the district of Midnapore.

No. 6*I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Mahamahopadhyaya as a personal distinction upon—

Pundit Ayodhya Nath Miser Samavedi of Pota, in the district of Mozufferpore.

„ Krishna Singh, Thakur of Bhoar in Tirhoot.

„ Kanhai Lal Jha of Mangraumi, in the district of Durbhunga.

No. 7*I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Khan Bahadur as a personal distinction upon—

* * * * * * *

Maulvi Ahmad, Municipal Commissioner for the town of Calcutta.

Saiyid Muhammad Ajmal, Honorary Magistrate of Barh, in the district of Patna.

* * * * * * *

No 9*I.*

His Excellency the Viceroy and Governor-General is pleased to confer the title of Rai Bahadur as a personal distinction upon—

Baboo Mata Din, late Subordinate Judge of Mozufferpore, in the Bengal Presidency.

„ Nundo Kishore Das, Assistant Superintendent of the Tributary Mehals of Orissa.

„ Kali Podo Mukherjea, Personal Assistant to the Commissioner of Orissa.

* * * * * * *

W. J. CUNINGHAM,
Offg. Secy. to the Govt. of India.

The following orders, issued by the Government of India, in the Military Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

Fort William, the 1st January 1890.

VOLUNTEER CORPS.

APPOINTMENTS.

No. 15.—*Calcutta Naval Volunteers*—

Mr. Robert Bushby to be Chief Engineer, with effect from the 30th December 1889.

Mr. William B. Steel ... ...
„ Alfred Falconer ...
John Jamieson Muir
Sydney Lynch
Francis Lamount
„ George Houston Russell
„ Alexander McGregor ...

To be Engineers, with effect from the 30th December 1889.

No. 16.—*Cossipore Artillery Volunteers*—

Mr. Stewart McPherson to be Second Lieutenant, *vice* Gore-Browne, transferred to the Great Indian Peninsula Railway Volunteer Rifle Corps.

E. H. H. COLLEN,
Secretary to the Govt. of India.

The Calcutta Gazette.

WEDNESDAY, JANUARY 8, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

ERRATUM.

The 31st December 1889.—In the Notification, dated 1st December 1889, published at page 266, Part IB, of the *Calcutta Gazette* of the 4th idem, appointing Mr. Perry to be a Commissioner of the Purneah Municipality in the district of Purneah, for "R. C. C. P. Perry," read "R. C. P. Perry."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 4th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Rajkrishna Mookerjee and Munshi Bichak Lal to be Commissioners of the Jhaldah Municipality in the district of Manbhoom, *vice* Baboos Sri Nath Banerjea and Behari Lal Choudhury, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 6th January 1890.—It is hereby notified that, under section 11, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the following gentlemen to be members of the several Local Boards in the district of the 24-Pergunnahs :—

Local Board of	Names of members.
Alipore	Rai Prosonno Coomar Banerjee Bahadoor. Mr. R. D. Mehta. Baboo Nobin Chand Ghose. „ Surja Coomar Roy Chowdhry. „ Asutosh Biswas.
Diamond Harbour ...	„ Shama Churn Patitunda. Munshi Ashraf Ali Khan. Baboo Grish Chandra Mandle. „ Mohendra Nath Mukerjie.
Baraset	„ Kedar Nath Banerjie. „ Khettra Gopal Das. „ Mohendra Nath Ghoshal.
Basirhat	Baboo Kunja Behari Chatterjie. Moulvie Golam Kasseem. Baboo Sukrity Churn Roy.
Barrackpore	Baboo Ambica Churan Mukerjie. Munshi Jehan Ali Shaikh.
Dum-Dum	Baboo Kristo Kisore Roy. „ Baikunta Nath Chukervertty.

2. The Lieutenant-Governor is also pleased to appoint the following gentlemen, under section 10 of the Act, to be members of the Local Boards mentioned against their names :—

Name of Local Board.	Names of members.
Alipore ...	... Mowasjee Eduljee.
Basirhat ...	... Munshi Jehaluddin Mondle. Baboo Umesh Chundra Santra.
Dum-Dum ...	... Baboo Prya Nath Chuckraverty. Munshi Ibrahim Mondle. Baboo Brojo Nath Ghose.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th January 1890.—It is hereby notified for general information that, in exercise of the power vested in the Local Government by section 351 of Act III (B.C.) of 1884, and on the recommendation of the Commissioners of the Kurseong Municipality, made at a meeting, the Lieutenant-Governor confirms the bye-law set forth below, which has been framed by the Commissioners of the said Municipality under section 350 of the said Act.

BYE-LAW.

Any person who disobeys an order passed by the Commissioners under the provisions of section 236 of Act III (B.C.) of 1884, shall be liable to a penalty not exceeding Rs. 25.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th January 1890.—It is hereby notified for general information that the Lieutenant-Governor intends, in the exercise of the power vested in the Local Government by section 221 of Act III (B.C.) of 1884, and in accordance with the recommendation of the Commissioners of the Cutwa Municipality, in the district of Burdwan, made at a meeting, to extend the provisions of Part IX of the said Act to the above Municipality, and to sanction the levy of a fee under section 86(*f*), for the cleansing of latrines therein, unless good reasons are shown to the contrary within one month from the date of the publication of this notification within the Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

ERRATUM.

The 7th January 1890.—In paragraph 2 of the notification, dated the 29th November 1889, published at page 266, Part IB of the *Calcutta Gazette* of the 4th December 1889, containing the names of the members of the Local Boards in the district of Patna, *for* Kazi Sayad Mohamad Ismail, an appointed member of the Barh Local Board, *read* Kazi Sayad Mohamed Aizal.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th January 1890.—It is hereby notified that, under section 9, Act III (B.C.) of 1885, the following gentlemen have been elected members of the Local Boards in the district of Bankoora :—

Local Boards.	Thana for which elected.	Names of members.
Bankoora ...	Bankoora	... Baboo Krishna Govind Goswami. „ Mahes Chandra Banerjea.
	Onda	... Baboo Ram Govinda Mukerjee.
	Gangajalghati	... Baboo Mahendranath Banerjea. „ Basanta Kumar Neogi.
	Raipore	... Baboo Kalipada Chatterjea. „ Soron Chandra Pal.
	Khatra	... Baboo Kanti Chundra Banerjea.
	Bishenpore	... Baboo Beni Madhub Banerjea. „ Gora Chand Goswami.
Bishenpore ...	Sonamukhi	... Syed Fuzler Rahaman. Baboo Ram Keshab Hazra.
	Kutalpore	... Baboo Haran Chundra Mukerjea.
	Indas	... Baboo Choudhury Mohamed Majaman.

It is hereby notified that, under section 11, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the following gentlemen to be members of the several Local Boards in the district of Bankoora :—

Local Boards.	Names of Members.
Bankoora	The Senior Covenanted or Uncovenanted Deputy Collector for the time being, *ex-officio*. Baboo Banamali Dutta. „ Gogan Lal Pathak. „ Nadiar Chand Roy.
Bishenpore	„ Kailash Chandra Chatterjee. Chowdhry Mahaed Rahamen. Baboo Natabor Sircar.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th January 1890.—It is hereby notified that, under section 9, Act III (B.C.) of 1885, the following gentlemen have been elected to be members of the Local Boards in the district of Burdwan :—

Local Board of	Thana for which elected.	Names of members.
Burdwan ...	Burdwan ...	Baboo Annada Prasad Mookerjee. Munshi Fazle Rabbi.
	Satgachia ...	Baboo Nalinaksha Bose. „ Sris Chundra Chowdhry.
	Jamalpore ...	Baboo Ashutosh Mookerjee.
	Bood-Bood ...	Baboo Bunwarilall Hali.
	Ausgram ...	Baboo Dabendra Chundra Chatterjee.
	Sahebgunge ...	Baboo Radhagobind Mundle.
	Roynah ...	Baboo Upendra Chandra Mookerjee.
	Khandghose ...	Chowdhry Afzal Rabbi.
Culna ...	Culna ...	Baboo Mohendra Nath Mullik. „ Narendra Nath Borat.
	Purbasthaly ...	Baboo Nrisingha Ram Chuckerbati. „ Satyendra Nath Chowdhry.
	Montessur ...	Baboo Annada Chundra Das. „ Purusothum Bose.
Cutwa ...	Cutwa ...	Baboo Brojendra Nath Sen. „ Ashutosh Chowdhry.
	Ketugram ...	Baboo Kedarnath Banerjea. „ Radhica Prosad Sing.
	Mongulcote ...	Munshi Motiur Rahman. Baboo Jodunath Mookerjea.
Raneegunge ...	Raneegunge ...	Baboo Troylakhyanath Roy.
	Assensole ...	Baboo Saroda Prosad Chuckerberti. „ Durga Dass Misra.
	Kanksa ...	Baboo Chunilal Goswami. „ Kulada Prosad Mookerjea.

2. The following gentlemen are appointed, under section 11 of the Act, to be members of the above Local Boards :—

Local Board of	Names of members.
Burdwan	Munshi Golam Asduq. Baboo Jagabandhu Mitra, L.M.S. Syed Sudder-uddin Ahmed. Baboo Kedar Nath Dutta. Deputy Inspector of Schools, *ex-officio*.
Culna	Baboo Mohendranath Singh. „ Soshi Bhuson Pal. „ Tara Das Bhattacharjee.
Cutwa	Baboo Gopinath Gupta. „ Radha Raman Gangooly. Syed Safi Ali Hossain.
Raneegunge	Mr. C. Earfe. „ J. Doyle. Kumar Dakhineswar Malia.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal

DECLARATION.

The 4th January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Furreedpore Municipality for a public purpose, viz., for the excavation of a tank to be called the Jubilee tank in mouzah Kamlapur, otherwise known as Jhiltuli Kalibari, in the town of Furreedpore, pergunnah Sherdia, zillah Furreedpore, it is hereby declared that for the above purpose a piece of land measuring, more or less, 11 beegahs of standard measurement, is required. The land is bounded on the North by the public road; on the East by the house of Kamini Kumar Mukerjee, Sasanka Mohan Mukerji and Kailash Chandra Dutt; on the South by a khal and the pucca house of the late Ishan Chandra Majamdar; and on the West by the public road, the loan office, and the house of Ishan Chandra Maitra.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, JANUARY 8, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given that the proprietary right of Government, as specified in the conditions of sale below, to the undermentioned estate, situate in the district of Bankoora, will be put up to sale at the Bankoora Collectorate on 13th January 1890, corresponding 1st Magh 1296 B.S.

The purchasers will be subject to the following conditions of sale:—

Conditions of Sale.

1*st.*—The estate to be sold to the highest biddor above the upset price, which will be fixed by the Collector at the time of sale. The purchaser of this estate will be considered as the proprietor of the estate, and the entire proprietary right of Government in such estate will be transferred to him, subject to the revenue fixed in perpetuity.

2*nd.*—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings, and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3*rd.*—If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid down at once.

4*th.*—If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the estate to be again put up to sale at the risk of the defaulting purchaser, after issue of advertisement, as in the case of original sale:—

Number on the district roll.	Name of estate and pergunnah.	Approximate area in acres.	Government revenue assessed.	Remarks.
1022	Sadistar Puraton Rastab, pergunnah Bishenpore.	A. R. P. S.YD. S.FT. S.IN. 1 2 14 11 4 72	Rs A. P. 4 13 0	

Bankoora Collectorate, the 7th December 1889.

W. V. G. Tayler, Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Backergunge will be put up for sale at the Collector's Office of that district on the 8th January 1890, corresponding with 25th Pous 1296 B.S., for the kist ending with 28th September 1889, for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
1408	Abu Mahamud taluq, pergunnah Bozergomedpur.	2,965 4 1	.....	6a. 1½g. 2kts. Ijmali share.	Lal Mahomed and others.	1,127 3 5½	.....	61 2 10½
1416	Buncharam Basu taluq, pergunnah Bozergomedpur, hissa 8 annas.	1,550 5 3	.....	2a. Ijmali share ...	Jogodiswari Chaudhurain.	190 9 8	.....	52 14 9
1445	Durgapur Toar, pergunnah Bozergomedpur.	820 4 10½	.....	10a. Ijmali share ...	Dakhina Kumar Roy Choudhury and others.	512 11 0½	.....	60 11 11½
1478	Gouri Kanta and Radha Kanta Bhattacharji taluq, pergunnah Bozergomedpur.	596 5 4	.....	6a. 2½g. Ijmali share...	Jogodiswari Chaudhurain.	228 4 7	.....	55 14 10½
1487	Jiban Krishna Sen, Hari Krishna Sen, Kamal Krishna Sen, pergunnah Bozergomedpur.	2,295 9 6½	.....	6a. 15½g. 1½kt. Ijmali share.	Jogodiswari Chaudhurain and others.	978 13 0½	.....	174 3 11
	Gobinda Deb Roy, Pran Manikya Chandra Roy, Durga Narayan Roy, and Mirtunjay Mukerjee taluq.							
1578	Panioty Alexander taluq, pergunnah Bozergomedpur.	4,833 12 0½	.....	2a. Ijmali share ...	Ditto ditto ...	604 3 2½	.....	179 5 1½
1585	Radha Krishna Roy, Harananda Roy, Kali Dass Sidhanta taluq, pergunnah Bozergomedpur.	2,436 10 10	.....	5a. 14½g. 1½kt. Ijmali share.	Ditto ditto ...	874 11 7	.....	215 4 5½
1628	Ramna Bomna Toar Mohamed Sajl taluq, pergunnah Bozergomedpur.	9,487 10 8	.....	8a. 15½g. 19 15 6½ 2kts. Ijmali share.	Golam Ahad Chowdhuri and others.	10,676 12 1	.....	2,044 15 4½
1633	Ram Raju Deo taluq, pergunnah Bozergomedpur.	2,062 2 11½	.....	2a. Ijmali share ...	Jogadiswari Chaudhurain.	257 12 2½	.....	76 8 7
1633	Ditto ditto ...	2,062 2 11½	.....	3a. share under separate account.	Taramoni Debya ...	386 10 7	.....	129 12 10
1651	Ramjan Bibi, Farjana Bibi and Saduruddin Kazi taluq, pergunnah Bozergomedpur.	565 6 7½	.....	2a. share under separate accounts.	Rahamjan Bibi ...	70 10 10	.....	14 14 8
1721	Pergunnah Chandra Dip, &c., hissa 2a. 13½g. 3kts.	13,916 5 10	.....	3a. 13½g. 1kt. share under separate account.	Mr. C. Panioty, executor to the estate of Mr. Theodaras Constantine Panotty and others.	3,189 2 9	.....	1,173 3 1
1722	Pergunnah Ditto, hissa 2a 10g 1kt.	14,464 10 1½	.....	Ditto.	Ditto	3,314 13 0	.....	2,416 15 9
1725	Mouzah Chikni-Kandi, hissa 8½a., pergunnah ditto	3,382 8 1	.....	6a 17½g 2kt. Ijmali share.	Kuli Mohan Son and others.	1,479 8 7	.....	24 3 9
1727	Ditto 7a pergunnah ditto.	2,815 15 10	.....	5a 2½g 1½ Ijmali share.	Ditto.	902 2 11	.....	40 7 10
1739	Khajeh Nur taluq, hissa 5a 6½g, pergunnah ditto.	2,525 3 1½	Whole estate.	.....	Wazedennessa Khatoon, mother of Mahamud Ismail Khan Chaudhuri and others.	.....	875 11 3	.....
1764	Pergunnah Dakhin Shahabazpur, hissa 3a 1½g 1kt.	8,543 6 8	Ditto.	.....	Mr. A. Thomas and others.	.....	1,745 14 11	.....
1916	Tappeh Habili Silimabad, hissa 10g.	1,045 7 0½	.....	5½a Ijmali share.	Bama Sundari Gupta and others.	359 6 2½	.....	63 11 9
1994	Bishonath Sen taluq, pergunnah Khanja Bahadurnagore.	570 6 11½	Whole estate.	.....	Raj Kumar Sen and others.	.....	142 6 5	.....
2749	Durgakoneswar taluq, pergunnah Utter Shahabazpur.	1,037 11 2	.....	2a. 13½g. 1kt. share under separate account.	Abdul Aziz Chowdhuri	172 15 1	.....	66 2 2
3257	Pergunnah Ratandi Kalikapur, hissa 4 annas.	6,309 6 10	.....	¼a. Ijmali share ...	Jogodiswari Debya ...	197 2 6	.....	30 12 3
3257	Ditto ditto ...	6,309 6 10	.....	15g. share under separate account.	Iswar Chandra Roy ...	295 12 1	.....	80 15 4
3258	Ditto ditto ...	6,309 6 10	.....	6½g. 2kt. Ijmali share	Jogodiswari Debya ...	131 7 4	.....	34 12 7½
3258	Ditto ditto ...	6,309 6 10	.....	¼a. share under separate account.	Iswar Chandra Roy and others.	197 2 9	.....	76 6 3
3263	Pergunnah Sahazadpur, hissa 2a. 10½g.	581 7 6	Whole estate.	.....	Nobin Kishore and others.	.....	182 14 5	.....
3865	Tappeh Abdullapur, hissa 10a. 13g.	2,367 13 0	Ditto ...	.....	Durga Charan Pal and others.	.....	62 2 11	.....
4597	Chur Karnokati, pergunnah Chandradip.	1,226 0 3	.....	3a. 13½g. 1kt. Ijmali share.	Mrs. D. Panioty ...	281 2 5	.....	22 10 9
4757	Chur Madunpura, pergunnah Ratandi Kalikapur.	1,139 0 0	Proprietary right of whole estate.	.....	Rajendra Chandra Roy Chaudhury and others.	.....	639 0 0	.....
5211	Kumaria Chur, hissa 13a. 18½g. 1kt., pergunnah Utter Shahabazpur.	1,169 0 0	.....	3a. 8g. 2kt. 11½til., Ijmali share.	Durga Prasanna Roy and others.	250 5 0	.....	18 6 1½
5211	Ditto ...	1,169 0	.....	1a. 11g. 2kt. share under separate account.	Krishna Kumar Das...	113 14 0	.....	1 1 3

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
5231	Nalgara Chur, pergunnah Dakhin Shahabazpur.	Rs. A. P. Revenue— 1,595 13 5 Malikana— 177 5 0 1,773 2 5	Howladari rights of whole estate.	.....	Raj Kumar Bhaduri...	Rs. A. P.	Rs. A. P. 1,664 6 3	Rs. A. P. .....
6412	Tappeh Asimpur and pergunnah Tahapur, Thak No. 1632, mouzah Darichur Lakshmipura *alias* surplus alluvial accretion to estate Khalasi Chur.	528 0 0	Proprietary right of whole estate.	.....	Abdul Majid Kazi Chowdhury.	.....	198 0 0	.....
6441	Tappeh Sultanabad, hissa 13*g.* 1*k.* Gulbadanbibi.	963 11 3	Whole estate.	.....	Syed Mozzum Ali Chowdhury and others.	.....	74 12 5	.....
6442	Ditto, hissa 1*a.*, Salima Begum.	2,103 5 3	Ditto ...	.....	Ditto ditto ..	.....	168 4 3	.....
6443	Ditto, hissa 1*a.* 15*g.*, Syed Uzir Alial Hosani Choudhury.	2,529 11 5	Ditt ...	.....	Ditto ditto ...	.....	196 5 7	.....
6449	Ditto, hissa 7½*a.*, Asimonessa Khatoon.	542 1 4	Ditto ...	.....	Ditto ditto ...	.....	7 0 11	.....
6454	Thak No. 1651 surplus alluvial accretion to Ilsa Chur.	865 0 0	Proprietary right of whole estate.	.....	Durga Mohun Dass and others.	.....	1295 B. S.— 865 0 0 Current year— 150 0 0 015 0 0	.....

Backergunge Collectorate, the 27th November 1889. H. SAVAGE, Offg. Collector.

NOTICE is heerby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Jessore will be put up for sale at the Collector's Office of that district on Friday, the 10th January 1890, corresponding 27th Pous 1296 B.S., for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
192	Madhabpasa, pergunnah Isafpur.	Rs. A. P. 2,587 2 4	.....	Hisya No. 1	Raj Kumar Roy and others.	Rs. A. P. 305 6 3½	Rs. A. P.	Rs. A. P. 19 5 8½
193	Madhubpur, pergunnah Mohamedshahi.	539 1 7	.....	Do. No. 1	Bhuban Mohini Dasya and others.	129 10 5	.....	1 12 11
208	Srirampur, pergunnah Isafpur.	39 1 6	.....	Do. No 1	Modhu Sudan Baksi and others.	626 1 0	.....	81 8 5
5295	Gongadaspur, pergunnah Ukhra.	5,169 0 7	.....	Do. No. 6	Hama Churn Chowdhry.	25 2 2	.....	6 5 7

Jessore Collector's Office, the 2nd December 1889. A. GUPTA, Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Beerbhoom will be put up for sale at the Collector's Office of that district on 10th January 1890 for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
72 Separate account No. 15.	Kirtihat, pergunnah Khargram.	Rs. A. P. 1,931 10 0	.....	16g. 3kag 13til 2kara.	Judab Lal Bondyopadyaya.	Rs. A. P. 97 15 0	Rs. A. P.	Rs. A. P. 2 15 10
75	Turigram, pergunnah Shahajadpur.	1,568 0 0	The whole	.....	Shekh Tarifullah ...	.....	21 9 0	.....
170 Separate account No. 283.	Akuni, pergunnah Swarupsinha.	1,832 10 0	.....	1a. 10g.	Purna Chandra Shome	171 12 8	.. ...	0 3 5

Beerbhoom Collectorate, the 5th November 1889. M. K. BOSE, Deputy Collector in charge

NOTICE is hereby given, under sections 6 and 18, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Monghyr will be put up for sale at the Collector's Office of that district on 28th January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
	A	Rs. A. P.		*I.—Permanently-settled estates.*		Rs. A. P.	Rs. A. P.	Rs. A. P.
13	Jons, pergunnah Salemabad.	613 14 0	.....	2a. 13g. 6c. 13b. ...	Kuldip Narain Singh and others.	102 5 0	.....	104 6 0
13	Ditto ...	613 14 0	.....	3a. 3d. 18c. 6f. 14r. ...	Ramman Singh and others.	122 10 0	.....	74 10 6
283	Bolchhi, pergunnah Amerthu.	641 1 0	.....	2a. 8d.	Gopal Singh and others ...	96 3 0	.....	10 1 0
283	Ditto ...	641 1 0	.....	3a.	Ramadheen Rai and others.	120 1 0	.....	29 1 0
602	Parorn, pergunnah Ballia.	830 15 0	.....	1 dam	Lachmi Kumri	2 10 0	.....	0 2 0
602	Ditto ...	830 15 0	.....	1a. 11d. 1c. 1d. 4r. 2p.	Lal Mohun Mullik and others.	132 2 0	.....	1 5 6
620	Sultanpur Tetri, pergunnah Ballia.	893 0 0	.....	11a. 9d. 1k.	Sheik Tohower Hossain and others.	639 5 0	.....	131 15 0
804	Taluqa Tulsipur and others, pergunnah Malki.	932 10 0	.....	1a. 18d. 2d.	Manohar Lal and others ..	110 15 3	.....	52 12 9
830	Ganga Persad, pergunnah Malki.	588 3 0	.....	2a. 1c. 1k. 9r.	Reet Lal Singh and others	121 2 0	.....	61 5 3
1451	Bhowmandpur *alias* Ramdeari, pergunnah Malki.	1,166 13 0	.....	1a. 5g. 1c. 3d.	Shew Dyal Singh and others.	91 9 0	.....	21 14 0
1451	Ditto ...	1,166 13 0	.....	5g. 2c. 8d. 2k. 5f. ...	Mussamut Amrito Kumri and others.	20 15 0	.....	3 15 0
1451	Ditto ...	1,166 13 0	.....	16g. 2c. 6d.	Bhojraj Singh and others	60 12 0	.....	14 11 0
2305	Chuckangra, pergunnah Amerthu.	1,083 14 0	.. ...	1a. 15d. 11c. 2b. 4f. 8b.	Shah Mohamad Hossain and others.	120 7 0	.....	29 14 0
2317	Imamnagar, pergunnah Amerthu.	513 14 0	Whole ...	.....	Syed Tasaduk Hossain and others.	.. .	0 13 6	.....
2746	Halsi, pergunnah Amerthu.	1,504 1 0	.....	13a. 10d. 5c. 2b. ...	Beni Singh and others ...	1,282 0 0	.....	220 14 0
2779	Mahiuddinagar Karik, pergunnah Amerthu.	564 11 0	.....	3a.	Kokil Singh and others ...	95 3 0	.....	11 14 0
2779	Ditto ...	564 11 0	.....	2a.	Rohim Singh and others .	120 9 0	.....	0 14 0
5359	Mohamedpur Fataha, asli and dakhli, pergunnah Emadpur.	708 0 0	.....	12a.	Moulvi Asrafuddin Ahmad and others.	551 0 0	.....	18 14 9
				II.—Temporarily-settled estates.				
1433	Akberpur Barari, pergunnah Malki.	783 13 0	.....	14a.	Kharag Singh and others	685 14 0	.....	60 8 8

Monghyr Collectorate, the 4th December 1889. T. E. COXHEAD, Officiating Collector.

NOTICE is hereby given that the proprietary right of Government, as specified in the Conditions of Sale below, to the undermentioned estate situate in the district of Maldah, will be put up to sale at the Maldah Collectorate on 11th January 1890, corresponding with 28th Pous 1296 B.S.

The purchasers will be subject to the following conditions of sale—

Conditions of sale.

1*st.*—The estate to be sold to the highest bidder above the upset price, which will be fixed by the Collector at the time of sale. The purchaser of this estate will be considered as the proprietor of the estate, and the entire proprietary right of Government in such estate will be transferred to him, subject to the revenue fixed in perpetuity.

2*nd.*—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3*rd.*—If the amount of purchase money do not exceed Rs. 100, the whole amount to be paid down at once.

4*th.*—If the amount of purchase money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the estate to be again put up to sale at the risk of the defaulting purchaser, after issue of advertisement, as in the case of original sale.

Number on the district roll.	Name of estate and pergunnah.	Approximate area in acres.	Government revenue assessed.	REMARKS.
		A. R. P.	Rs. A. P.	
98	Kismut Jot Kasturi, pergunnah Kotuali.	62 0 12	50 0 0	

Collector's office, district Maldah, the 15th November 1889. C. A. SAMUELLS, Collector.

NOTICE is hereby given, under section 6 of Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of the 24-Pergunnahs will be put up for sale at the Collector's Office of that district on the 8th January 1890 for arrears of revenue which fell due on the 28th September 1889.

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
9	Pergunnah Magura, kismut Chitta and others.	818 1 7½	The whole	.....	Harish Chandra Roy Chowdhury and others.	.....	72 4 4	.....
15	Pergunnah Magura, mouzah Khariberia and others.	4,091 4 2½	Ditto ...	.....	Hem Chundra Roy Chowdhury and others.	.....	230 4 6½	.....
53	Pergunnah Magura, kismut Rameshurpur and others.	3,287 3 0	.....	12*a.* 10*g.* 5*kag* 15½ residuary share.	Radha Mohan Mundal and others.	2,571 11 8	.....	33 3 8
64	Pergunnah Magura, kismut Bansdroni and others.	6,842 4 9	.....	10*a.* 8*g.* 6*kora* 8 residuary share.	Prosunna Coomar Banerjee and others.	4,455 12 9	.....	128 1 2
67	Pergunnah Magura, kismut Futtepore and others.	1,383 1 9	.....	11*a.* 5½*g.* residuary share...	Kalli Kristo Mundal and others.	974 10 5	.....	72 12 9
97	Pergunnah Magura, kismut Bagi and others.	990 10 4	.....	9*a.* 11½*g.* residuary share...	Ditto ...	618 2 0½	.....	52 10 7
98	Pergunnah Magura, mouzah Moheshurpur and others.	553 3 11	The whole	.....	Ditto ...	.....	28 11 3	.....
99	Pergunnah Magura, kismut Mokundpur and others.	1,065 7 11	.....	13*a.* 18*g.* residuary share...	Ditto ...	924 10 10	.....	20 4 8
151	Pergunnah Baridbati, kismut Chak Hotoo-ria and others.	39,930 11 11½	.....	15*a.* 15½*g.* 12½ residuary share.	Trailakha Nath Biswas and others.	39,374 1 0½	.....	338 3 1
207	Pergunnah Medon Molla, mouzah Soobo-dhepur and others.	633 2 9	The whole	.....	Woomesh Chundor Ray Chowdhury and others.	.....	28 1 0	.....
313	Pergunnah Moora-gacha, kismut Sakooya and others.	1,385 9 2	.....	8*a.* 17*g.* 2*kranti* residuary share.	Kalli Kristo Mundal and others.	767 1 10½	.....	62 14 4
314	Pergunnah Moora-gacha, kismut Hari-narayanpur and others.	12,248 10 1½	.....	9*a.* 10*g.* 4 residuary share	Radha Mohan Mundal and others.	7,246 13 9½	.....	180 0 6
315	Pergunnah Moora-gacha, kismut Raghu-nathpur and others.	10,256 13 10½	.....	10*a.* 18½*g.* residuary share	Kalli Kristo Mundal and others.	7,003 8 2½	.....	450 3 2½
322	Pergunnah Mooraga-cha, mouzah Autum-pur and others.	10,565 0 2	.....	8*a.* 16*g.* 11*kag* 9-6 residuary share.	Harry Mohan Banerjee and others.	5,834 7 5½	.....	86 7 9
342	Pergunnah Ghur and others, mouzah Rai-pur and others.	7,847 2 4½	The whole.	.....	Kalli Kristo Mundal and others.	.....	202 10 6½	.....
346	Pergunnah Balia, mouzah Shantoshbati and others.	5,548 2 9	.....	15*a.* 14*g.* 2*kranti* residuary share.	Radha Mohan Mundal and others.	5,447 0 9	.....	189 7 2
348	Pergunnah Balia, kismut Panchaor and others.	2,136 15 4	.....	10*a.* 13*g.* 1*kori* 1*kranti* residuary share.	Manindra Mohun Mukerjee and others.	1,424 10 2½	.....	49 7 8
355	Pergunnah Balia, kismut Raipur and others.	2,762 0 7	.....	10*a.* 10*g.* 1*kora* 1*kranti* residuary share.	Kalli Kristo Mundal and others.	1,815 7 4½	.....	181 3 7½
385	Pergunnah Auzeem-abad, hooda Rash Khalli and others.	19,424 8 1½	.....	Excluding shares separated under section 10 of Act XI of 1859, and under section 70 of Act VII (B. C.) of 1876, the residuary share paying a revenue of Rs. 10,055-1-6.	Apoorba Kumari Dasi and others.	10,055 1 6	.....	535 9 2½
385-3	Ditto ditto ...	19,424 8 1½	.....	Share separated under section 70 of Act VII (B. C.) of 1876, paying a revenue of Rs. 1,362-8-7½.	Upendra Kristo Mundal.	1,362 8 7½	.....	151 4 8
385-7	Ditto, ditto ...	19,424 8 1½	.....	Share separated under section 70 of Act VII (B.C.) of 1876, paying a revenue of Rs. 1,362-8-7½.	Kalli Kristo Mundal	1,362 8 7½	.....	151 4 8
386	Pergunnah Auzeem-abad, mouzah Udaya-rampur and others.	1724 9 8	.....	8*a.* 17*g.* 2*kranti* residuary share.	Kalli Kristo Mundal and others.	954 12 11½	.....	68 13 6
388	Pergunnah Balia, mouzah Molowyapur and others.	5,327 4 6	.....	Excluding share separated under section 10 of Act XI of 1859, the residuary joint shares 12*a.* 6*kora.*	Ditto ...	6,271 7 8½	.....	364 4 8½
389	Pergunnah Balia, mouzah Soutoshpur-and others.	9,434 9 7	.....	15*a.* 6*g.* 3*kora* 1*kranti* residuary share.	Ditto ...	7,867 1 3½	.....	477 15 1
390	Pergunnah Balia, mouzah Gondho Baduli and others.	1,381 9 7	.....	11*a.* 5½*g.* residuary share	Ditto ...	973 9 3	.....	72 13 11
391	Pergunnah Mooraga-cha, mouzah Gomokhi and others.	5,538 8 6	.....	11*a.* 6*g.* 2*kranti* residuary share.	Ditto ...	4,087 8 7	.....	210 8 6
392	Pergunnah Auzoora-abad, hooda Joychan-dipur and others.	8,313 7 8	.....	12*a.* residuary share ...	Saroda Dasi and others.	6,235 1 9	.....	345 0 10½
394	Pergunnah Auzeem-abad, mouzah Kissori-pur and others.	7,018 12 11	.....	10*a.* 10*g.* 1*kora* 1*kranti* residuary share.	Kalli Kristo Mundal and others.	4,672 8 11½	.....	428 14 8
395	Pergunnah Auzeem-abad, taraf Madhub-pur and others.	14,657 13 11	The whole.	.....	Kailash Chunder Mundal and others.	.....	1,229 0 9	.....
401	Pergunnah Auzeem-abad, hooda Ram-kristopur and others.	8,941 9 7	.....	10*a.* 10*g.* 1*kora* 1*kranti* residuary share.	Kalli Kristo Mundal and others.	5,877 3 10	.....	699 6 3½
403	Pergunnah Auzeem-abad, taraf Pathor-beria and others.	5,143 3 3	.....	15*a.* 10*g.* residuary share...	Radha Mohan Mundal and others.	4,982 7 8	.....	150 12 8½
411	Pergunnah Magura, kismut Dhannya Khola and others.	2,519 11 10	The whole.	.....	Harish Chandra Roy Chowdhury.	.....	309 7 1	.....
1534	Pergunnah Magura, taraf Bantra and others.	14,681 6 4	.....	4*a.* 2*kora* 2*kranti* residuary share.	Soorat Mohini Dasi and others.	3,700 14 9	.....	233 14 6
1534-2	Pergunnah Moydu, taraf Bantra and others.	14,681 6 4	.....	1*a.* 3*g.* 3*kora* share ...	Sookhomoyi Dasi ...	1,089 10 2	.....	98 15 5

RAM CHURN BOSE, Deputy Collector, for Collector.

24-Pergunnahs Collectorate, Alipur, dated the 25th November 1889.

NOTICE is hereby given, under section 6, Act XI of 1859, and section 11 of Act VII of 1868, that the under mentioned mehals and tenures borne in the towji of the district of Noakhally will be put up to public and unreserved sale at the Collector's Office of that district on Saturday, the 11th January 1890, corresponding with 28th Pous 1296 B.S., for arrears of revenue and other demands like revenue recoverable under the law in force due for kist 28th September 1889.

Towji No.	Name of pergunnah, mehal, and tenure.	Sudder jumma of entire estate or tenure.	Whether the whole estate to be sold or part thereof.	If only a share is to be sold, specification of such share or shares.	Names of proprietors or tenure-holders of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
1	2	3	4	5	6	7	8	9
45	Kismat Mohindra Narayan, pergunnah Sundeep, station Sundeep.	Rs. A. P. 637 1 11	Whole...	... ..	Chundra Mohon Nandi	Rs. A. P.	Rs. A. P. 109 7 3	Rs. A. P. .....
194	Chur Hudrakhali, zemindari Moodafat Hossen, ghât Maghi, pergunnah Sundeep.	1,994 0 0	Do. ...	.....	Assanullah Choudhuri and Rahimullah Choudhuri Matauli.	.....	318 0 0	.....
1551	No. 14, Gayer Makararri Howla Abdul Rahaman in chur Shulukya *alias* Sunya chur, pergunnah Bhooloosh.	595 6 11	Do. ...	.....	Wazuddin Maghi, son of Tomizuddin Bhuya of chur Shulukya, station Shudharam.	.....	130 2 6	.....
1671	No. 1, Gayer Makararri Meadi (temporary) Howla Anwaruddin, Kali Das, Madan Nath Moodafat, Mahammed Manwar, Mahammed Kalim, Akramuddin in chur Gasi, pergunnah Jagira.	1,667 4 6	Do. ...	.....	Isaf Maghi, son of Amiruddin, Hawladar of Chiladi, station Lukhipura.	.....	364 10 0	.....
1671	No. 3, Gayer Makararri Meadi (temporary) Howla Mahammed Manwar, Mahammed Kalim, Akramuddin in chur Gazi, pergunnah Jagira.	1,318 9 0	Do. ...	.....	Srimati Halimennessa Choudhurani, wife of Baksha Ali Choudhuri of Shahar Kushba, station Lukhipura.	.....	291 18 0	.....
1671	No. 45, Gayer Makararri Meadi Howla Sarforuddin, Kalimuddin, No. 279, Dakhal in chur Gazi, pergunnah Jagira.	555 9 7	Do. ...	.....	Ajamuddin Patwari, son of Showfuddin Bhuya; Amirjan, wife of Kalimuddin, mother and guardian of Ameenullah, Fazil, minors of chur Lukhi Chuni, son of Panaullah; Matumeah, son of Ajamuddin; Kasim, son of Munshi; Karimennessa, wife of Hasim; Moonsar Ali, son of Samsher Ali; Samadali, son of Khan Mahamed; Tazumuddin, son of Kagumuddin; Umed Ali, son of Ajamuddin: Mammeah, son of Mahamed Hanip; Abdul Meah, son of Amud Ali; Fazar Ali, son of Hasim; Srimati Halubernessa, wife of Himat Ali; Kadir Baksha, son of Kasim Sarkar; Janbaksha, son of Jumen Ali; Amjad, Asabuddin, Munswar Ali, sons of Ajamuddin of chur Gazi, station Hatia.	....	121 7 0	.....
1686	No. 1, Gayer Makararri Meadi Howla Polan Meah and others in chur Alexander, pergunnah Jagira.	540 13 7	Do. ...	.....	Polan Meah, son of Golam Ali Bhuya; Amiruddin, son of Ashak Maghi; Abdul Kareem Meah, son of Umed Ali of chur Gazi; Abdul Meah, son of Alabuddin; Aptar Ali, son of Tomu of chur Algi; Umed Ali Serang, son of Reazuddin Mullah of chur Gassain, station Hatia.	.....	118 2 9	.....
1686	No. 2, Gayer Makararri Meadi Howla Polan Meah and others in the said chur, pergunnah Jagira.	640 12 9	Do. ...	.....	Polan Meah, son of Golam Ali Bhuya; Amiruddin, son of Ashak Maghi; Abdul Kareem Meah, son of Anis Mazoomdar and Manoo Meah, son of Umed Ali of chur Gazi; Abdul Meah, son of Alabuddin; Aptar Ali, son of Tomu of chur Algi, station Hatia; Umed Ali Serang, son of Reazuddin Mullah of chur Gassain, station Hatia.	... ..	142 3 0	.....
1693	No. 80, Gayer Makararri Meadi Howla Ajmatullah, Shubal Chandra Guho in chur Mazhdhora, pergunnah Sundeep.	708 14 7	Do.	.....	Uma Charan Guho, son of Rajkishore Guho of Mirjapur station, Hat Hazari, zillah Chittagong, at present of chur Maghdhora, station Sundeep.	.....	155 0 0	.....

Noakhally Collectorate, the 26th November 1889. MOHINI MOHUN CHAKRAVARTY, Dy. Collr. for Offg. Collr.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Maldah will be put up for sale at the Collector's Office of that district on 11th January 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrear due from it.
1	2	3	4	5	6	7	8	9
233	Tikoil, pergunnah Chandlai.	Rs. A. P. 1,341 13 0	Whole estate.	.....	Madhu Sudan Sanyal, Pran Nath Sanyal, Jadumoni Debi, Hari Nath Sanyal, Saroda Sundari Debi, Radha Madhab Choudhuri, Ram Narain Sircar and Radha Raman Dey, executors on behalf of Rata Kristo and Radha Kristo Choudhuri, minors, Guru Prasad Sanyal, guardian on behalf of Gobinda Bandhu Sanyal, Bhagabati Debya, Promoth Nath Choudhuri, and Radha Madhab Choudhuri.	Rs. A. P.	Rs. A. P. 50 8 0 Arrears of land revenue.	Rs. A. P. .....

Collector's Office, Maldah, the 30th November 1889. C. A. SAMUELLS, Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Chittagong, will be put up for sale at the Collector's Office of that district on the 31st January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
	Thanas Town and Ranzan—	Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
2 / 2	Taruf Ajoidha Ram, Fattiabad.	723 13 0	Yes: the whole estate is to be sold.	.....	Pran Kristo Das, Ram Shahak Das and others.	.....	49 8 8	.....
	Thanas Patya, Futtickcherry, Hathazari, and Satkania—							
25 / 51	Taruf Alearkhan ...	1,606 0 9	No: only shares are to be sold.	Separate accounts having been opened under Act XI of 1859, share No. I, Asad Ali Khan; share No. II, Akber Ali Khan; share No. III of the remaining proprietors.	Share No. 1, proprietor Anwar Ali Khan.	468 7 5	.....	139 1 6
					Share No. 2, Asharaf Ali Khan and Jandah Bibi and others.	811 6 3	.....	240 14 2
					Share No. 3, Uzir Ali and Anwar Ali Khan.	336 3 1	.....	96 13 8
								476 12 8
	Thanas Futtickcherry, Hathazari, Patya, Ranzan, Town, and Zowargunge—							
28 / 54	Taruf Anandi Rai, Kanongoe.	849 6 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 10, Ram Joy Mohazan; share No. 11, Ram Joy Mohazan; share No. 13, Sudder Ali, and share No. 24, Bishambur.	Share No. 10, Kali Kumar, Durgakripa De.	12 11 0	.....	3 12 3
					Share No. 11, Kali Kumar, Durgakripa De.	14 14 0	.....	4 6 6
					Share No. 13, Asharaf Ali Aminolla, *alias* Gurun Meah.	11 0 0	.....	3 4 3
					Share No. 24, Kali Kumar and Durgakripa De.	53 15 5	.....	16 0 6
								27 7 6
	Thanas Hathazari, Ranzan, and Town—							
29 / 55	Taruf Aziz Nasarat ...	701 12 0	Yes: the whole estate is to be sold.	.....	Sheik Karam Ali Meah.	.....	235 0 1	.....
	Thana Futtickcherry—							
37 / 64	Taruf Annundy Mahollah	1,160 0 3	Ditto ...	.....	Nemai Charan Nandi, Gumashta.	.....	59 1 6	.....
	Thana Ramzan—							
83 / 391	Taruf Basanta Ram, Fatehabad.	557 14 3	Ditto ...	.....	Anunda Mohon, Samad Ali and Sreemati Meherjan Bibi and others.	.....	31 1 0	.....
	Thanas Hathazari, Futtickcherry, Patya, Town, and Satkania—							
92 / 401	Kismut Balaram Sircar Baboit, taruf Sonoullah Khan.	1,063 11 3	Ditto ...	.....	Gris Chandra Rakhit and Guru Das Rakhi	.....	315 12 6	.....
	Thanas Bhatiari, Hathazari, Ramoo, Zorwargunge, Patya, and Satkania—							
116 / 382	Kismut Bissessari Baboit, taruf Gouri Sankur.	1,228 12 9	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 13 of the remaining proprietors.	Share No. 13, Mohabat Ali, Mahamed Hosain, Kali Charan and others.	404 13 11	.....	3 13 6
	Thanas Futtickcherry, Hathazari, Patya, Town, Satkania, and Ramoo—							
257 / 1288	Taruf Jubber Dust Khan.	6,538 11 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 1, Fazal Ahamud.	Share No. 1, Fazal Ahamud and Bazal Samad.	2,043 14 5	.....	299 13 4
	Thanas Futtickcherry, Hathazari, Patya, and Satkania—							
284 / 1407	Taruf Karim Khan ...	715 12 0	Yes: the whole estate will be sold.	.....	Anwar Ali Khan ...	.....	210 0 0	.....
	Thanas Patya and Satkania—							
286 / 1409	Taruf Komur Kulli ...	1,015 13 0	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 10, Dwarka Nath Kundo.	Dwarka Nath Kundo	68 10 5	.....	20 5 11
	Thana Ranzan—							
305 / 1552	Taruf Kanus Fernandes ...	1,640 5 3	Yes: the whole estate will be sold.	.....	Gris Chandra Roy Rakhit, Guru Das Roy Rakhit, and others.	.....	486 15 0	.....
	Thana Bhatiari—							
336 / 1751	Taruf Modun Chowdhury	686 6 5	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 4, Koshalya.	Shib Prosad Shukul	141 10 0	.....	42 0 9
	Thanas Hathazari and Ranzan—							
372 / 1489	Taruf Mohomad Shafi Nazir.	558 7 3	Yes: the whole estate will be sold.	.....	Susty Charan Son, Bhairub Chandra Chowdhury and others.	.....	155 12 8	.....

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
385 / 1900	Thana Zorwargunsa— Taruf Mohomed Monohur	666 15 6	Yes; the whole estate will be sold.	.....	Sreemati Raiso Nissa Chowdhurin.	.....	196 0 0	.....
	Thanas Hathazari, Patya, Ranzan and Town—							
480 / 2482	Kismut Pran Kristo, Gopi Mohun, Guru Das and Haridas Roy Baboit, taruf Jugul Kissor Chowdhury.	3,353 14 6	No: only shares will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2, Akhil Chandra Roy, share No. 6 of the remaining proprietors.	Share No. 2, Akhil Chandra Roy.	361 8 9	.....	113 4 4
					Share No. 6, Gris Chandra Roy, on behalf of minor Bhikon Chandra and Esof Ali and others.	1,329 2 8	.....	365 4 7
								478 8 11
	Thanas Futtiokcherry, Patya, Hathazari, Ranjan and Town—							
481 / 2433	Taruf Pran Bullab ...	944 5 5	No: only a share will be sold.	Ditto, share No. 2, Mohesh Chandra Chowdhury.	Mh sh Chandra Chowdhury and Obhoy Charan Chowdhury and others.	118 0 8	.....	35 0 9
	Thana Ranzan—							
511 / 2538	Taruf Raghob Juggodish	515 0 3	Ditto ...	Ditto, share No. 12 of the remaining proprietors.	Gunga Das, Brejo Mohon and others.	133 2 1	.....	34 3 7
	Thanas Patya, Ranzan, Town, and Hathazari—							
51 / 2544	Taruf Ram Mohon Sen ...	884 11 3	Yes: the whole estate will be sold.	.....	Prasanna Kumar and Ali Mosh.	.....	129 13 6	.....
	Thanas Chakaria, Patya, Ranzan, and Town—							
527 / 2554	Taruf Ram Sondur Kanongoe.	849 6 6	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2 of the remaining proprietors.	Srimoti Latifa Khatun.	681 6 6	.....	202 3 9
	Thanas Zorwargunge, Patya, Ranjan and Satkania—							
535 / 2565	Taruf Ram Kishore Kanongoe.	818 11 10	Ditto ...	Ditto, share No. 6, Ram Chandra Biswas and Bangshi Badon Biswas.	Mohesh Chandra Bhuttacharjee.	14 11 0	.....	4 5 9
	Thanas Patya and Town—							
569 / 2929	Taruf Sachi Roshun ...	752 11 0	No: shares will be sold.	Ditto, share No. 1, Sheek Sadak Ali; share No. 2, Keramut Ali.	Share No. 1, Sadut Ali Chowdhury.	83 5 3	.....	24 7 1
					Share No. 2, Anwar Ali Chowdhury.	188 2 9	.....	17 10 3
								42 1 4
	Thanas Bhatiari, Hathazari, Zowargunge, Patya, Ranzan, Town and Satkania—							
573 / 2938	Taruf Sachi Ram Kanongoe.	26 12 9	No: shares will be sold.	Separate account having been opened under Act XI of 1859, share No. 1, Lal Mohomed; share No. 16, Dwarka Nath Kanongoe; share No. 52, Ram Kumar Dey and others; share No. 63 of the remaining proprietors.	Share No. 1, Lal Mohamed.	4 14 3	.....	1 7 3
					Share No. 16, Dwarka Nath Kanongoe on behalf of Lakhi Narain Chackro.	4 4 6	.....	1 4 3
					Share No. 52, Ram Kumar Brejo Bashi.	0 10 6	.....	0 2 11
					Share No. 63 of the remaining proprietors Asanullah Chowdhury and others.	293 0 3	.....	83 8 9
								86 7 2
	Thanas Hathazari, Patya, Ranzan and Town—							
590 / 3054	Taruf Shib Durga Sharan...	2,942 8 9	No: only a share will be sold.	Ditto, share No. 8, Shoobal Chandra Das.	Shoobal Chandra Das.	2 14 5	.....	7 9 5
	Thana Chakaria—							
606 / 3113	Taruf Sheremast Khan Chowdhuri.	527 6 6	Ditto ...	Ditto, share No. 1, Fazal-ahamed.	Share No. 1, Fazal-ahamed, Hazal Samad and others.	165 10 0	49 2 8	.....

N. B.—The amounts in columns 8 and 9 represent arrears, the latest day for payment of which was 25th September 1889.

Chittagong Collectorate, the 14th December 1889.

G. H. ALLEN, for Offg. Collector

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Shahabad will be put up to public and unreserved sale at the Collector's Office of that district on the 11th day of January 1890 for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realised in the same manner as arrears of revenue due on the 28th day of September 1889.

When in columns 6, 7, and 9 of the appended statement is is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9	10
Serial No.	Towji No.	Name of mehal with pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold the arrears due from it.	If only a share is to be sold, the arrears due from it
			Rs. A. P.		A. P. K. M. D.		Rs. A. P.	Rs. A. P.	Rs. A. P.
1	59	Balua, pergunnah Arrah.	5,372 14 8	.....	Naraida Hotampore ... 16 0 0 0 0 Piparpanti Patti Tirpatti ... 16 0 0 0 0 Kewatia ... 16 0 0 0 0 Kholepore Jakahri ... 16 0 0 0 0	Ram Saran Lall ...	1,403 9 5½	.....	4 1 4½
2	62	Bakhorapore, pergunnah Arrah.	2,606 10 8	.....	Bakhorapore ... 1 3 10 0 0	Mohesh Dutt and others.	215 4 5	.....	25 4 5
					Ditto ... 1 4 0 0 0	Shiva Saran Singh and others.	222 3 6½	.....	16 9 6½
					Ditto ... 6 11 11 2 4	Raghoonundon Parsad and others.	1,173 8 1½	.....	251 13 7½
3	206	Farhangpore, pergunnah Arrah.	709 3 0	.....	Mustafapore Bhadwar ... 1 4 0 0 0 Sobhidoomra ... 0 6 0 0 0 Ditto ... 0 6 0 0 15 Siripatpore Chatar 3 9 0 0 0	Jagdam Sahai ...	17 7 4½	.....	17 7 4½
					Mustafapore Bhadwar ... 4 4 0 0 10 Farhangpore ... 0 0 0 0 10 Gothaulabaraoli 10 0 0 0 0	Shia Balak Lall and others.	153 10 8½	.....	8 11 7½
4	208	Ditto	1,592 0 1	.....	Farhangpore ... 3 2 8 0 0 Mustafapore Bhadwar ... 4 0 0 0 0 Siripatpore ... 4 2 0 10 0 Gothaulabaraoli 4 0 0 0 0 Sobhidoomra ... 5 0 0 0 0	Jugdeo Narayen Singh and others.	409 0 6	.....	24 10 0
					Farhangpore ... 1 8 0 0 0 Mustafapore Bhadwar ... 2 6 13 6 0 Gothaulabaraoli 1 8 0 0 0 Sobhidoomra ... 2 8 0 0 0 Siripatpore Chatar 1 9 5 12 0	Raj Balam Singh ...	204 5 10½	.....	9 15 9
5	223	Gyanpore, pergunnah Arrah.	1,706 10 8	.....	Gyanpore 8 0 0 0 0	Raghunandan Prasad Pande.	853 5 4	.....	106 10 6
					Ditto ... 8 0 0 0 0	Radha Madho Pershad Pande.	853 5 4	.....	106 10 6
6	396	Mathurapore Sonadia, pergunnah Arrah.	2,296 10 8	.....	Mathurapore Sonadia ... 7 1 7 0 0	Bibi Umat and others	1,574 1 4½	.....	121 15 7½
7	434	Mahoolkhurd, pergunnah Arrah.	550 0 0	Whole ...	.....	Ram Saran Singh and others.	.....	0 14 0	.....
8	530	Padoorah, pergunnah Arrah.	1,291 0 0	Do. ...	.....	Madho Pershad and others.	.....	1 2 0	.....
9	633	Semana Jeo Narayen, pergunnah Arrah.	888 8 0	.....	1 4 0 0 0	Kali Charun Singh ...	74 0 8½	.....	0 9 8½
					2 8 0 0 0	Abhiram Singh and others.	148 1 5	.....	0 7 5
					9 5 1 6 10	Moti Singh and others	523 4 2	.....	3 3 11½
10	771	Taufir Kutwa Rampore, pergunnah Barahgawan.	1,080 0 0	.....	13a.	Jhagroo Pande and others.	877 8 0	.....	12 14 5
11	816	Kalpore Bingawan, pergunnah Barahgawan.	2,126 3 4	Whole ...	.....	Bhugwan Das and others.	.....	21 9 8	.....
12	1161	Padaria, pergunnah Belara.	1,530 0 0	Do. ...	.....	Babu Baijnath Sahai	.....	0 8 0	.....
13	1576	Baghelwa, pergunnah Chausa.	686 0 0	.....	8a.	Debi Dyal Chobe and others	293 0 0	.....	3 8 0
14	1607	Chilbila Kadipore, pergunnah Chausa.	751 9 6	Whole ...	.....	Ram Nihora Ram and others.	.....	1 10 7	.....
15	1620	Chilabri Patti Bhichook Sahu, pergunnah Chausa.	720 14 7	Do. ...	.....	Dandi Pande and others.	.....	75 0 4	.....
16	1719	Indaurpati Girdhari Singh, pergunnah Chausa.	584 5 7	Do. ...	.....	Isri Rai and others ...	.....	29 0 11	.....
17	1948	Pipradh, pergunnah Chausa.	760 9 5	Do. ...	.....	Bhopat Rai and others	.....	0 11 0	.....
18	2056	Tiwai, pergunnah Chausa.	502 5 3	.....	Tamai ... 7 9 10 0 0 Do. ... 3 6 10 0 0	Bhairo Rai and others Sheo Dhark Miser and others.	244 11 11½ 111 4 8½	....	73 3 9 1 3 9
19	2144	Barjoo, pergunnah Chainpore.	764 12 2	.....	12a.	Mahabir Prasad and others.	573-10-1-10½	.....	10 10 11
20	2163	Baghi, pergunnah Chainpore.	859 11 9	.....	7a. 6p.	Ram Dat Rai and others.	403 0 2½	.....	40 15 0½
21	2165	Bandipore, pergunnah Chainpore.	933 5 4	Whole ...	.....	Baijnath Sahai ...	.....	0 7 8	.....
22	2173	Bahiree Kalan ...	506 10	.....	6a.	Naipal Singh and others.	190 12 9½	.....	25 5 0½
23	2188	Bairi Raghoonath, pergunnah Chainpore.	1,325 13 10	Whole ...	.....	Suraj Narayan Singh and others.	.....	667 6 3	.....
24	2250	Bharkhar, pergunnah Chainpore.	722 6 5	.....	13a. 8p. 11k. 8m. 9d	Dhan Coomar Chund and others.	619 2 4	.....	42 3 4
25	2317	Chata, pergunnah Chainpore.	709 5 4	Whole.	.....	Mussamut Husseni Bibi and others.	.....	124 12 5	.....
26	2332	Darwan Moali, pergunnah Chainpore.	1,066 10 8	.....	4a.	Girdhari Rai and others.	266 10 8	.....	16 0 5½
					3a. 2½p.	Sivabaren Rai and others.	211 1 9½	.....	3 11 3½
27	2337	Dumduma, pergunnah Chainpore.	936 0 5	Whole.	.....	Samrath Rai and others.	.....	5 5 5	.....
28	2356	Damdwa	804 10 9½	.....	8a.	Girdhari Singh and others.	402 5 4½	.....	83 3 6½
					5a. 6p.	Parbhoo Singh and others.	268 3 6½	.....	72 11 4½

1	2	3	4	5	6	7	8	9	10
Serial No.	Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
							Rs. A. P.	Rs. A. P.	Rs. A. P.
29	2357	Daudkheli Mobarakpore, pergunnah Chainpore.	739 2 1	Whole.	.....	Mohip Narayen Singh and others.	.....	46 10 6	.....
30	2364	Dohrak, pergunnah Chainpore.	1,068 5 3	Do. ...		Baijnath Sahai ...	.....	0 0 2	.....
31	2413	Goi, pergunnah Chainpore.	1,414 0 0	.....	A. P. K. M. D. Lanka ... ... 2 8 0 0 0 Li ... . 2 8 0 0 0 Lanka ... . 2 8 0 0 0 Li ... . 2 8 0 0 0 Goi ... ... 2 8 5 18 0 Lanka ... ... 2 8 5 18 0 Do. ... . 10 7 14 2 0 Goi ... . 13 3 0 14 2 Li .. . 5 4 0 0 0	Ram Saroop Singh. Ram Sabhi Singh and others. Mussamut Lakhpati Koer. Aher Singh and others.	98 13 2 130 3 2 143 2 3 874 2 9	....	66 3 3 8 8 7 14 3 876 11 8
32	2519	Hamirpore, pergunnah Chainpore.	608 0 0	Whole	.. ...	Radha Mohan Prasad	.....	37 14 11	.....
33	2542	Indila, pergunnah Chainpore.	611 3 2	Do. ..	.....	Herkhoo Singh and others.	.....	79 2 7	.....
34	2618	Karji, pergunnah Chainpore.	1,122 2 2	.....	Karji 1 6 0 0 0 Kargaon ... 1 6 0 0 0 Babhnnon ... 1 6 0 0 0 Dubri ... 1 6 0 0 0 Karji ... 6 0 0 0 0 Kargaon ... 6 0 0 0 0 Babhniaon ... 6 0 0 0 0 Dubri ... 6 0 0 0 0 Numpura ... 12 5 6 13 5	Thakoor Dyal Singh and others. Mussamut Janki Koer and others. Zalim Singh and others.	132 4 3½ 793 9 7½ 40 12 5½	....	8 0 0 43 9 7 16 2 8½
35	2632	Kaliyanpore, pergunnah Chainpore.	533 5 4	Whole.	.....	Deo Narayen Singh and others.	.....	154 8 9	.....
36	2647	Katas, pergunnah Chainpore.	713 9 7	.....	13a. 4p.	Doman Singh and others.	594 10 7½	.....	240 10 7
37	2761	Majhaure, pergunnah Chainpore.	1,066 10 8	Whole.	.....	Baijnath Sahai ...	.....	0 1 4	.....
38	2774	Musaudher, pergunnah Chainpore.	680 4 4	Do. ...	.....	Bal Kishoon Sahai and others.	.....	142 8 7	.....
39	2878	Nawajhouti ..	814 14 11	Do. ...	...	Gopal Sarun Singh and others.	.....	308 0 2	.....
40	2944	Pariari, pergunnah Champore.	1,527 7 6	Do. ...	.....	Radha Mohan Prasad Pande and others.	.....	94 12 6	.....
41	3051	Sitirampore *alias* Sasa.	1,441 1 1	Do. ...	.....	Rajnath Sahai ...	.....	0 3 4	.....
42	3074	Soodhi, pergunnah Chainpore.	1,036 4 3	.....	Baroona ... ... 16 0 0 0 0 Wajhgoan ... 16 0 0 0 0 Jigna ... ... 16 0 0 0 0 Madanpoora . 16 0 0 0 0	Lala Seanund and others.	1,008 6 5	.....	25 6 10
43	3102	Shiopore Khal, pergunnah Champore.	967 7 6	.....	2p.	Tilakdhari Lal ...	10 1 3	.....	2 14 6
44	3178	Tari, pergunnah Chainpore.	869 14 3	... ..	Tari 4 0 0 0 0 Patti Kasir . 4 0 0 0 0 Jaddpore ... 4 0 0 0 0 Tari ... ... 9 4 0 0 0 Jadu Kunt . 9 4 0 0 0 Patti Kasir ... 9 4 0 0 0 Jadupore ... 5 4 0 0 0 Sonbersa ... 5 4 0 0 0 Basantpore ... 5 4 0 0 0 Bhugwanpore ... 5 4 0 0 0 Baradihri ... 16 0 0 0 0 Kekarha ... 16 0 0 0 0 Salondha ... 16 0 0 0 0 Ghusna ... 16 0 0 6 0	Debi Dyal Singh ... Gopal Sarun Singh and others.	124 12 5 300 7 0½	....	2 9 3 33 10 5½
45	13634	Kushi Sadhwa, pergunnah Dinara.	1,000 0 0	.....	Kushi ... ... 8 10 13 6 10 Rehi ... ... 8 10 13 6 10 Dasraon 5 4 0 0 0	Ram Sarun Lall and others.	161 4 3½	.....	12 12 4½
46	3639	Khedaoi, pergunnah Dinara.	986 10 8	.....	Khadaon Khurd 11 2 8 0 0 Khadaon Kalan 11 2 8 0 0 Dhanchoos ... 11 2 8 0 0 Bhanjandihra ... 11 2 8 0 0	Bajhoobir Sarun Thakoor and others.	690 10 4	.....	20 3 4
47	3645	Patti Kamiari, pergunnah Dinara.	1,025 1 1	Whole.	.....	Sona Koer and others.	.....	7 0 5	.....
48	3703	Baroohi, pergunnah Nonore.	2,813 0 0	Do. ...	.....	Madho Pande and others.	.....	4 5 9	.....
49	3767	Herapore Lasadi, pergunnah Nonore.	2,212 0 0	.....	Lasadi ... ... 16 0 0 0 0 Hirapore Dhamaria. 8 0 0 0 0	Ram Sarun Singh and others.	2,085 8 0	.....	8 3 6
50	3782	Koulo Dehri, pergunnah Nonore.	752 9 8	Whole.	.....	Lachmi Narayen and others.	.....	104 4 8	.....
51	3843	Mirzapore Atpa ...	615 0 0	..... .	8a.	Ditto ...	322 8 0	.....	37 0 0
52	4102	Sandeo, pergunnah Pawar.	1,066 10 8	Whole ...	.....	Bisumbher Singh and others.	.....	9 12 3	.....
53	4292	Doman Dehri, pergunnah Piro.	666 10 8	Do. ...	.....	Budhan Singh and others.	.....	102 8 11	.....
54	4294	Damarua, pergunnah Piro.	900 0 0	Do. ...	.....	Aga Sultan Tafazal Hossain.	.....	112 0 0	.....
55	4509	Makundpore Jamsoodi.	500 0 0	Do. ...	.....	Babnan Ojha and others.	.....	4 7 8	.....
56	4667	Sonbersa, pergunnah Piro.	520 0 0	.....	1p.	Mussamut Moorta Koer.	2 11 4	.....	6 15 2
57	5108	Chandonpore, pergunnah Sasseram.	586 10 8	.....	14a. 4p. 10k.	Makund Pande and others.	527 1 4	.....	8 11 0
58	5633	Mahuari Baraicha.	658 2 2	.....	Mahuari ... 16 0 0 0 0 Parasia .. 16 0 0 0 0	Mussamut Bibi Fatma and others.	331 11 0½	.....	41 15 3½
59	5933	Suara Sakhan, pergunnah Sasseram.	718 8 5	.....	8a. 9p. 3k. 16m. 4½d.	Manoo Rai and others.	396 7 0	.....	23 0 10
60	6182	Noorpore Majhauli, pergunnah Arrah.	533 7 5½	Whole.	.. ...	Chandhry Abhiram Singh and others.	.....	0 2 1	.....

Shahabad Collectorate, Arrah, the 22nd December 1889

E. F. GROWSE, Offg. Collector.

NOTICE is hereby given that or the undermentioned plots of the Nizamut lakhraj State lands situated in the district of Burdwan, Nos. 72 to 75 will be put up to sale on the spot by the Deputy Collector at the Burdwan Collectorate, and No. 89 by the Sub-divisional Officer of Culna, on Monday, the 27th January 1890, corresponding to 15th Magh 1296 B. S.

The purchasers will be subject to the following conditions of sale:—

Conditions of Sale.

1. The lands to be sold revenue-free to the highest bidder above the upset price, which will be fixed for each plot at the time of sale.

2. The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and the purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3. If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid down at once.

4. If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the lands to be again put up to sale at the risk of the defaulting purchasers, after issue of advertisement, as in the case of original sale.

5. The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mouzah.	Pergunnah.	Approximate area in bighas.	Boundaries.	Remarks.
				B. K. CH.		
73	Jaigirdagra	Ukhari ...	Shamurshahi.	7 5 7	East of the Bhagar jote lands of Saroo Patan; south and west of jote lands of Budhu Mirdha; south of jote lands of Rassul Mirdha; east of a public road and of jote lands of Mohur Mirdha and of the Bhagar jote lands of Saroo Patan.	*Plot I.*—Jote of Sakir Mandal and of Nihar Bibi, wife of Edu Mandal of Narigram.
73	Ditto ...	Ditto ...	Ditto ...	10 9 15	North of jote lands of Pitambar Charal, Kedar Chowdhury, Shek Karoo, and Shek Tooraj; west of jote lands of Hara Mirdha, Dohar Mirdha, Kedar Chowdhury and Manik Mirdha; south of jote lands of Sova Mirdha, Haroo Mirdha, Sakauddin Mirdha, Jamuna Mirdha, Tarku Shek; east of jote lands of Ulfoo Mandal, Tarku Shek, Karoo Shek, and of Bhagar jote lands of Saroo Shek; south and east of jote lands of Waz Shek.	*Plot II.*—Do do.
74	Ditto ...	Ditto ..	Ditto ...	2 13 11	North of jote lands of Manik Mirdha; east of jote lands of Sona Mirdha and Dolal Khan; south of jote lands of Ahvarey Mirdha; west of jote lands of Adu Chowdhury.	*Plot III.*—Jote of Taki Mandal of Narigram.
75	Ditto ...	Ditto ...	Ditto ...	4 13 14	North of the chowkidari chakran lands of Tincuri Hari; east of jote lands of Sakauddin Mirdha, Hara Mirdha, Sonaulla Mirdha, and Ronea Lal Charal; south of jote lands of Sonaullah Mirdha; west of the chowkidari chakran lands of Gourub Khan, Patan and Ramdhan Bagdi.	*Plot IV.*—Jote of Sakir Mandal of Narigram.
89	Dakadda	Shyambati	Karajpur	5 15 12	South of the jote lands of Deb Nath Pal and Kunja Mandal; east of the lakhraj jote lands of Deb Nath Pal; north of the lakhraj jote lands and of the barren land of Deb Nath Pal; west of a public road.	Jote of Sita Nath Pal and Deb Nath Pal of Shyambati.

Burdwan Collectorate, the December 1889. KEDAR NATH DUTT, for Officiating Collector.

NOTICE is hereby given, under sections 6, 7, and 13 of Act XI of 1859, that the undermentioned estates or shares of estates in the district of Pubna will be put up for sale at the Collector's Office of that district on the 10th January 1890, corresponding with 27th Poos 1296 B. E., for arrears of revenue and other demands for the kist of September 1889, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

Dowji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, the specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.	Remarks.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.	
176	Taraf Shampur, pergunnah Amirabad.	3,156, 9 0 Police— 5 1 0	.....	Ijmali share.	Kashi Nath Das, Kunsan Chandra Ghosh and others.	1,935 5 0 Police— 3 1 0	.....	8 7 0	The following shares which are not in arrears are exempted from sale— Revenue. Police. Rs. A. P. Rs. A. P. Ataronessa, wife of Moulvi Sayidud-din Ahmed ... 450 15 0 0 12 6 Gurucharan Dutta and others ... 770 5 0 1 4
227	Aliarpur, pergunnah Katar Mohalla.	3,139 0 0 Police— 14 1 0	The entire mehal is to be sold.	.....	Javat Chandra Bhaduri and others.	.....	2 5 0	.....	
330	Brandoho Bohoti, pergunnah Borobasar.	854 6 0	.....	Ijmali share.	Amirannessa Khatun, mother and guardian of Moulvi Abdul Hai and others.	701 3 0	.....	43 3 6	The following shares which are not in arrears are exempted from sale— Rs. A. P. Jauhobi Choudhurani .. 42 7 0 Mohima Chandra Joardar 27 11 6 Shares in arrears for which separate notices have been issued in consequence of their sudder jumma being less than Rs. 500. Revenue. Rs. A. P. Ekabbar Fakir ... ... 27 11 6 Rohimuddin Munshi and others 55 6 6

Pubna Collectorate, the 18th December 1889. W. FIDDIAN, Collector.

Statement of Government Promissory Notes enfaced for payment of Interest in London, under deduction of amount re-transferred to India, and outstanding in the Books of the Bank of Bengal on the 31st December 1889.

PARTICULARS.	3½ per cent. transfer loan of 1853-54.	4 PER CENT. LOANS							4½ PER CENT. LOANS				Transfer loan of 1879, seven shillings per cent. portion.	5 per cent. loan of 1856-57.	GRAND TOTAL.
		Of 1832-33.	Of 1835-36.	Of 1842-43.	Of 1854-55.	Transfer of 1865.	Reduced 4 per cent. loan of 1879.	Total.	Of 1870.	Of 1878.	Transfer loan of 1879 4½ per cent. portion.	Total.			
Balance of 15th December 1889 ...	54,700	11,29,387	25,43,800	2,47,61,100	1,02,89,200	4,12,74,100	2,06,24,400	10,06,21,987	49,700	70,97,500	11,06,91,600	11,78,38,800	1,33,800	32,200	21,86,81,487
ADD—															
Amount enfaced at Madras between 16th and 31st December 1889	.....	.....	.....	500	.....	72,000	.....	72,500	.....	.....	41,000	41,000	.....	.....	1,13,500
Amount enfaced at Bombay between 16th and 31st December 1889	.....	.....	.....	1,59,000	1,81,000	1,15,000	.....	4,55,000	.....	31,000	1,13,000	1,44,000	.....	.....	5,99,000
Amount enfaced at Calcutta between 16th and 31st December 1889	.....	.....	.....	13,500	7,500	64,000	.....	85,000	.....	18,500	69,000	87,500	.....	.....	1,72,500
DEDUCT—	54,700	11,29,387	25,43,800	2,49,34,100	1,04,77,700	4,15,25,100	2,06,24,400	10,12,34,487	49,700	71,47,000	11,09,14,600	11,81,11,300	1,33,800	32,200	21,95,66,487
Amount written off in the London registers	.....	.....	.....	40,500	75,700	9,13,400	5,500	10,35,100	.....	1,500	98,000	99,500	.....	.....	11,34,600
Balance on 31st December 1889 ...	54,700	11,29,387	25,43,800	2,48,93,600	1,04,02,000	4,06,11,700	2,06,18,900	10,01,99,387	49,700	71,45,500	11,08,16,600	11,80,11,800	1,33,800	32,200	21,84,81,887

NOTE.—From 9th June 1867 to 31st Oct. 1889—Enfaced from India 6,141 lakhs; re-transferred from London 5,309 lakhs.

"	1st Nov. 1889	"	15th Nov.	"	"	"	"	4	"	"	"	4 "
"	16th "	"	30th "	"	"	"	"	18	"	"	"	12 "
"	1st Dec. "	"	15th Dec.	"	"	"	"	12	"	"	"	22 "
"	16th "	"	31st "	"	"	"	"	9	"	"	"	11 "
								6,184				5,358
								5,358				

Balance against India ... 826 lakhs.

PUBLIC DEBT OFFICE, BANK OF BENGAL,
Calcutta, the 2nd January 1890.

(3420—1)

D. CRUICKSHANK,
Secretary and Treasurer.

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1889.			
Dec. 23	2 Bundles sheet iron, J in a diamond	Order ...	S. S. "Governor."
,, 23	10 Packages, no mark	Ditto ...	Ditto.
,, 23	2 Bundles hoop iron, 11 white	Ditto ...	Ditto.
,, 23	5 Bars round iron, C P	Ditto ...	Ditto.
,, 23	1 Case, 610 in a diamond, A B & Co. outside ...	Ditto ...	Ditto.
,, 23	1 Case, A B & Co. in a triangle	Ditto ...	Ditto.
,, 23	1 Crate & Co. in a diamond, J S top	Ditto ...	Ditto.
,, 23	1 Bale, 494 in a triangle, C H L & Co. top ...	Ditto ...	Ditto.
,, 23	2 Pieces lead, Esmeralda or no mark	Ditto ...	Ditto.
23	2 Cases, G D M in a block, B S top	Ditto ...	Ditto.
,, 23	5 Bales, H & Co. in a diamond, M B below ...	Ditto ...	Ditto.
,, 23	1 Truss, R in a diamond, C S outside	Ditto ..	Ditto.
,, 23	2 Cases, S by 229 in a diamond, J below ...	Ditto ...	Ditto.
,, 23	160 Kegs, W L	Ditto ...	Ditto.
,, 23	1 Case, 547 in a diamond, W below	Ditto ...	Ditto.
,, 23	28 Cases, J M	Ditto ...	Ditto.
,, 20	40 Cases, G A & Co. in a diamond, N C T outside ...	Ditto ...	S. S. "Nepaul."
,, 21	6 Packages, C in a triangle, G B top	Ditto ...	Ditto.
,, 28	5 Cases, Behors	Ditto ...	Ditto.
,, 28	1 Case, A M D in a heart, H S K & Co. by Madras below.	Ditto ...	Ditto.
,, 28	1 Case, B B & Co. in a diamond	Ditto ...	Ditto.
,, 28	4 Packages, 8016 in a block, B L B outside ...	Ditto ...	Ditto.
,, 28	1 Case, B & Co.	Ditto ...	Ditto.
,, 28	5 Cases, 3578 in a block	Ditto ...	Ditto.
,, 28	1 Case, 1138 in a diamond, B K L outside ...	Ditto ...	Ditto.
,, 28	1 Case, 26 in a diamond, B K below	Ditto ...	Ditto.
,, 28	1 Case, B B in a diamond	Ditto ...	Ditto.
,, 28	16 Cases, C R	Ditto ...	Ditto.
,, 28	1 Case, C B & Co. by S in a diamond	Ditto ...	Ditto.
,, 28	1 Case, D S & A S	Ditto ...	Ditto.
,, 28	1 Case, Mr. D'Silva	Addressed ...	Ditto.
,, 28	1 Truss, D H in a diamond	Order ...	Ditto.
,, 28	5 Cases, D by 9 in a diamond	Ditto ...	Ditto.
,, 28	6 Packages, E S	Ditto ...	Ditto.
,, 28	1 Case, E B in a diamond, A L below	Ditto ...	Ditto.
,, 28	2 Cases, C H Edgell, Esq.	Addressed ...	Ditto.
,, 28	1 Case, E F in a diamond	Order ...	Ditto.
,, 28	1 Case, F E & K E	Ditto ...	Ditto.
,, 28	2 Cases, F F L by Madras	Ditto ...	Ditto.
,, 28	1 Case, A H Fitcher, Esq., care of Bird & Co. ...	Addressed ...	Ditto.
,, 28	1 Case, F A P	Order ...	Ditto.
,, 28	5 Cases, G 393 in diamond, W M & Co. below ...	Ditto ...	Ditto.
,, 28	1 Case, G S M	Ditto ...	Ditto.
,, 28	1 Case, 972 in a diamond, G S below	Ditto ...	Ditto.
,, 28	1 Case, 951 in a diamond, G S below	Ditto ...	Ditto.
,, 28	2 Cases, H A R & K E	Bux, Ellahie ...	Ditto.
,, 28	1 Case, H M M by O B	Order ...	Ditto.
,, 28	15 Cases, J O & Sons	Ditto ...	Ditto.
,, 28	2 Cases, 2933 in a triangle, J B & Co. top ...	Nash and Andrew.	Ditto.
,, 28	1 Case, J P J	Order ...	Ditto.
,, 28	1 Case, K in a diamond, T C top, W M & Co. below	Ditto ...	Ditto.
,, 28	2 Cases, 600 in a diamond, L S & Co. outside ...	Ditto ...	Ditto.
,, 28	1 Case, L J K in a diamond, R below	Ditto ...	Ditto.
,, 28	1 Case, Miss Linsey, Bhowanipur	Addressed ...	Ditto.
,, 28	2 Cases, L O C K E	Order ...	Ditto.
,, 28	1 Case, L M S in a diamond	Ditto ...	Ditto.
,, 28	1 Case, Longview	Ditto ...	Ditto.
,, 28	2 Cases, G. E Manisty, Esq	Addressed ...	Ditto.
,, 28	1 Trunk, M W. Apperley, Esq.	Ditto ...	Ditto,
,, 28	1 Case, M in a diamond	Order ...	Ditto.
,, 28	1 Case, E. H. Man, Esq.	Addressed ...	Ditto.
,, 28	1 Case, M S in a block within a triangle ...	Order ...	Ditto.
,, 28	2 Cases, M J A N in a diamond	Ditto ...	Ditto.
,, 28	1 Case, M A in a diamond, D L top	Ditto ...	Ditto.
,, 28	5 Cases, 157 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,, 28	22 Packages, no mark	Ditto ...	Ditto.
,, 28	75 Cases, 291 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,, 28	1 Case, no mark or O S & Co.	Ditto ...	Ditto.
,, 28	10 Cases, 295 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,, 28	10 Cases, 328 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,, 28	1 Case, N C J in a diamond, G A & Co. outside ...	Ditto ...	Ditto.

Date of removal to Import Warehouse.		Number, mark and description.	Consignees.	hips.
1889.				
Dec.	28	1 Case, O M by 14 L Madras	Order ...	S. S. "Nepaul."
,,	28	1 Case, R B & M I	Ditto ...	Ditto.
,,	28	12 Cases, R B M I in a diamond, G A & Co. outside	Ditto ...	Ditto.
,,	28	32 Cases, 3000 in a triangle, S D & C below ...	Ditto ...	Ditto.
,,	28	1 Case to the Military Secretary to the Viceroy ...	Addressed ...	Ditto.
,,	28	4 Cases, S T & Co.	Order ...	Ditto.
,,	28	2 Bales, S S by 202 in a block	Ditto ...	Ditto.
,,	28	1 Case, S S by 267 in a block	Ditto ...	Ditto.
,,	28	2 Cases, 926 in a diamond, W W & Co. outside ...	Ditto ...	Ditto.
,,	28	1 Case, 539 in a diamond, W below	Ditto ...	Ditto.
,,	28	1 Case, 741 in a diamond, W N & Co. outside ...	Ditto ...	Ditto.
,,	28	1 Case, W L in a diamond, C below	Ditto ...	Ditto.
,,	28	2 Cases, 586 in a diamond, W below	Ditto ...	Ditto.
,,	28	1 Case, 565 in a diamond, W below	Ditto ...	Ditto.
,,	28	3 Packages, 5303 by Y M in a block	Ditto ...	Ditto.
,,	28	1 Parcel, Mr. R. Kennedy	Addressed ...	Ditto.
,,	28	1 Parcel, Revd. J. W. Thomas	Ditto ...	Ditto.
,,	28	1 Parcel, Messrs. J. Skinner & Co.	Ditto ...	Ditto.
,,	27	1 Case, E L M	Order ...	S. S. "Chyebassa."
,,	27	1 Case, 7474 in a diamond, D U F F outside ...	Ditto ...	Ditto.
,,	27	40 Cases, 229 in a diamond, A B & Co. outside ...	Ditto ...	Ditto.
,,	27	1 Case, A by comp in a triangle	Ditto ...	Ditto.
,,	27	1 Case, A & Co. in a triangle, C & B below ...	Ditto ...	Ditto.
,,	27	31 Cases, B L & Co.	Ditto ...	Ditto.
,,	27	1 Case, 9798 in a diamond, B R & B outside ...	Ditto ...	Ditto.
,,	27	4 Cases, B in a diamond	Ditto ...	Ditto.
,,	27	1 Case, Mrs. Broadhead	Addressed ...	Ditto.
,,	27	1 Case, 356 by 264 in a diamond, C B & Co. outside	Order ...	Ditto.
,,	27	3 Cases, 1402 in a diamond, Port Blair below ...	Ditto ...	Ditto.
,,	27	2 Cases, G F K & Co.	Ditto ...	Ditto.
,,	27	3 Cases, G F K & Co. in a triangle, C & B below ...	Ditto ...	Ditto.
,,	27	3 Cases, G L & Sons in a diamond, G A & Co. outside	Ditto ...	Ditto.
,,	27	2 Cases, 580 in a block, H C B & Co. below ...	Ditto ...	Ditto.
,,	27	1 Case, H M H in a diamond, H S K & Co. below	Ditto ...	Ditto.
,,	27	4 Packages, 340 in a diamond, J B G below ..	Ditto ...	Ditto.
,,	27	1 Bundle case, J D & Co	Ditto ...	Ditto.
,,	27	6 Cases, 220 in a diamond, A B & Co. outside ...	Ditto ...	Ditto.
,,	30	2 Cases, L O C K E	Ditto ...	Ditto.
,,	30	6 Cases, M D by Scottpur, Blackburn, Patterbund Dhubrudha.	Ditto ...	Ditto.
,,	30	1 Case, M & Co in a diamond, D below ...	Ditto ...	Ditto.
,,	30	3 Packages, N K in a diamond	Ditto ...	Ditto.
,,	30	33 Packages, no mark	Ditto ...	Ditto.
,,	30	1 Case, 185 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,,	30	1 Crate, P in a triangle	Ditto ...	Ditto.
,,	30	76 Packages, P & Co.	Ditto ...	Ditto.
,,	30	66 Cases, R B & M I in a triangle, C & B below ...	Ditto ...	Ditto.
,,	30	3 Cases, Sir Fred Roberts, care of Major Miley ...	Addressed ...	Ditto.
,,	30	4 Cases, R J D in a diamond, S J S C outside ...	Order ...	Ditto.
,,	30	1 Case, S by C S in a diamond, S J S C outside ...	Ditto ...	Ditto.
,,	30	1 Case, T B	Ditto ...	Ditto.
,,	30	8 Cases, T in a diamond, G below	Ditto ...	Ditto.
,,	30	1 Case, 1367 in a block within a triangle ..	Ditto ...	Ditto.
,,	30	1 Case, 741 in a diamond, T top	Ditto ...	Ditto.
,,	30	2 Cases, V & Co.	Ditto ...	Ditto.
,,	30	1 Case, Watson & Summers	Ditto ...	Ditto.
,,	30	2 Packages, 741 in a diamond, W N & Co. outside	Ditto ...	Ditto.
,,	31	1 Bale, W H by Tarrapur	Ditto ...	Ditto.
,,	31	7 Cases, 273 in a diamond, W T H B below ...	Ditto ...	Ditto.
,,	31	1 Case, 487 in a diamond, W below	Ditto ...	Ditto.
,,	31	2 Cases, 548 in a diamond, W below	Ditto ...	Ditto.
,,	31	3 Cases, C P & Co. in a diamond	Ditto ...	Ditto.
,,	31	1 Case, Mr. J. W. Dougherty	Addressed ...	Ditto.
,,	31	7 Casks, Messrs. Kilton & Co.	Ditto ...	Ditto.
,,	31	1 Case, Messrs. Lyall, Marshall & Co.	Ditto ...	Ditto.
,,	31	1 Case, 938 in a diamond, O below	Order ...	Ditto.
,,	31	1 Case, G & Co. in a triangle	Ditto ...	Ditto.
,,	31	1 Case, P L & Co. in a diamond, C C Colombo below.	Ditto ...	Ditto.
,,	31	1 Case, George Reid, Esqr.	Addressed ...	Ditto.
,,	31	4 Cases, T in a diamond, H below	Order ...	Ditto.

The 6th January 1890. (3424—1) G. H. SIMMONS, Vice-Chairman.

Statement of the Affairs of the Bank of Bengal for the week ending 30th December 1889.

LIABILITIES.

		Rs.	A.	P.
Capital paid up		2,00,00,000	0	0
Reserve Fund		58,00,000	0	0
Public Deposits at Head Office	Rs. 93,39,214 8 11			
Ditto ditto at Branches	,, 67,45,972 5 4	1 60,85,186	14	3
Other Deposits at Head Office and Branches		3,34,28,778	12	11
Bank Post Bills, &c.		2,03,786	11	4
Sundries		15,20,692	6	9
Rupees		7,70,98,444	13	3

ASSETS.

	Rs.	A.	P.
Government Securities	19,48,204	0	0
Other authorized Investments	79,20,009	12	0
Loans on Government and other authorized Securities	1,17,06,394	15	10
Accounts of credit on ditto ditto	1,01,14,640	3	4
Bills discounted and purchased	2,32,65,197	2	2
Balances with other Banks	13,58,680	9	11
Bullion	4,24,300	14	11
Dead Stock	12,41,537	2	8
Stamps	11,087	1	0
Sundries	99,367	4	5
	5,80,89,509	2	3
Cash and Currency Notes at Head Office ... Rs. 90,57,725 14 9			
Cash and Currency Notes at Branches ... ,, 99,51,209 12 3	1,90,08,935	11	0
Rupees	7,70,98,444	13	3

BANK OF BENGAL,
Calcutta, 2nd January 1890.

R. L. BIRD, Chief Acctt.
Rate for Demand Loans 6 per cent.
Percentage 37·05.

By order of the Directors,
W. D. CRUICKSHANK,
Secy. and Treasurer.
(3416 1)

IT is hereby notified that the following properties belonging to the judgment-debtors (Baboo Radhe Kishun Lall Sand, Mussamut Jiwana *Bahoo*, and Mahboob Lall, major son, and Khub Lall, Ajoob Lall, and Pancham Lall *alias* Tooni Baboo, minor sons, and Massamut Lali Bibi, minor daughter of Baboo Balkrishn Lall Sand, deceased, under the guardianship of aforesaid Mahboob Lall) will be sold by public auction in the Court of the District Judge of Tirhoot, at 12 o'clock on the 15th day of January 189-, in the execution of decree No. 181 of 1888, *in re* Balkrishun Dass and others, decree-holders, *versus* Radhe Kishun Lall Sand and others, judgment-debtors, for realization of decree debts, Rs. 1,14,912-7.

Serial No.	Names of villages, with pergunnah, thana and district.	Area.	Government revenue.	Extent of share to be sold.	Estimated value.
		A. R. P.	Rs. A. P.	A. G. C.	Rs. A. P.
1	Mouzah Sultanpur asli and mouzahs Nainpoorba, Sharifabad, and Gonal Bindrahan dar dakhli with known and unknown *talas*, pergunnah Hajipur, bearing towji No. 1226 old and No. 3590 recent, within the police-station Mahnar, district Mozufferpur.	1,003 0 25	1,075 3 2	8 0 0	9,100 0 0
2	Mouzah Aeaz Chak, appertaining to mehal Sultanpur, pergunnah Hajipur, bearing towji No. 1226 old and No. 3590 recent, within the police-station Mahnar, district Mozufferpur.	646 3 30	1,075 3 2	8 0 0	5,900 0 0

Mozufferpore, the 4th January 1890. (3422—1) UPENDRA CHANDRA MULLICK, Subordinate Judge.

IT is hereby notified that the following properties belonging to the judgment-debtor (Bhagwat Pershad Singh) will be sold by public auction by the Nazir of the District Judge of Tirhoot on the 15th day of January 1890, in the Court-house, in execution of a decree held by Raghoobardyal Choudhry for the realization of Rs. 2,55-10-3

Serial number.	Names of the villages with pergunnahs.	Area.	Government revenue.	Extent of share to be sold.	Estimated value as stated by decree-holder.
		A. R. P.	Rs. A. P.	A. G. C. K. D.	Rs.
1	Taluka Mohunpore asli with mouzah Rutunpore dakhli, pergunnah Balacach, bearing former towji No. 53 and present towji No. 402, within the jurisdiction of police-station, sub-registry and district Durbhunga.	1,507 0 5	3,244 9 3	1 6 2 2 0	1,000
2	Mouzah Baikoonthpore, appertaining to Taluka Mohunpore, pergunnah Balacath, bearing former towji No. 53 and present town No. 402, within the jurisdiction of police-station, sub-registry and district Durbhunga.	948 2 3	3,244 9 3	1 6 2 2 0	100

(3412—1) GIRIS CHUNDER CHOUDHRY, Subordinate Judge, 1st Court.

Notices of deaths sent to the Administrator-General of Bengal under Section 64 of Act II of 1874.

Name of deceased.	Place of death.	Date of death.	By whom and when death reported.	REMARKS.
Alfred William Sylvestor...	Phalera, Rajpootana ...	29th July 1889 ..	Resident at Jeypore, on the 14th October 1889.	Intestate. Assets about Rs. 981-8-11. No application for administration.
Stephen Byrne	Howrah	7th ,, ,, ..	District Judge of Hooghly, on the 12th December 1889.	Intestate. Assets about Rs. 10-9 The deceased was a sailor. No application for administration.
William Alexander Sanderson.	Quetta	10th Oct. ,, ...	Political Agent, Quetta and Pishin, on the 7th December 1889.	Will. Assets about Rs. 850. Deceased was a driver on the North-Western Railway. Mr. Thomas Russ Executor of the Will, has applied f probate.
M. M. F. Williams ...	Futtehpur	24th Nov. ,, ...	Judge of Cawnpore, on the 16th December 1889.	Will. Mr. A. Sell, C.S., Distri Judge of Meerut, Executor. T Administrator-General of Beng will probably administer.
D. Jackson	Mahkuti Factory, Assam	10th ,, ,, ...	Deputy Commissioner of Sibsagor, on the 7th December 1889.	Informal Will. Assets above Rs. 1,0 Deceased was Manager of the Ma kuti Factory of the Assam Tea Co pany. No application for admin tration.
C. R. Gordon	Allahabad	2nd ,, ,, ...	Judge of Allahabad, on the 18th December 1889.	Intestate. Assets about Rs. 247-6 No application for administratio Deceased has a brother, Mr. Gordon, Poona.
Mollison	Serajgunge	15th ,, ,, ...	District Judge of Pubna and Bogra, on the 17th December 1889.	Intestate. Assets about Rs. 3,681. Relatives in Scotland. No applicatio for administration.
J. Butcher	Chybasa	23rd ,, ,, ...	Deputy Commissioner of Singbhoom, on the 21st December 1889.	Will. Assets about Rs. 837. Execut Mr. Tuther. No application for pr bate.

1, COUNCIL HOUSE STREET,
Calcutta, the 6th January 1890.

L. P. D. BROUGHTON,
Administrator-General, Bengal.

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sál beams and scantlings supplied from this depôt will be as follows:—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 „ „ 2-12 „
23 „ „ 2-14 „
24 „ „ 3 „

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 „ 2-4 „
Under 7 feet „ 2 „

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates:—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates:—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

Notice.

THE public are hereby informed that a Fair will be held at Falakata, in the sub-division of Alipur, Western Dooars, district Julpigoree. The Fair will commence on 23rd January 1890 (A.D.) corresponding with 11th Magh 1296 (B.S.), and will continue up to 6th February 1890. Tradesmen, dealers, and others may buy and sell there during this time. Blankets, cloth of sorts, ivory, wool, rhinoseri horns, musk, honey, wax, lac, ponies, and various other articles from Bhootan and Thibet, as also rice, paddy, jute, cotton, tobacco, mustard seed, wheat and other crops, which are grown in the Western Dooars, will be available at the Fair. Falakata is on the left or east bank of the Mujnai river, and within easy reach of Julpigoree and Cooch Behar. A good cart and driving road exists all the way.

Tradesmen and others who may attend the Fair will receive every kindness and assistance from the local officers.

DONALD SUNDER, Sub-divisional Officer, Alipur Dooars.

Alipur, the 10th December 1889.

Notification.

THE Zamindari Dák Tax in the district of the 24-Pergunnahs for the year 1890-91 is fixed at the rate of eight annas per cent. per annum on the sudder jumma of estates paying a revenue amounting to Rs. 50 and above

The amount due for each estate is payable in two instalments, the first being due on the 1st June 1890, and the 2nd on the 16th December 1890.

A. FORBES, Magistrate of 24-Pergunnahs.

Notice.

THE public are hereby informed that a Fair will be held at Santrabari, at the foot of the Buxa hills in the sub-division of Alipur, Western Dooars, district Julpigoree. The Fair will commence on 10th January 1890 (A.D.) corresponding with 29th Pous 1296 (B.S.), and will continue up to 20th January 1890. Tradesmen, dealers, and others may buy and sell there during this time. Blankets and cloth of sorts, yak tails, wool, ivory, rhinoseri horns, musk, honey, wax, lac, ponies, and various other articles from Bhootan and Thibet will be available at the Fair. Santrabari is within easy reach of Mogul Hât Railway station and Cooch Behar. A good cart and driving road exists all the way.

Tradesmen and others who may attend the Fair will receive every kindness and assistance from the local officers.

DONALD SUNDER, Sub-divisional Officer, Alipur Dooars.

Alipur, the 7th December 1889.

Notice.

I, GIRIJAMANI DEBYA of Saydabad, Hotarpara, in the town of Berhampore, district Moorshedabad, police-station Sujaganj, do hereby declare that I have appointed my dear Baboo Sita Kanta Mukharji, son of late Baboo Kamala Kanta Mookharji, my sole general agent and manager for all my properties in this and Dinagepore and other districts to the entire exclusion of all others, and I hereby declare that I shall not be responsible for the doings of any other person than those of Baboo Sita Kanta Mukharji.

SREEMATTY GIRIJAMANI DEBYA.
SITA KANTA MUKHARJI, Am-Mukhtar.
(3368—3) Zemindar.

Road Cess Notification.

DISTRICT BOGRA.

IT is hereby notified for general information that under section 46, Act III (B.C.) of 1885, and section 38, Act IX (B.C.) of 1880, the District Board of Bogra have, at an adjourned Special Meeting held on the 28th December 1889, determined that the road cess in the district, for the cess year 1890-91 (from 1st April 1890 to 31st March 1891), shall be levied at the maximum rate, viz. one-half anna on each rupee of the annual value and annual net profits as described in section 6, Act IX (B.C.) of 1880.

H. G. SHARP, Chairman, District Board of Bogra.
Bogra, the 30th December 1889.

Notice.

THE post of the Serishtadar of the Munsif's Court, Kulna, is vacant. Salary Rs. 40 rising to Rs. 60 by biennial increment of Rs. 2. Applications, with copies of testimonials, will be received up to 15th proximo.

R. F. RAMPINI, District Judge.

District Judge's Office, Burdwan, the 30th December 1889.

Notice.

WANTED an Overseer for the Dinagepore Municipality. Salary Rs. 45 and horse allowance Rs. 10 a month. Passed Overseers of the Public Works Department, with experience in municipal works, are only required to apply. Applications will be received by the undersigned up to 25th January 1890.

SITAKANT MOOKERJEE, Vice-Chairman.
Dinagepore, the 27th December 1889. (3406—3)

Notice.

WANTED a Civil Court Ameen for the district of Manbhoom on a salary of Rs. 50 per mensem.

Candidates must possess a thorough knowledge of English, Bengali, and Surveying, besides holding a diploma of having passed the junior grade Pleadership examination as required by the High Court's Circular No. 24 of November 1858.

Applications will be received up to the 10th proximo.

E. N. BAKER, Deputy Commissioner, Manbhoom.
Manbhoom, Deputy Commr.'s Office, the 23rd December 1889.

WANTED a Native Doctor, on Rs. 30 a month, for the Colgong Municipal Dispensary. Applications with copies of testimonials and diploma will be received by the undersigned up to 20th January 1890.

(3411—3) A. A. WACE, Magistrate.

Wanted

A DRAUGHTSMAN with a knowledge of surveying, who can plot from field books kept in English. Salary Rs. 40 to Rs. 60 according to qualifications. Applications in candidates' own handwriting, and copies of testimonials, to be submitted to—

Municipal Engineer, Patna.

(3419—2)

In the Court of the Subordinate Judge at Monghyr.

EXECUTION CASE No. 215 OF 1889.

Tarachand and others, decree-holders, *versus* Tokhan Singh and others, judgment-debtors.

THE following property of the judgment-debtors shall be sold at public auction by the Nazir of this Court on the 13th January 1890 at 12 noon :—

One anna right and interest of Ajodhya Prasad Singh, judgment-debtor, in mehal Juwas, pergunnah Salemabad, bearing towji No. 13 and sudder jumma of Rs. 613-14-0, thana Soorjgurrah, sub-registry Lakheeserai.

GRISH CHANDER CHATTERJEE, Subordinate Judge,

(3414—1) Monghyr.

Notice.

In the Court of the District Judge of Purneah.

EXECUTION CASE NO. 78 OF 1889.

Syud Mehdi Hossain and others of Rosulpur, pergunnah Badour, decree-holders, *versus* Syud Safdar Reza of Deodhi, Kishengunge, judgment-debtor.

TO be sold by the Nazir of the District Judge's Court, Purneah at 11 A.M. on 3rd February 1890, in the District Judge's Nazarat, the right, title, and interest of the abovenamed judgment-debtor in the property named below for realization of a mortgage decree amounting to Rs. 39,341-1-6 :—

One anna five gandas two kowrees and two krants share of pergunnah Surjapur, belonging to Syud Safdar Reza, judgment-debtor, bearing towji No. 7, and paying Government revenue Rs. 18,984-3-5½, sub-registry Kishengunge and Kaliagunge, in the district of Purneah; approximate value Rs. 30,000.

F. B. TAYLOR, District Judge.

Purneah, the 31st December 1889.

(3421—1).

Uncovenanted Service Family Pension Fund.

NOTICE.

THE Fifty-second Annual General Meeting of Subscribers of the above Institution will be held in the Town Hall, on Wednesday, the 29th January 1890, at 3 P.M., to receive the report of the Directors and to consider such matters as may then be submitted.

By order of the Directors,

W. H. RYLAND, Secretary.

Calcutta, the 31st December 1889. (3415—3)

CERTAIN personal property consisting of cloths, &c, belonging to late Mr. Forbes, are found intestate. Notice is hereby given inviting the persons claiming the property to take letter of administration and apply for the same to the undersigned.

GUNGA NAND MOOKHERJEA,

For Deputy Commissioner of Manbhoom.

Road-cess Notification.

DISTRICT BACKERGUNGE.

IT is hereby notified for general information that under section 46 of Act III (B.C.) of 1885, the District Board of Backergunge have, at a Special Meeting, held on the 21st December 1889, determined that the road-cess for the next cess year 1890-91, shall be levied at half of the maximum rate, *i.e.*, one pice a rupee on the annual value of land.

ROJONI KANTA DASS, Vice-Chairman.

Dinagepore District Board.

SIX PER CENT. LOAN.

THE Dinagepore District Board have resolved, with the permission of the Lieutenant-Governor of Bengal, to borrow Rs. 10,000 (out of two lakhs of rupees) during the current financial year (1889-90) for construction of permanent bridges in their district roads on security of the District Fund formed under Act III (B.C.) of 1885, detailed accounts of which for last two years were published in the *Calcutta Gazette*, Part IB, page 164, dated 7th August 1889.

2. Tenders for the whole or any part of the said amount of Rs. 10,000 will be received by the Vice-Chairman of the Board from this date to Friday, the 31st January 1890. Tenders must be in sums of Rs. 500) or multiples of Rs 500.

3. Each tender must be addressed in the form annexed herewith to the Vice-Chairman, and enclosed in a closed and sealed cover superscribed "Tender for Loan." If the tenderer is not resident in India, he must name an agent resident in India, to whom a letter of allotment may be issued if any part of the loan is allotted to such tenderer.

4. Each tender must be accompanied by deposit money, at a rate of 5 per cent. on the amount tendered, to be sent by postal money-order, and the money-order receipt must be filed with the tender. Deposits will, in the case of accepted tenders, be credited proportionally in part payment of the allotment certificates issued in respect of the tender. If any allotment certificate is not fully taken up, the deposit will be forfeited.

5. The rate at which a tender is made must not contain a fraction of an anna : if a rate containing a fraction of an anna is inserted in any tender, such fraction will be struck out, and the tender treated as if the rate did not contain such fraction of an anna.

6. The rate at which each tender is made must be specified in rupees, or rupees and annas. A tender in which no rate is thus specified, but a subscription is offered in some other terms, *e.g.*, at the recorded minimum, or at some specified percentage in addition to the recorded minimum, or at the average of the accepted tenders, will be rejected as null and void.

7. Tenders will be opened publicly by the Vice-Chairman at the Dinagepore Magistracy on Saturday, the 1st February next, at noon (Calcutta time).

8. Tenders at the minimum rate will be accepted in the order of the rates tendered, beginning with the highest rate. The amount allotted at the lowest rate at which tenders are accepted will be divided amongst those who have tendered at this rate in proportion, as nearly as may be found convenient, to the amounts of their tenders, provided that no allotment will be issued if the amount distributable on any tender is less than Rs. 500.

9. To each tenderer (or to his agent) whose tender is accepted in whole or in part, such number of allotment certificates as may be necessary to make up the aggregate amount allotted to him will be issued by the Vice-Chairman as soon as possible after the tenders have been accepted, and a list of the names of those to whom such allotment certificates are issued will be posted for general information at the District Board's Office.

10. Payment of any allotment certificate is to be made in credit of the District Fund at the Dinagepore Treasury.

Form of Tender

I, A. B., hereby tender for Rs. (Rs. ,) of the six per cent. loan advertised in the *Calcutta Gazette*, dated , and agree to pay for the same subject to the condition mentioned in the advertisement, at the rate of Rs. As. for every hundred rupees allotted to me.

I enclose a money-order receipt for deposit money for Rs. sent to the address of the Vice-Chairman of the Dinagepore District Board.

Any allotment made to me may be communicated to at

NOTE.—A separate tender must be made at each rate tendered The rate tendered should be the whole amount per centum, not the premium or discount: thus "one hundred and two" or "one hundred." or "ninety-nine," not "two per cent. premium" or "par" or "one per cent. discount."

(3413—3) C. R. MARINDIN, Chairman.

New Beerbhoom Coal Company, "Ld."

PROCEEDINGS of the Thirty-third Ordinary General Meeting of the Shareholders, held at the Office of the Company, No. 1, Hastings' Street, on Saturday, the 4th January 1890, at noon :—

PRESENT :

J. N. Stuart, Esq.	P. F. Hedger, Esq.
David Cowie, Esq.	D. King, Esq.
A. R. McIntosh, Esq.	S. Heslop, Esq.
Lieut.-Col. H. T. S. Yates, R.A.	By his Attorney A. B. Stewart, Esq.
John Pendlebury, Esq. ...	By his Attorney A. R. McIntosh, Esq.
E. N. Grace, Esq. ...	By his Attorney I. H. Heckle, Esq.
T. H. Cowie, Esq., Q.C. ..	By their Attorney David Cowie, Esq.
H. C. Erskine, Esq. ...	
General C. H. Blunt, C.B.	
Mrs. G. H. Hatchard ..	
,, M. C. Smith ...	
Henry Blunt, Esq., deceased	By his Executor David Cowie, Esq.
N. S. Sweedland, Esq., deceased	By his Administrator David Cowie, Esq.

The advertisement calling the meeting having been read, and the Report of the Directors with Statement of Accounts for the half-year ending 31st October 1889 having been submitted and taken as read—

It was proposed by J. N. Stuart, Esq.

Seconded by David Cowie, Esq.

and carried unanimously—

That the Directors' Report and Accounts for the half-year ending 31st October 1889, which have been printed and circulated among the Shareholders, be adopted and passed as satisfactory.

It was proposed by Lieut.-Colonel H. T. S. Yates, R.A., by his Attorney A. B. Stewart, Esq., seconded by E N. Grace, Esq., by his attorney I. H. Hechle, Esq, and carried unanimously—

That the sum of Rs. 1,42,440-1-2, standing at the credit of Profit and Loss Account, be appropriated in manner following :—

	Rs.	A.	P.
Dividend at the rate of Rs. 14 per share	1,00,800	0	0
Managing Agents' commission at 10 per cent per share ...	10,080	0	0
Manager's commission at 5 per cent. per share	5,040	0	0
Directors' commission at 1 per cent. per share	1,008	0	0
Reserve fund	5,000	0	0
Wear and tear account ..	10,000	0	0
Carried forward to next half-year	10,512	1	2
	1,42,440	1	2

It was proposed by T. H. Cowie, Esq., Q.C., by his Attorney David Cowie, Esq.

Seconded by S. Heslop, Esq.

and carried unanimously—

That Messrs. J. N. Stuart and D. King be re-elected as Directors.

With a vote of thanks to the Chair the meeting separated.

(3423—1) J. N. STUART, Chairman.

Notice.

IT is hereby notified for general information that the District Board of Tipperah, in compliance with the wishes of Government, have established two scholarships at Rs. 15 each, tenable for one year at present, at the Sibpore Engineering College. Those willing to take upany particular branch of study, and attend the workshops attached to the College, are requested to send in their applications on or before the 20th March 1890. to enable the undersigned to award the scholarships on the 1st April 1890. Successful candidates will have to contract for service under the District Board.

H. M. WEATHERALL, District Board, Tipperah.

In the Court of Baboo Saroda Prasad Chatterjee, Roy Bahadur, Subordinate Judge of Sarun.

EXECUTION CASE No. 194 OF 1889.

Pertap Singh and Soudagar Singh, decree-holders, *versus* Isri Prasad Singh, judgment-debtor.

TO be sold in the above case by the Nazir of the District Judge's Court of Sarun, at 12 A.M. on the 6th day of January 1890, for the satisfaction of the decree, Rs. 6,506-10—

1. Six annas out of one anna twelve krant sixteen masant treated as sixteen annas of mouzah Pithouri, with tolah Maya Panday, appertaining to mehal Pithouri, pergunnah Bal, bearing towji No. 798, within the jurisdiction of thana Chupra, registration Chupra ; sudder jumma Rs. 532-8-6½ ; approximate value Rs. 25; road cess Rs. 3-8 ; collection expenses Rs. 2-8 ; net produce Rs. 3.

2. Six annas out of one anna twelve krant treated as sixteen annas of mouzah Benout, appertaining to mehal Pithouri, pergunnah Bal, bearing towji No. 798, chouki Ekma, registration Chupra ; sudder jumma Rs. 532-8-6½ ; approximate value Rs. 10 ; road cess Rs. 3 ; collection expenses Rs. 1-8 ; net produce Rs. 4.

3. Six annas out of two annas 2¾ pies treated as sixteen annas of mouzah Birti, appertaining to mehal Pithouri, pergunnah Bal, bearing towji No. 798, chouki Ekma, registration Chupra ; sudder jumma Rs. 532-8-6½ ; approximate value Rs. 2; road cess Rs. 3 ; collection expenses Rs. 2 ; net produce Rs. 2.

4. Six annas out of three annas four pie treated as sixteen annas of mouzah Sarea, appertaining to mehal Pithouri, pergunnah Bal, bearing towji No. 798, within the jurisdiction of thana Chupra, registration Chupra ; sudder jumma Rs. 532-8-6½ ; approximate value Rs. 10.

5. Six annas out of one anna twelve krant treated as sixteen annas of mouzah Masihan tolah, appertaining to mehal Pithouri, pergunnah Bal, bearing towji No. 798 ; sudder jumma Rs. 532-8-6½ ; approximate value Rs. 5 ; road cess Rs. 2 ; collection expenses Rs. 1; net produce Rs. 2.

6. Six annas out of three annas two pie treated as sixteen annas of mouzah Lana, pergunnah Bal, appertaining to mehal Lana, pergunnah Bal, bearing towji No. 673, chouki Baniapur, within the jurisdiction of thana and registration Chupra ; sudder jumma Rs. 817-1-1¼ ; approximate value Rs. 10 ; road cess Rs. 3-8 ; collection expenses Rs. 1-8 ; net produce Rs. 4.

7. Six annas out of three annas two pie eight krant treated as sixteen annas of mouzah Mohamedpur, appertaining to mehal Lana, pergunnah Bal, bearing towji No. 673, chouki Baniapur, within the jurisdiction of thana and registration Chupra ; sudder jumma Rs. 817-1-1¼ ; approximate value Rs. 10 ; road cess Rs. 3-8 ; collection expenses Rs. 1-8 ; net produce Rs. 4.

8 Six annas out of three annas two pie eight krant treated as sixteen annas of mouzah Bhawaninagar appertaining to mehal Lana, pergunnah Bal, bearing towji No. 673, chouki Baniapur, within the jurisdiction of thana and registration Chupra ; road cess Rs. 3-8 ; collection expenses Rs. 1-8 ; net produce Rs. 4 ; sudder jumma Rs. 817-1-1¼, approximate value Rs. 10.

SARODA PRASAD CHATTERJEE, Subordinate Judge.

(3410—1)

Notification.

A MONUMENT in the Faridpur cemetery, to a child of the name of Burt, needs repair. The friends of the deceased are therefore requested to inform the undersigned if they are willing to repair it.

PURNO CHANDRA RAI, Dy. Magistrate in charge, for Magistrate.

FARIDPUR MAGISTRATE'S OFFICE, the 3rd January 1890.

MR. S. S. COOPERS is authorized to sign our firm per procuration from this date.

CROFT, WELLS & Co.

1, Clive Row, 1st January 1890. (3418—3)

WE have this day admitted Mr. David Hynd as a partner in our firms.

KOCH & PERMAN.

SIMON KOCH & Co.

Calcutta, the 1st January 1890. (3417—2)

The Majagram Tea Company, "Limited."

Passed 14th December 1889. *Confirmed 4th January 1890.*

AT an Extraordinary General Meeting of the Majagram Tea Company, "Limited," duly convened and held at the Registered Office of the Company, No. 4, Mangoe Lane, Calcutta, on the 14th day of December 1889, the subjoined special resolutions were duly passed, and at a subsequent Extraordinary General Meeting of the said Company, also duly convened and held at the same place on the 4th day of January 1890, the subjoined special resolutions were duly confirmed:—

1*st*.—"That it has been proved to the satisfaction of this Meeting that the Company cannot, by reason of its liabilities, continue its business, and that it is advisable to wind up the same, and accordingly that the Company be wound up voluntarily."

2*nd*.—"That Mr. A. S. Lovelock be appointed Liquidator on a remuneration of Rs. 250 (two hundred and fifty rupees) only."

WILLIAMSON, MAGOR & Co., Secretaries.
(3426—1)

Holta Tea Company, Limited.

NOTICE is hereby given that an Extraordinary General Meeting of the Holta Tea Company, Limited, will be held at the Registered Office of the Company, No. 5, New China Bazar Street, in the Town of Calcutta, on Wednesday, the 22nd day of January instant, at the hour of 12 o'clock at noon, for the purpose of considering and passing resolutions confirming the purchase by the Company of the "Chota Bundla" Tea Estate, and of authorizing the Directors to execute for and on behalf of the Company, and to affix the seal of the Company to a mortgage over the said Chota Bundla Tea Estate, to secure to the vendor the balance of the purchase-money thereof.

By order,
MITCHELL, REID & Co, Secretaries.
Dated the 6th January 1890. (3427—1).

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

In the matter of CHUNDER CHURN DASS and another, insolvents.

On Saturday, the 7th day of December last, it was ordered that the hearing of this matter do stand adjourned until Saturday, the 11th day of January instant, and that the order made in this matter for the *ad interim* protection of the said insolvents from arrest be enlarged to the said 11th day of January instant, and that the said insolvents be and they are at liberty to file an amended estate paper, and that the said insolvents do then attend to be examined before the said Court.

Insolvents in person. (3428—1)

In the matter of BULLOBE S. D. COHEN, an insolvent.

On Saturday, the 4th day of May last, by an order of this Court, the said insolvent was adjudged entitled to her personal discharge under the Act XI Vic., Chapter XXI as to all persons named in her schedule as creditors or claiming to be creditors respectively.

O. J. Gangooly, Attorney. (3129 - 1)

In the matter of SIMON S. D. COHEN, an insolvent.

On Saturday, the 4th day of May last, by an order of this Court, the said insolvent was adjudged entitled to his personal discharge under the Act XI Vic., Chapter XXI as to all persons named in his schedule as creditors, or claiming to be creditors respectively.

O. C. Ganguly, Attorney. (3430—1)

In the matter of CHARLES RODRIGUES, an insolvent.

On Saturday, the 23rd day of November last, it was ordered that, subject to payment to Albert Birmingham Miller, Esq., the Official Assignee of this Court, and the Assignee of the estate and effects of the said insolvent, of his usual commission and all costs and charges lawfully due, the petition filed by the said insolvent seeking for relief under the provisions of the said Act be dismissed, and the vesting order made thereon be discharged, provided always that all acts or things done by the said Assignee or other person acting under his authority prior to this order shall be good and valid, and shall not be annulled or in any wise affected thereby, and upon payment of his commission and all costs, charges and expenses lawfully incurred by him as aforesaid, the said Assignee do deliver over to the said insolvent upon his receipt all the estate and effects, moneys, goods, books and papers now remaining in the hands of the said Assignee belonging to the estate of the said insolvent.

Insolvent in person. (3131—1)

In the matter of BRIJBHUKUN DASS, an insolvent.

On Wednesday, the 4th day of September last, it was ordered that, subject to payment to Albert Birmingham Miller, Esq., the Official Assignee of this Court, and the Assignee of the estate and effects of the said insolvent, of his usual commission and all costs and charges lawfully due, the petition filed by the said insolvent seeking for relief under the provisions of the said Act be dismissed, and the vesting order made thereon be discharged, provided always that all acts or things done by the said Assignee, or other person acting under his authority prior to this order, shall be good and valid, and shall not be annulled or in any wise affected thereby, and upon payment of his commission and all costs, charges and expenses lawfully incurred by him as aforesaid, the said Assignee do deliver over to the said insolvent upon his receipt all the estate and effects, moneys, goods, books and papers now remaining in the hands of the said Assignee belonging to the estate of the said insolvent.

N. C. Roy, Attorney. (3432—1)

In the matter of KRISTODHONE GHOSE and others, insolvents.

On Saturday, the 7th day of December last, it was ordered that the order of adjudication against the said insolvent, made in this matter on the 9th day of April last, is revoked, and the vesting order made thereon is discharged, provided always that all acts or things done by Albert Birmingham Miller, Esq., the Official Assignee of this Court, and the Assignee of the estate and effects of the said insolvents, or other person acting under his authority prior to this order, shall be good and valid, and, shall not be annulled or in any wise affected thereby, and upon payment of his commission and all costs, charges and expenses lawfully incurred by him as aforesaid, the said Assignee do deliver over to the said insolvents upon their receipt all the estate and effects, moneys, goods, books and papers now remaining in the hands of the said Assignee belonging to the estate of the said insolvents.

U. C. Dutt, Attorney. (3433—1)

In the matter of GREES CHUNDER MOOKERJEE and another, insolvents.

On Saturday, the 7th day of December last, it was ordered that the order of adjudication against the said insolvents, made in this matter on the 26th day of February last, is revoked, and the vesting order made thereon is discharged, provided always that all acts or things done by Albert Birmingham Miller, Esq., the Official Assignee of this Court, and the Assignee of the estate and effects of the said insolvents, or other person acting under his authority prior to this order, shall be good and valid and shall not be annulled or in any wise affected thereby, and upon payment of his commission and all costs, charges and expenses lawfully incurred by him as aforesaid, the said Assignee do deliver over to the said insolvent Grees Chunder Mookerjee upon his receipt all the estate and effects, moneys, goods, books and papers now remaining in the hands of the said Assignee belonging to the estate of the said insolvents.

C. F. Pittar, Attorney. (3434—1)

IN the matter of HURRY CHURN PAUL and others, insolvents.

On Monday, the 16th day of December last, it was ordered that the matters of the petition of the said insolvents be heard on Saturday, the first day of February next, and that the said insolvents do then attend to be examined before the said Court.

Insolvents in person. (3435—2)

IN the matter of ARTHUR MILSON HOUGHTON, an insolvent.

On Saturday, the 21st day of December last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the first day of

February next, and that the said insolvent do then attend to be examined before the said Court.

Insolvent in person. (3436—2)

In the matter of ARTHUR MILSON HOUGHTON, of No. 40, Dhurruntolla Street, in the town of Calcutta, late a commission agent and order supplier, at present without any work, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Saturday, the 21st day of December last, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3437—1)

In the matter of HURRY CHURN PAUL, GANODA PROSAUD PAUL, MUGNO CHUNDER PAUL, and NIBA PADO PAUL, lately carried on business in co-partnership as dealers in Cocoanut Oil at Halsi-Bagan in Calcutta, but now residing at Rajah Brojendro Narain Roy's Street in Calcutta aforesaid, insolvents.

Notice that the petition of the said insolvents seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Monday, the 16th day of December last, and by an order of the same date, the estate and effects of the said insolvents were vested in the Official Assignee.

Insolvents in person. (3438—1)

Chief Clerk's Office, the 7th January 1890.

POSTAL NOTICES.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	14th Jan. ...	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets).	13th ,, ...	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	13th ,, ...	Ditto.
Australia, New Zealand, and Tasmania.	13th ,, ...	Ditto.
Colombo	8th ,, ...	Per P. & O. steamer *Rohilla*
Straits, China and Japan ...	13th ,, ...	Per str. *Moray*.
Rangoon and Moulmein ...	8th ,, ...	Ditto *Kistna*.
Ditto ditto ...	10th ,, ...	Ditto *Madura*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	8th ,, ...	Ditto *Madras*.
Port Blair	16th ,, ...	Ditto *Maharani*.

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

On the day of despatch of the Mail for Europe, the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 8-30 P.M., and late letters and papers will be received up to 9 P.M. On other days the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 7 P.M., and foreign letters and papers fully prepaid, bearing an extra stamp of four annas, will be received up to 7-30 P.M. for despatch by any Foreign Mails despatched the same night.

E, HUTTON, Presidency Postmaster.

General Post Office, the 7th January 1890.

Unclaimed Letters held in the Calcutta General Post Office on 7th January 1890.

Brown, A.
Murray, C.
Sinclair, Hamilton & Co.
Temple, F.
Wroughton, W. R. & Co.

Letters marked Care of "Post Office."

Annfield, F.
Atkinson, F. S.
Atkinson, A.
Barker, F. W.
Barrington, H. E. W.
Bates, Miss E. K.

Letters marked care of "Post Office."

Bather, H. R.
Baxter, Mrs.
Behan, J. L.
Belitski, R
Bennett, J. J. T.
Berkeley, C. M.
Boland, J.
Bolton, J. M. L.
Brownlow, Miss.
Brown, W.
Bruce R. G.
Burrows, C. J.
Carrapaett, Mr.
Carroll, J.
Charles, R.
Chatterton, J.
Comar, Mrs. A.
Cooper, H. J.
Cooper, W.
Corfuld, Capt.
Cornelius, H.
Courage, R.
Courtney, F. S.
Curzon, Hon'ble A. U.
Davis, Mrs. G.
Dickson, Mrs. E.
DeMeuron, Pierre.
Drakeford, A.
Dunlo, Viscount.
Douglas, G. P. H.
Duclerc, G. P.
Elliott, K.
Fisk, F M.
Fletcher, Neil.
Fowler, Miss.
Fraiser, H. C.
Francis, A. M.
Freedman, J. J.
Gellett, Cecil S.
Glover, W. E.
Godwin, George.
Gracewood, Geo.
Greve, E. C.
Green, W. W.
Hamilton, J. R.
Horns, Miss M.L.
Hardy, Mrs. M.
Hawksworth, Mrs.
Heseltine, H. H.
Hewett, A. B.
Higgins, C. C.
Hilton, R. W.
Hodge, Mrs. George.
Keane, J. J.
Kleine, Henri.
Lach, R.
Lamb, E. G.
Landie, Miss E.
Leatham, A. E.
Livermore, H. A.
Levinge, Sir William.
Livesay, T.
Lindeman, L. K.
Livewright, R.
Lloyd, Willis.
Long, W.
Lyons, G. B. C.
Maitland, A.
Major, A.
Mathewson, F.
Mackenzie, J.
Mallite, O. W.
Matthews, J. R.
Millett, G. G.
McAdoo, Mr.
McKenzie, Mrs D.
McNair, Miss.
Menzies, C.
Meyer, A. T.
Miller, G.
Morshead, L.
Murphy, John.
Newby, C. R. A.
Ogden, J.
Palmer, Mrs. M.
Percival, Percy.
Platts, Mrs. S. K.
Powell, F.
Prentor, Miss.
Rennard, J. R.
Rickot, Mrs
Robins, J.
Rogerson, Miss A.
Rubie, Phil C.
Salomon, C.
Sano, T.
Shwartz, L.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sisam, Rev. W. B.
Smith, M. O.
Smith, R.
Soares, F. H.
Steinhart, Mr.
Sutton, H. C.
Sweet, L.
Taylor, C.
Thomas, G. T.
Thompson and Co.
Tomkyns, Geo.
Uphill, T.
Waddell, Alex.
Walter, F.
Walter, Amherst.
Westmacott, H. H.
Williamson, C.
Woodhouse, G.

Registered Letters.

Aitkin, D,
Bennett, J. J. T.
Edwards, C.
Eglinton, C. A.
Guiseppe, Celestini.
Hogens, Charles.
MacLeod, D. J.
Marsland, W,
Wallace, Miss H.
Westmacott, F. H.
Whittaker, Hariet.

Unclaimed Letters held in the Barrackpore Post Office on the 6th January 1890.

Adie, Miss M. J.
Brown, Miss.
Cowie, J.
Duff, J. U.
Feddy, Miss C. S.
Fergusson, H. F.
Harrison, Rev. H. J.
Hitch, E. H.
Howatson, Mrs. F.
Hudson, Mrs. M. E.
Marvey, Mrs. H.
Parker, C. F.
Simpson, Dr. R. J.
Trusham, Miss.

E. HUTTON,

Presidency Postmaster, Calcutta.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 3rd January 1890.

Name of river.	Reach of river.	Least depth of water soundings.		Remarks.
		Ft.	In.	
Bhagirati.	Entrance from Ganges ...	1	9	At mouth entrance practically closed.
	Thence to Nurpur	2	0	Tiktikipara.
	From Nurpur to Jungipur ...	2	3	Nurpore.
	,, Jungipur to Berhampur	1	6	Berhampore.
	,, Berhampur to Cutwa ...	2	3	Moshimpore.
	,, Cutwa to Nuddea ...	2	9	Nidoy.
Bhyrub-Jelinghi.	Entrance from Ganges ...	0	0	
	Thence to Akriganj	8	0	
	Akriganj to junction of the Bhyrub and Jelinghi ...	4	0	Junction.
	Thence to Patkabari	5	6	Patkabari.
	Patkabari to Nuddea	4	6	Punditpore.
Matabanga.	Entrance from Ganges ...	2	6	
	Thence to Chnypara ...	0	10	Sircarpara.
	From Chnypara to Shikarpur	1	3	Pragpore.
	,, Shikarpur to Boalia ...	1	6	Sampore.
	,, Boalia to Chuadanga ...	3	0	Sialmari.
	,, Chuadanga to Kissenganj and Hanskhali...	3	0	Bastupore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A. M.	Feet.	Feet.	
Ganges.	Sahebganj ...	4-1-90	6	0·16	68·16	
	Rampore Boalia	4-1-90	12	2·92	44·92	
	Entrance of Bhagirati ...	4-1-90	7	3·65	48·96	
	Entrance of Bhyrub-Jelinghi ...	4-1-90	...	8·16	46·52	
	Entrance of Matabanga ...	4-1-90	...	8·25	...	
Bhagirati.	Berhampur ...	6-1-90	12	3·42	37·21	
Jelinghi ...	Kushnaghur ...	3-1-90	...	4·84	13·73	
	Saroopgunge ...	3-1-90	6	4·08	8·38	
Matabanga	Hanskhali ...	3-1-90	...	4·50	15·35	

PURNA CHANDRA BOSE,
for Exe. Engr., Nuddea Rivers Division.

Berhampore, the 6th January 1890.

AT the Meteoroiogical Office, No. 5, Russell Street, the following official publications:—

Meteorological Report of	1867 ...	Rs.	0	12 per copy.
Ditto ditto	1868 ...	,,	1	8 ,,
Ditto ditto	1869 ...	,,	2	4 ,,
Ditto ditto	1870 ...	,,	2	6 ,,
Ditto ditto	1871 ...	,,	2	8 ,,
Ditto ditto	1872 ...	,,	3	0 ,,
Ditto ditto	1873 ...	,,	3	0 ,,
Ditto ditto	1874 ...	,,	3	0 ,,
Administration Report of	1870-71 ...	,,	0	4 ,,
Ditto ditto	1871-72 ...	,,	0	4 ,,
Ditto ditto	1872-73 ...	,,	0	4 ,,
Ditto ditto	1873-74 ...	,,	0	4 ,,
Ditto ditto	1874-75 ...	,,	0	4 ,,
A table of the average monthly and annual rainfall at 98 Stations in Northern India		,,	0	4 ,,
Report of the Midnapore and Burdwan cyclone of the 15th and 16th October 1874		,,	2	8 ,,

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JOHN ELIOT, M.A., *Meteorological Reporter to the Govt. of Bengal.*

CALCUTTA, the 26th August 1875.

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ALEX. PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

Meteorological Office, Bengal, the 17th March 1886.

Annual Statement of the Seaborne Trade and Navigation of the Bengal Presidency and of its Chief Port (Calcutta) and each of its Subordinate Ports (Chittagong, Balasore, Cuttack, Pooree, and Naraingunge). Volumes I and II. Price Rs. 20 for 1888-89. Published at the Calcutta Custom House. Previous years volumes can also be obtained at the same price.

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H. A. D. PHILLIPS,
Under-Secy. to the Govt. of Bengal.

The 24th November 1886.

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WEDNESDAY, JANUARY 8, 1890.

PART IV.

of the Bengal Council.

GOVERNMENT OF BENGAL.

LEGISLATIVE DEPARTMENT.

THE following Bill was introduced and read in the Council of the Lieutenant-Governor of Bengal for the purpose of making Laws and Regulations, and referred to a Select Committee, on the 4th January, 1890, with instructions to report thereon within a fortnight, and is published for general information:—

A Bill to amend the Bengal Vaccination Act, 1880, and Act II, 1887.

WHEREAS it is expedient to amend the Bengal Vaccination Act, 1880, and Act II, 1887; It is hereby enacted as follows:— Preamble.

1. This Act shall come into force from the date on which it may be published in the *Calcutta Gazette* with the assent of the Governor-General. Commencement of Act.

2. In the Preamble of the Bengal Vaccination Act, 1880, for the words "the Town, Port, and Suburbs" the words "Calcutta and the Port" shall be substituted. Amendment of Preamble of Act V, 1880.

3. In section one of the same Act, for the words "the Town, Port, and Suburbs" the words "Calcutta and the Port" shall be substituted. Amendment of section 1, Act V, 1880.

4. (*1*) In section two of the same Act, for the definition of "Town of Calcutta" the definition "'Calcutta' means Calcutta as defined by the Calcutta Municipal Consolidation Act, 1888" shall be substituted. Amendment of definition of "Town of Calcutta."

(*2*) In the same section, add the following to the definition of 'Port of Calcutta':— Addition to definition of "Port of Calcutta."

"or of any other law for the time being in force."

(*3*) In the same section, the definition of "Suburbs of Calcutta" is hereby repealed. Repeal of definition of "Suburbs of Calcutta."

5. In the Bengal Vaccination Act, 1880, for the words "the Town of Calcutta," wherever they occur, the word "Calcutta" shall be substituted. "Calcutta" substituted for "Town of Calcutta" in Act V, 1880.

6. In section sixteen of the same Act, for the words "the said Town" the word "Calcutta" shall be substituted. Amendment of section 16, Act V, 1880.

7. In section nineteen of the same Act, for the words "in the said Town" the word "therein" shall be substituted. Amendment of section 19, Act V, 1880.

8. In section five of Act II, 1887, the words "the Town or Suburbs of" are hereby repealed. Amendment of section 5, Act II, 1887.

9. In section six of the same Act, for the words "the Town, or Port of Calcutta, or the Suburbs" the words "Calcutta or the Port" shall be substituted. Amendment of section 6, Act II, 1887.

10. (*1*) All rules made and orders issued under section thirty-three of the Bengal Vaccination Act, 1880, relating to the Town of Calcutta in force immediately before the passing of this Act, shall be deemed to be in force in Calcutta as defined by the Calcutta Municipal Consolidation Act, 1888. Rules and orders in force before passing of Act to be in force in Calcutta as defined by Act II, 1888.

(*2*). The Local Government may, from time to time, modify or cancel such rules and orders.

(*3*). And all such rules and orders relating to the Suburbs of Calcutta are hereby repealed.

STATEMENT OF OBJECTS AND REASONS.

The Lieutenant-Governor was empowered under section thirty-three of the Bengal Vaccination Act, 1880, to make rules and issue orders in all matters connected with the working of that Act which was applicable in the first instance to the Town of Calcutta, the Port of Calcutta, and the Suburbs. Separate rules were made for Calcutta, for the Suburbs, and for places outside Calcutta and the Suburbs; and as it is desirable to have the same rules in force henceforth in the Old Town of Calcutta, and in that portion of the Suburbs which has been amalgamated therewith by Act II, 1888, and to place the parts of the Suburbs not so amalgamated under the same rules as those made for the places outside the Old Town of Calcutta and the Old Suburbs, the present Bill is introduced to give effect to these objects.

CALCUTTA;
The 18th December, 1889.

H. L. HARRISON.

CALCUTTA;
The 7th January, 1890.

C. H. REILY,
Assistant Secretary to the Government of Bengal,
Legislative Department.

[REGISTERED No. 29.]

No. 2 of 1890.

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, JANUARY 8, 1890.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT *separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., Cap. 67.

THE Council met at the Council Chamber on Saturday, the 4th January, 1890.

Present:

The HON'BLE SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant-Governor of Bengal, *presiding.*

The HON'BLE SIR CHARLES PAUL, K.C.I.E., *Advocate-General.*

The HON'BLE F. B. PEACOCK.

The HON'BLE P. NOLAN.

The HON'BLE T. T. ALLEN.

The HON'BLE SIR HENRY HARRISON, KT.

The HON'BLE SIR ALFRED CROFT, K.C.I.E.

The HON'BLE DR. MAHENDRA LAL SIRCAR, C.I.E.

The HON'BLE C. H. MOORE.

The HON'BLE H. PRATT.

The HON'BLE SHAHZADA MAHOMMED FURROKH SHAH.

The HON'BLE DR. RASH BEHARY GHOSE.

The HON'BLE RAJA RAMESHWAR SING BAHADUR.

RULES FOR THE CONDUCT OF BUSINESS.

THE Hon'ble Sir Charles Paul presented the Report of the Select Committee appointed to consider and amend the Rules for the Conduct of Business at Meetings of the Council.

He said:—"The Council will see from the report the amendments which have been made. The rules have been redrafted in what we considered a more convenient form. The only material alterations are those mentioned in the report, to two of which I shall refer. One of these is Rule 31, where it is provided that when a Bill is introduced, it shall, together with the Statement of Objects and Reasons, be published in the English and Vernacular languages in the official gazettes of such parts of Bengal as are affected by the Bill. And on some subsequent occasion the member in charge of it shall make one or more of the following motions:—(*a*) that it be referred to a Select Committee, or (*b*) that it be taken into consideration by the Council at some future day, or (*c*) that it be circulated for the purpose of eliciting opinions thereon.

"The amendment which we have made is this. We have provided in certain cases, whenever it may be unnecessary to refer a Bill to a Select Committee, that it may be taken into consideration by the Council. Occasions have arisen where a reference to a Select Committee was useless to provide for such cases. We have put in clause (*b*) of Rule 31.

"But inasmuch as it may be said that such a Bill should not be passed too summarily, we have provided that it shall be published with the Statement of Objects and Reasons, and as a rider upon that we have, as mentioned in the fifth paragraph of our report, provided, as a matter of further precaution, that the President shall have authority, upon a motion to consider a Bill being carried, to submit the Bill itself, or any part of it, section by section, to the Council; thus making the Council act the part of a Select Committee.

"Then another rule to which I wish to call attention is Rule 44. This is intended to meet the case which has occurred more than once of the passing of a Bill being postponed on account of some formal or trifling amendment having been made.

"I wish to point out another matter which came before the Select Committee. Under the Indian Council's Act the President has a casting vote. That provision was made a rule under our existing rules. The Members of the Select Committee thought that it did not come within the scope of a rule, and therefore what we propose to do (but which has been left out by mistake) is to add a foot-note indicating that the President has a casting vote under a particular section of the Indian Council's Act. This has only been done for the purpose of making the subject complete and calling attention to it.

"We have also provided that the right of the President to address the Council before putting the question should be indicated in specific terms, and have introduced a rule giving effect to that object. These are the principal amendments we have made."

His Honour the President said:—"This Report will be in the hands of Members to-day, and the Rules will be brought forward for passing at the next meeting of the Council. Under the rules we have yet to get the consent of the Government of India before they can come into force."

BENGAL VACCINATION BILL.

The Hon'ble Sir Henry Harrison introduced the Bill to amend the Bengal Vaccination Act, 1880, and Act II, 1887, and moved that it be read in Council.

He said:—"I explained at the last meeting the objects and measures of this Bill which are very much of a formal character."

The Motion was put and agreed to.

The Bill was read accordingly.

The Hon'ble Sir Henry Harrison also moved that the Bill be referred to a Select Committee, consisting of the Hon'ble Messrs. Nolan and Allen, and the Mover, with instructions to report thereon within one fortnight.

The Motion was put and agreed to.

CALCUTTA AND THE SUBURBAN POLICE SUPERANNUATION FUNDS BILL.

The Hon'ble Sir Henry Harrison moved that the Report of the Select Committee on the Bill to consolidate the Calcutta and the Suburban Police

Superannuation Funds be taken into consideration in order to the settlement of the clauses of the Bill.

The Motion was put and agreed to.

The Hon'ble SIR HENRY HARRISON also moved that the clauses of the Bill be considered for settlement in the form recommended by the Select Committee.

He said:—"I wish to make one remark on the present occasion. The Select Committee in their report said, that they struck out so much of section 2 as made the provisions of that section applicable to the Clerk appointed to manage the Superannuation Fund.

"Since then I have received a memorial from the Clerk drawing attention to the hardship to him of losing his pension, but so long a time has elapsed since the report of the Select Committee was prepared that I have not been able to remember why we left it out. I do not think we had the intention of depriving the Clerk of his salary or pension.

"My recollection is, that we considered the wording of section 2 sufficient without making any particular reference to the Clerk. The words of the section are:—'The Police Superannuation Funds * * * * shall be consolidated, and shall form one Police Superannuation Fund and, shall be applied from time to time to the payment of the charges incurred in the control and management of the said Fund.' That is the first purpose to which the revenues of the Fund are to be applied. The section goes on to say—'and of such superannuation or retiring allowances or gratuities as may be ordered by the Local Government at any time to any Police Officer of the Calcutta or Suburban Police Force,' and the words followed—'or to any person employed as a Clerk to manage the said Fund.' That seemed to the Select Committee rather confused, because the first purpose to which the revenues are to be applied, viz., the management of the Fund, is quite different from the second purpose, which is the payment of pensions and gratuities to members of Police Force for which the Fund primarily exist. Therefore to put the Clerk in the same category as the Police Force seemed rather out of place. The Clerk rather came under that portion of the section which made the revenues applicable to the payment of the charges incurred in the control and management of the Fund.

"But as there may be some doubt, I will ask the Council to insert such words as will remove all difficulty, and therefore I move that the words 'including salaries, pensions or gratuities' be inserted after 'charges' in line 7 of section 2, making the wording run thus: 'and shall be applied from time to time to the payment of the charges, including salaries, pensions or gratuities, incurred in the control and management of the said Fund.' That, I believe, will make the intention quite clear."

The Motion was put and agreed to.

The Hon'ble Sir Henry Harrison's motion that in line 7 of section 2, after the word "charges" the words "including salaries, pensions or gratuities" be inserted, was also put and agreed to.

CALCUTTA PORT BILL.

HIS HONOUR the President said:—"The next item of business on the list is to consider the Report of the Select Committee on the Bill to consolidate and amend the law relating to the Port of Calcutta and to the appointment of Commissioners for the said Port. On that subject the Hon'ble Mr. Moore has rather an important amendment to propose; and as the matter is still under the consideration of the Chamber of Commerce, he asks that the consideration of this Bill be postponed. I am sure the Council will readily accede to the Hon'ble Member's request, and I hope we shall be able to discuss the Bill at our next meeting."

The consideration of the Report was postponed.

The Council adjourned to Saturday, the 11th January, 1890.

CALCUTTA;
The 7th January, 1890.

C. H. REILY,
Assistant Secretary to the Govt. of Bengal, Legislative Department.

PROPOSED EXHIBITION IN VIENNA.

The 31st December, 1889.—The following correspondence is published for general information.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Govt. of Bengal.

Circular No. 490.—M. & Ex., dated Calcutta, the 19th December 1889.

From—J. W. P. MUIR-MACKENZIE, ESQ., C.S., Under-Secretary to the Government of India, Revenue and Agricultural Department,

To—The Secretary to the Government of Bengal.

I AM directed to forward a copy of a letter No. 990, dated the 31st August last, from the Imperial and Royal Austro-Hungarian Consul-General, Bombay, regarding an exhibition to be held in Vienna between the 15th May and 31st October, 1890, of articles connected with agriculture and the management of forests, and to request that you will be good enough, with the permission of His Honour the Lieutenant-Governor, to give due publicity to the announcement.

No. 990, dated Bombay, the 31st August 1889.

From—F. STOCKINGER, ESQ, Imperial and Royal Austro-Hungarian Consul-General, Bombay,

To—The Secretary to the Government of India, Foreign Department.

BY order of my Government I have the honour to inform you that, under the auspices of the Imperial and Royal Agricultural Society in Vienna, an exhibition of articles connected with agriculture and the management of forests will be held in Vienna between the 15th May and the 31st October 1890.

According to the official prospectus the following foreign articles will be admitted to this exhibition:—

(1) Machines and appliances for agriculture and sylviculture and for the industries connected therewith; also for the production of fruit, wine and hops; for the breeding of domestic fowls, of bees, silk-worms and dogs; for hunting, shooting, and fishing.

(2) Various appliances for agriculture, such as artificial manure, artificial fodder, veterinary appliances and medicines, &c.

(3) Models, plans and drawings; also statistical information referring to agricultural and sylvicultural improvements, architecture and engineering.

(4) Models, plans, drawings and statistical information referring to agricultural and sylvicultural instruction and experiments; also the literature bearing on these subjects.

(5) Models, plans, drawings and statistical information referring to the utilisation of droppings and waste stuff.

(6) Models, plans, drawings and statistical information referring to the food-supply of large cities.

(7) Domestic fowls and dogs.

I have the honour to request you, therefore, to bring the foregoing information to the notice of the respective official authorities as soon as possible.

Should any further information be required by intending exhibitors, I shall be happy to give it as far as I am able to do so, and also to forward any notice or application for admission to the said exhibition to the proper quarter.

Such notice should be given or application made as soon as possible.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 4th January 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.			
	Western Districts.		
BURDWAN DIVN. 1	Burdwan Jan. 4, '90	Nil	Weather—seasonable. Harvesting of winter rice going on. Prospects of *rubbi* fair, and those of sugarcane good. Prices of common rice :— Srs. Burdwan ... . 15; Ranegunge .. .. 15½; Culna ... ... 15; Cutwa ... ... 15¼ } per rupee.
2	Bankoora ,, 4, '90	Nil	Weather—seasonable. Harvesting of *amun* over. Prospects of *rubbi* not good. Sugarcane doing well. Common rice selling at 20 seers per rupee at Sudder and 18½ seers at Bishenpore.
3	Birbhum ,, 4, '90	Nil	Weather—seasonable. Harvesting of *amun* crop nearly finished. Sugarcane is in fine order, but not yet ripe for crushing. Rice selling at Soory 16½ seers per rupee, and at Rampore Hât 18 seers.
4	Midnapur ,, 4, '90	Nil	Weather—cold and bright. Harvesting of rice continues. Outturn in Contai about 14 annas, and in rest of the district about 12 annas. Prices continue to fall in most thanas. Prices of rice :— Srs. Sudder ... ... 16; Contai ... ... 24 (new rice); Tumluk ... ... 18; Ghatal ... ... 18 } per rupee.
5	Hooghly ,, 4, '90	Nil	Weather—seasonable. Reaping of winter paddy almost over. Prospects of *rubbi* crops good. Prices of common rice :— Srs. Ch. Sudder ... ... 12 0; Serampore ... ... 11 8; Jehanabad ... ... 18 7 } per rupee.
	Howrah ,, 4, '90	Nil	Weather—a little cloudy. *Amun* crop is still being reaped. Prospects good. Price of common rice at Sudder 12½ seers per rupee.
	Central Districts.		
PRESIDENCY DIVN. 6	24-Pergns. Jan. 4, '90	Nil	Weather—Seasonable. Harvesting of *amun* going on, and the yield is estimated at 16 annas. Winter crops doing well. Common rice sells at from 15 to 17 seers per rupee; at Barrackpore only the price is quoted at 13½ seers.
7	Nuddea ,, 4, '90	Nil	Weather—seasonable. Harvesting of late rice is completed. Winter crops are doing well. *Kalai* and *mung* are being harvested.
8	Khoolna ,, 4, '90	Nil	Weather—seasonable. *Amun* harvest still progressing; outturn good Prospects of winter crops good.
9	Jessore ,, 4, '90	Nil	Weather—seasonable. Harvesting of *amun* rice still going on. Outturn of *kalai*, mustard, tobacco, and linseed expected to be 10 annas. These crops were partly damaged by the unseasonable rain in November. Price of rice stationary.
10	Moorshedabad ,, 4, '90	Nil	Weather—bright and cold. *Amun* and *kalai* are still being harvested. Prospects of *rubbi* crops good.
RAJSHAHYE DIVN. 11	Dinagepur ,, 4, '90	Nil	Weather—cloudy with east wind; very foggy. Harvesting of winter rice going on. Coarse rice selling at 17 seers per rupee.
12	Rajshahye ,, 4, '90	Nil	Weather—seasonable, a little cloudy. Paddy and *kalai* are still being harvested with fair outturn. Spring sowings are going on satisfactorily. Prospects on the whole good.
13	Rungpur ,, 4, '90	Nil	Weather—seasonable. The *amun* harvest is nearly over. Tobacco transplantation continues. Wheat, mustard, and sugarcane promise well. Land is being prepared for early rice.
14	Bogra ,, 4, '90	Nil	Weather—days warm, nights somewhat chilly About two-thirds of *amun* crop reaped. Other crops doing well. Price of common rice at head-quarters 20 seers per rupee.
15	Pubna ,, 4, '90	Nil	Weather—seasonable. *Amun* crop is being reaped; outturn expected to be about 13 annas. Sugarcane is a deficient crop; the yield is not expected to be above 8 annas. Winter crops are fair. Prices still high.
16	Darjeeling ,, 4, '90	Nil	Weather—very cold and bright. The crops both in hills and Terai are doing well. Prospects generally good.
17	Julpigoree ,, 4, '90	Nil	Weather—cold and fair. Cutting of *haimanti* paddy nearly finished. Prospects good. Prices of ordinary rice :— Srs. Julpigoree (Sudder) ... ... 15 to 16; Boda ... ... 20; Rajgunge ... ... 20; Patgram ... ... 15; Damdim ... ... 16; Totalya ... ... 13; Alipore Duars ... ... 15 to 16 } per rupee.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded.*			
	Eastern Districts.		
Dacca Divn. 18	Dacca Jan. 4, '90	Nil	Weather—bright and cold. Harvesting of *amun* finished; outturn on the whole good. Winter crops doing well. Sowing of *boro* paddy going on. Fodder is available. No special change in the prices of food-grains.
19	Furreedpur „ 4, '90	Nil	Weather—seasonable. *Amun* harvest completed. *Kalai* is being cut. Cold-weather crops doing well. Flow of date juice fair. *Jali* rice is being sown on churs.
20	Backergunge „ 4, '90	Nil	Weather—seasonable. Prospects of crops good. Harvesting of *amun* still continues.
21	Mymensingh „ 4, '90	Nil	Weather—cool and bright. Harvesting of *amun* paddy still going on. *Rubbi* crops are in a flourishing condition. Price of common rice almost steady.
Chittagong Divs. 22	Chittagong „ 4, '90	Nil	Weather—seasonable. Harvesting of *amun* not yet finished. Prospects of winter crops fair.
23	Noakholly „ 4, '90	Nil	Weather—seasonable. Harvesting of *amun* nearly finished. *Rubbi* crops doing well. Price of rice stationary.
24	Tipperah „ 4, '90	Nil	Weather—seasonable. Cutting of *amun* paddy completed. Winter crops doing well.
25	Chittagong Hill Tracts. „ 3, '90	Nil	Weather—very cold with dense fogs in the morning throughout the week; cloudy during the last two days. Harvesting of late plough-paddy still continues. Mustard, tobacco, and chillies progressing.
	Hill Tipperah „ 4, '90	Nil	Weather—cold. *Amun* paddy and cotton are still being gathered; fair outturn expected. Prospects of tobacco and chillies fair.
BEHAR.			
Patna Divn. 26	Patna „ 4, '90	Nil	Weather—cold. Paddy is still being reaped in some places. *Rubbi* crops are progressing well. Rain would do good to the standing crops. Gram, peas, and mustard are flowering. Prospects of poppy favourable. There has been a slight rise in prices of some of the food-grains.
27	Gya „ 4, '90	Nil	Weather—cold. Prospects of *rubbi* and poppy favourable. Paddy is being harvested. Food-stocks sufficient.
28	Shahabad „ 4, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops continue good. Sugarcane is being pressed. Prices of rice falling and of other food-grains stationary.
29	Durbhunga „ 4, '90	Nil	Weather—clear and cold. Harvesting of rice almost completed. Prospects of *rubbi* continue favourable, but a shower of rain would be greatly beneficial to the crop. Poppy reported to be very favourable. Tobacco crop is fair. Prices stationary.
30	Mozufferpur „ 4, '90	Nil	Weather—cold and clear. Prospects of poppy and *rubbi* crops continue good. Tobacco crop very promising.
31	Sarun „ 4, '90	Nil	Weather—seasonable. *Rubbi* crops look well. Prospects satisfactory. Poppy looks healthy and is promising.
32	Chumparun „ 4, '90	Nil	Weather—cold and bright. *Rubbi* crops doing well, but a good shower of rain would be beneficial. Poppy thriving: prospects excellent. Pressing of sugarcane progressing. Prices of food-grains easy.
Bhagulpore Divn. 33	Monghyr „ 4, '90	Nil	Weather—cool and fine. Harvesting of winter rice almost finished. *Rubbi* crops and poppy doing well.
34	Bhagulpur „ 4, '90	Nil	Weather—seasonable. Rice harvest closing. *Rubbi* crops now want rain. Mustard outturn likely to be rather below the average.
35	Purneah „ 4, '90	Nil	Weather—days rather warm for the season. Clouds gathered, but have dispersed. *Aghani* rice harvested, except on the very low lands; outturn for the whole district averages 16 annas. Mustard and *kurthi* are being gathered. Tobacco promises well. Showers are wanted for *rubbi* crops generally.
36	Maldah „ 4, '90	Nil	Weather—rather hot for the time of the year. Harvesting of winter rice still continues. *Rubbi* crops are doing well, but some rain would do good to them. Price of common rice stationary.
37	Sonthal Perghs. „ 4, '90	Nil	Weather—generally bright and clear. Cloudy for the past two days. Rice harvest still going on; an average outturn expected. *Rubbi* crops satisfactory.

	No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.				
Orissa Divn.	38	Cuttack Jan. 4, '90	Nil	Weather—seasonable. Reaping of *laghu sarad* over; estimated outturn about 14 annas. *Rubbi* doing well.
	39	Pooree „ 3, '90	Nil	Weather—seasonable. Harvesting of winter rice (late *sarad*) still continues. *Dalua* and *mung* crops doing well. Prices of food-grains steady.
	40	Balasore „ 4, '90	Nil	Weather—seasonable. Rice harvest not yet completed. Prospects of *rubbi* fair.
CHOTA NAGPORE.				
		South-West Frontier Agency.		
Chota Nagpore Divn.	41	Hazaribagh Jan. 4, '90	Nil	Weather—seasonable and cold. Crops generally good.
	42	Lohardugga „ 4, '90	Nil	Weather—seasonable: very cold. Prospects of *rubbi* good, but it wants rain soon. Harvesting of paddy is nearly finished in Palamow. Sugarcane not yet gathered.
	43	Singbhoom „ 4, '90	Nil	Weather—cloudy. *Surguja* and *sarso* (mustard) crops are being reaped. *Rubbi* prospects good. Prices stationary.
	44	Manbhoom „ 4, '90	Nil	Weather—seasonable throughout the week excepting to-day (4th), which is rather cloudy. Winter paddy is being threshed; probable outturn 14 annas. Other crops doing well.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 7th January, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

QUANTITIES PER RUPEE IN

Number.	DISTRICTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLUM. (*Sorghum Vulgare.*)		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
	BENGAL.															
	Western Districts.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
1	Burdwan ...	14 8	13 4	12 4	No sale.			12 0	10 0	13 8	15 12	12 5	18 12	...	...	...
2	Bankoora ...	14 8	13 12	12 4	14 0	14 0	14 8	15 0	15 0	16 4	19 0	18 0	21 0	...	...	...
3	Beerbhoom ...	15 8	15 0	11 4	...	...	...	12 0	13 0	12 0	15 0	15 0	16 8	...	...	...
4	Midnapore ...	13 0	12 8	13 5	...	...	...	12 8	11 0	13 0	17 0	16 0	17	...	...	...
5	Hooghly* ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Howrah ...	...	...	..	...	...	...	9 8	9 8	12 8	14 0	12 8	17 12	...	...	...
	Central Districts.															
	Calcutta ...	13 4	13 3	12 9	16 10	16 11	16 13	8 10	8 3	10 3	13 8	13 5	15 3	17 3	14 12	17
6	24-Pergunnahs	13 0	13 5	12 8	16 0	16 0	16 0	7 8	7 8	8 0	16 0	15 0	16 0	...	...	...
7	Nuddea ...	15 0	15 0	14 0	17 12	17 12	22 14	10 10½	10 10½	12 5	12 7	12 6	17 10	...	...	...
8	Khoolna ...	...		...	...	...	...	11 8	11 8	14 0	16 0	14 0	18 0	...	...	...
9	Jessore ...	13 5	13 5	11 0	...	...	...	9 0	9 0	11 0	16 0	16 0	17 0	...	...	...
10	Moorshedabad*	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...
11	Dinagepore ...	17 8	17 8	12 0	14 8	14 8	12 0	15 8	15 8	15 8	19 0	19 0	19 9	...	...	...
12	Rajshahye ...	15 12	15 0	15 12	19 8	19 8	24 0	13 8	10 8	12 0	15 12	13 8	16 8	...	...	...
13	Rungpore ...	13 5	13 5	14 3	...	...	...	10 0	8 8	12 4	13 5	12 12	16 0	...	...	...
14	Bogra ...	Best. 12 0 Com. 15 12	15 0	9 12¾	...	...	...	12 0	12 0	12 0	18 12	18 0	18 12	...	...	...
15	Pubna ...	12 0	15 8	17 0	...	...	...	7 8	7 6	8 0	16 8	14 4	17 4	...	...	...
16	Darjeeling ..	11 0	11 0	10 0	10 0	10 0	10 0	5 0	5 0	5 0	12 0	12 0	12 0	...	...	...
17	Julpigoree ..	13 0	12 0	11 0	16 0	16 0	16 0	8 0	8 0	9 8	16 0	17 0	16 0	...	...	...
	Eastern Districts.															
18	Dacca ...	13 0	13 0	15 0	16 0	16 0	20 0	13 0	12 0	14 0	16 0	14 0	16 0	...	...	...
19	Furreedpore ...	12 0	13 0	11 0	12 0	12 0	...	11 0	10 0	8 0	15 0	15 0	16 0	...	...	...
20	Backergunge ...	...	...	...	...	...	...	14 4	15 4	13 5	16 0	16 2	16 13	...	...	...
21	Mymensingh ...	10 0	10 0	9 0	...	...	...	9 0	8 0	12 0	14 0	13 14	20 0	...	...	...

* Return not received.

A In subdivisions retail prices of salt per rupee are :—Cuima 10 seers, Cutwa 10 seers 6 chittacks, and Ranegunge 10 seers 10 chittacks.

B At Rampore Hát retail price of salt 9½ seers per rupee.

C In Tumlook and Contai subdivisions retail price of salt 8 seers per rupee.

C1 In subdivisions retail prices of salt per rupee are :- Barasat 9 seers, Basirhat 9 seers, Diamond Harbour (at Magrahat) 10 seers, Barrackpore 9 seers 2 chittacks, and Dum-Dum 10 seers.

D In subdivisions retail prices of salt per rupee are :—Ranaghat 9 seers 2 chittacks, Chooadanga 9 seers, Kooshtea 10 seers, and Meherpore 10½ seers.

E In subdivisions retail prices of salt per rupee are :—Satkhira 9 seers 2 chittacks and Bagirhat 8 seers.

F In subdivisions retail prices of salt per rupee are :—Jhenida 9 seers, Magura 9¼ seers, Narail 9⅔ seers, and Bongong 10 seers.

st December 1889.

Bajra or Cumbu. (*Pennisetum typhoideum.*)			Marua or Ragi. (*Eleusine Coracana.*)			Kangni or Kakun, Italian millet. (*Setaria italica.*)			Gram, Chana, Chenola, Kadalay or Sunaga. (*Cicer aristinum.*)			TH.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	OMMON MASON, ARPENTER, OR BLACKSMITH.		DISTRICTS.
												Next preceding return.	Corresponding return of last year.	
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch	A. Rs. A.	Rs. A	
														BENGAL.
														Western Districts.
...	...	...	...	..	...	...	...	...	18 0	17 0	16 8	0 10 0 to 0 15 0	10 0 to 15 0	Burdwan.
...	...	...	...	...	..	...	...	...	15 8	15 0	14 8	9 0 to 16 0	8 0 to 15 0	Bankoora.
...	..	...	...	...	..	...	...	...	16 0	16 0	14 4	8 to 0 13 8	2 0	Beerbhoom.
...	...	...	...	...	...	...	...	...	15 0 to 17 0	15 0 to 16 4	14 0	4 7 8 to 0 10 0	7 8 to 12 4	Midnapore.
...	...	...	.	..	...	...	...	...	...	...	.		...	Hooghly.
...	...	...	...	...	...	...	...	...	16 12	16 8	15 0		...	Howrah.
														ommon mason). *Central Districts.*
13 0	13 2	11 14	...	...	...	15 11	15 3	17 12	16 2	15 15	15 3	0 15 0	15 0	Calcutta.
...	...	...	...	...	...	4 0	5 4	12 8	16 0	16 0	16 0	0 15 0 to 0 25 0	15 0 to 22 0	24-Pergunnahs.
...	...	...	...	.	...	...	...	...	18 14	18 14	16 0		..	Nuddea.
...	...	...	...	...	..	...	...	...	12 0	12 0	16 0		...	Khoolna.
...	..	...	...	..	...	...	..	...	16 0	16 0	16 0	0 10 0 to 0 15 0	10 0 to 15 0	Jessore.
...	3	...	...	...	..	..		...	...	...	...		...	Moorshedabad.
...	..	...	...	...	..	...	..	...	14 8	14 8	12 0		.	Dinagepore.
...	...	...	...	...	...	...	...	...	18 0	18 0	13 8	0 10 0 to 0 15 0	10 0 to 15 0	Rajshahye.
...	...	...	...	...	...	...	..	...	13 5	13 5	10 5	0 8 0 to 0 16 0	8 0 to 16 0	Rungpore.
..	...	..	...	...	...	...	...	...	13 8	15 0	9 12	0 8 0 to 2 0 0	12 0 to 15 0	Bogra.
.	...	...	...	...	...	...	...	...	15 0	15 4	18 0	0 10 0 to 20 0	0 to 22 0	Pubna.
...	...	...	13 0	13 0	14 0	...	...	...	10 0	10 0	10 0	0 7 0 to 2 0 0	8 0 to 20 0	Darjeeling
...	..	...	...	...	..	...	...	...	13 0	13 0	11 9	0 12 0 to 22 0	12 0 to 22 0	Julpigoree.
												0 15 0 to 2 0 0	20 0	
														Eastern Districts.
..	...	...	..	...	...	...	..	.	13 0	13 0	13 0	8 0 to 2 0 0	8 6 to 20 0	Dacca.
...	...	...	...	...	..	...	...	...	11 0	12 0	11 0	15 0	10 0 to 15 0	Furreedpo
...	...	...	...	...		...	...	...	15 8	15 0	13 5	2 0 to 15 0	10 0 to 15 0	Backergunge.
...	...	...	...			..	...		13 0	13 0	12 0	2 0 to 30 0	12 0 to 3 .	Mymensingh.

I In subdivisions retail prices of salt per rupee are :—Gaibanda 8 seers and Nilphamari 9 seers.
J At Sirajgunge retail price of salt 9½ seers per rupee.
K At Siliguri wholesale price of salt Rs. 4-4 per maund.
L At Fallacutta in Alipore subdivision retail price of salt 8 seers per rupee.
M In subdivisions retail prices of salt per rupee are:—Manickgunge 8 seers, Moonshigunge 8 seers 14 chittacks, and Naraingunge 9 seers 12 chittaks.
N In subdivisions retail prices of salt per rupee are :—Patuakhali 9 seers, Perozepore 9 seers, and Bhola 8 seers.
O In subdivisions retail prices of salt per rupee are :—Kishoregunge 8 seers, Jamalpore 10 seers, Sherepore 8 seers, and Netrokona 8 seers.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the Head-quarter

Number.	DISTRICTS.	QUANTITIES PER RUPEE IN																		
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLUM. (*Sorghum Vulgare.*)		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
	***Eastern Districts*—concluded.**	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
22	Chittagong ...	11 0	11 0	11 0	...	...	...	8 0	8 0	14 0	16 0	16 5	17 5	...	...	...
23	Noakholly* ...	...	...	...	..	...	...	..	...	...	...	...	...	...	...	...
24	Tipperah ...	10 7	12 5	12 8				10 0	10 0	16 0	16	17 12½	20 0	.	...	...
25	Chittagong Hill Tracts.	.	..	..	...	.	.	10 0	10 0	11 6¾	11 6	13 5	13 5½	...	...	...
	Hill Tipperah ..	6 0	6 0	6 0	.	..	..	8 0	8 0	9 0	16 0	16 0	20 0	...	...	...
	BEHAR.															
26	Patna ...	17 4 / 15 8	Red. 17 8 / White. 15 4	... / 16 4	24 0	24 0	20 0	10 8	10 8	11 0	18 0	18 6	16 0	22 0	24 0	...
27	Gya ...	16 8	17 0	13 8	20 0	20 0	16 0	10 0	10 0	9 8	17 0	18 0	15 8	...	...	...
28	Shahabad ...	16 0	16 0	15 8	22 0	21 0	18 4	9 0	9 0	10 0	17 0	16 8	15 8	21 0	22 8	18 4
29	Durbhunga ...	17 0	16 0	12 9½	19 0	20 8	20 15½	14 8	12 8	10 2	19 8	20 0	14 5	...	...	...
30	Mozufferpore	14 0	13 0	12 0	20 0	18 0	...	10 0	10 8	9 0	18 0	19 0	12 0	...	...	...
31	Sarun ...	16 4	15 12	15 0	22 0	21 0	21 8	8 8	8 8	8 8	15 10	14 14	13 8	...	...	...
32	Chumparun ...	13 0	12 0	13 0	20 0	20 0	21 0	9 0	9 0	9 0	18 0	19 0	13 8	...	...	...
33	Monghyr ...	17 5	17 13	15 12	21 0	15 12	21 0	12 1	12 1	14 11	16 4	18 14	17 13	...	...	21 0
34	Bhagulpore ...	16 6	16 6	15 2	20 3	20 3	12 10	12 0	12 10	Old. 11 0 / New. 15 2	17 11	16 6	Old. 15 2 / New. 16 6	...	...	...
35	Purneah ..	20 0	20 0	14 0	...	...	...	17 0	20 0	14 0	19 0	22 0	16 0	...	...	...
36	Maldah ...	18 0	18 0	14 0	...	...	..	9 0	11 0	12 0	16 0	14 8	17 0	...	...	...
37	Sonthal Perghs.	14 0	15 0	13 0	...	...	.	12 0	12 0	12 8	18 0	17 0	19 0	...	...	...
	ORISSA.															
38	Cuttack ...	13 2	13 2	13 2		...	...	10 8	10 8	11 13	19 11	18 6	19 11	...	...	...
39	Pooree ..	13 2	13 2	11 13	...	...	...	14 7	14 7	11 13	22 10	22 10	17 1	..	...	...
40	Balasore ...	15 0	15 0	12 0	18 0	18 0	18 0	12 0	12 0	12 0	18 0	17 0	22 0	..	...	...
	CHOTA NAGPORE.															
	South-West Frontier Agency.															
41	Hazaribagh ..	14 0	13 0	12 0	12 0	11 0	11 0	10 0	10 0	8 0	20 0	20 0	17 0	...	...	...
42	Lohardugga ..	11 12	Red. 12 0	11 0	12 0	13 0	...	18 0	21 0	14 8	20 0	22 0	19 0	...	...	...
43	Singbhoom ..	10 0	10 0	10 0	20 0	20 0	20 0	16 0	16 0	16 0	20 0	20 0	20 0	..	...	...
	Manbhoom	13 5	13 5	11 8	...	...	...	13 0	12 8	13 0	22 0	21 0	22 0	...	...	...

* Return not received.

P At Cox's Bazar retail price of salt 8 seers per rupee.
Pl In subdivision retail prices of salt per rupee are:—Buxar 10 seers, Sasseram 10½ seers, and Bhabuah 9½ seers.
Q In subdivision retail prices of salt per rupee are:—Tajpore 11 seers and Madhubani 10 seers.
R In subdivision retail prices of salt per rupee are:—Hajipore 9¾ seers and Sitamarhi 10 seers.
S At Bettiah retail price of salt 9½ seers per rupee.

CALCUTTA,
The 7th January, 1890.

RS OF 80 TOLAHS.

ber 1889—(concluded).

R MONTH.

JRA, OR CUMBU. (*Penicillaria typhoideum.*)			MARUA OR RAGI. (*Eleusine Coracana.*)			KANGNI OR KAKUN. ITALIAN MILLET. (*Setaria italica.*)			GRAM, CHANA, CHHOLA, KADALAY OR SUNAGA. (*Cicer arietinum.*)			COMMON MASON, CARPENTER, OR BLACKSMITH.			DISTRICTS.
	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
	Ch. S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	
	.. ..	... .	.. ..	... .	.. ..	.. ..	... ...	... ...	12 0	12 0	1 8	Rs. A.	Rs. A.	Rs. A.	
	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	...	...	...				
	... ...	... ...	... ...	... ...	... ...	. ...	... ...	... ...	13 14½	13 14½	16 0	9 8 to 12 0	9 4 to 12 0	9 0 to 11 0	Chittagong.
	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	...	...	...				
	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	12 0	12 0	10 0	...	...	...	Noakholly.
															Tipperah.
															Chittagong Hill Tracts.
															Hill Tipperah.
	.. ..	... ...	24 0	26 0	...	19 8	19 8	15 8	22 8	23 0	19 0				
	. ...	... ...	...	...	...	15 0	15 0	14 4	19 0	20 0	17 0				
	. ...	... ...	...	...	...	...	...	...	22 0	22 0	18 0				
	. ...	... ...	29 8	28 4	19 12	18 4	...	...	26 0	27 0	17 0				
	. ...	... ...	...	...	...	...	...	...	19 0	20 0	16 0				
	. ...	... ...	23 8	22 0	20 0	14 8	14 0	15 0	21 3	21 0	17 8				
	. ...	... ...	28 8	28 0	23 0	...	...	...	22 0	18 0	15 0				
	. ...	... ...	...	...	16 13	15 3	...	10 8	22 5	22 1	19 2				
	. ...	... ...	...	...	...	...	...	...	20 3	20 3	16 11				
	. ... ..	... ...	...	...	...	...	...	...	16 0	16 0	13 0				
	. ...	... ...	...	...	...	...	...	...	16 0	17 0	12 0				
	.. ..	.. ..	..	...	...	...	...	...	16 0	16 0	14 0				
	. ...	... ...	...	...	...	...	..	...	15 2	15 2	18 6				
	. ...	... ...	...	...	...	...	...	...	17 1	15 12	13 2				
	. ...	... ...	...	...	...	...	..	...	14 0	14 0	13 0				
	. ...	... ...	30 0	33 0	20 0	...	...	...	16 0	16 0	14 0				
	. ...	... ...	40 0	40 0	29 0	...	...	...	13 8	13 14	15 8				
	... ...	... ...	...	...	...	...	...	...	10 0	10 0	12 0				
	... ...	... ...	...	...	...	...	...	...	15 8	15 12	13 5				

Eastern Districts—concluded.

9 8 to 12 0	9 4 to 12 0	9 0 to 11 0	Chittagong.
...	...	...	Noakholly.
...	...	...	Tipperah.
...	...	...	Chittagong Hill Tracts.
15 0	15 0	15 0	Hill Tipperah.
			BEHAR.
7 0 to 8 0	7 0 to 8 0	6 0 to 8 0	Patna.
6 0 to 8 0	6 0 to 8 0	6 0 to 8 0	Gya.
6 0 to 7 8	6 0 to 7 8	6 0 to 7 8	Shahabad.
...	...	...	Durbhunga.
7 8 to 9 6	5 0 to 8 0	5 0 to 8 0	Mozufferpore.
6 9 to 10 0	6 9 to 10 0	6 9 to 10 0	Sarun.
5 10 to 9 6	5 10 to 9 6	5 10 to 9 6	Chumparun.
6 0 to 8 0	5 0 to 12 0	6 0 to 8 0	Monghyr.
7 8 to 1 4	7 8 to 11 4	6 9 to 11 4	Bhagulpore.
7 0 to 6 0	7 0 to 16 0	7 0 to 16 0	Purneah.
8 0 to 12 0	10 0 to 15 0	8 0 to 10 0	Maldah.
7 8 to 9 6	7 8 to 9 6	7 8 to 9 6	Sonthal Pergns.
			ORISSA.
...	...	...	Cuttack.
...	...	...	Pooree.
7 0 to 9 0	7 0 to 10 0	7 8 to 12 3	Balasore.
			CHOTA NAGPORE.
			South-West Frontier Agency.
7 8	8 0	7 8	Hazaribagh.
11 to 1	4 11 to 14 1	6 0 to 12 0	Lohardugga.
...	...	...	Singbhoom.
..	...	...	Manbhoom.

rs.

V In Khoorda subdivision retail price of salt 11 seers per rupee. (at Ranigunge) 9 seers.
W At Bhudruck retail price of salt 9 seers per rupee.
X At Govindpore retail price of salt 9 seers per rupee.

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt

Number.	MARTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta ...	2 12 2	2 12 3	2 11 3	2 2 6	2 1 11	2 2 3	4 6 5	4 10 2	3 11 6	2 11 4	2 12 0	2 6 0
2	Serajgunge ...	2 4 0	2 8 0	2 5 0	...	...	...	5 8 0	5 8 0	3 6 0	2 12 0	3 0 0	2 6 0
3	Dacca ...	3 0 0	3 0 0	2 10 0	2 7 0	2 7 0	1 15 0	3 0 0	3 4 0	2 12 0	2 7 0	2 12 0	2 8 0
4	Naraingunge	...	...	...	...	...	...	3 0 0	3 4 0	2 4 0	2 12 0	3 0 0	2 3 0
5	Chittagong ...	3 8 0	3 8 0	3 8 0	...	..	...	4 8 0	4 8 0	2 12 0	2 8 0	2 8 0	2 1 0
6	Patna ...	Red. 2 4 6 / White. 2 9 0	Red. 2 4 0 / White. 2 9 0	... / 2 8 0	1 10 0	1 9 6	1 14 0	3 12 0	3 12 0	3 8 0	2 2 6	2 0 0	2 7 0
7	Balasore ...	2 8 0	2 8 0	3 8 0	3 0 0	3 0 0	3 0 0	3 4 0	3 4 0	3 4 0	2 4 0	2 4 0	1 10 0
8	Pooree ...	...	...	...	...	..	.	...	...	...	1 15 0	1 15 0	2 2 6
9	Cuttack ...	3 0 0	3 0 0	3 0 0	..	..	...	3 0 0	3 0 0	3 4 0	2 0 0	2 3 0	2 0 0

CALCUTTA,
The 7th January, 1890.

gal on the 31st December 1889.

PRICES PER MAUND

Jowar or Cholum. (*Sorghum Vulgare.*)			Bajra or Cumbu. (*Pennisetum typhoideum.*)			Arhar or Thur. Cadjan I'ra. (*Cajanus indicus.*)			Firewood.			Salt.			MARTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
2 1 7	2 7 0	2 0 0	2 13 7	2 12 3	3 1 6	2 2 11	2 2 7	2 2 6	0 5 6	0 5 6	0 6 0	3 11 11	3 11 1	3 9 6	Calcutta.
...	...	...	...	...	...	...	...	...	...	...	...	4 2 0	4 2 0	3 13 0	Serajgunge.
...	...	...	...	...	...	2 12 0	2 12 0	2 8 0	0 4 0	0 4 0	0 5 0	4 4 0	4 4 0	4 4 0	Dacca.
...	...	...	...	...	...	3 4 0	3 4 0	3 2 0	0 8 0	0 8 0	0 10 0	4 0 0	4 0 0	3 12 0	Naraingunge.
...	...	...	...	...	...	...	...	...	0 7 0	0 7 0	0 5 0	4 0 0	4 0 0	3 14 0	Chittagong.
1 12 0	1 9 6	...	...	...	...	1 14 0	1 12 0	1 12 0	0 5 0	0 5 0	0 5 3	3 14 0	3 14 0	3 13 0	Patna.
...	...	...	...	...	...	...	...	...	0 5 0	0 5 0	0 4 6	3 15 0	4 2 0	3 13 6	Balasore.
...	...	...	...	...	...	...	...	...	...	...	...	3 6 0	3 6 0	3 6 0	Pooree.
...	...	...	...	...	...	2 12 0	2 2 0	2 2 0	0 8 0	0 8 0	0 8 0	3 12 0	3 13 0	3 12 0	Cuttack.

ıblished for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of Bengal

Meteorological Division	District	Representative station	Station Observations. Air pressure. Mean barometric height, 8 A.M.	Air pressure. Mean reduced to sea-level.	Air pressure. Variation from mean.	Wind. Prevailing direction.	Wind. Mean wind velocity.	Temperature. Highest during week.	Temperature. Date.	Temperature. Lowest during week.	Temperature. Date.	Temperature. Mean maximum temperature.	Temperature. Mean minimum temperature of week.	Temperature. Mean daily temperature of week.	Temperature. Variation from normal mean of week.	Temperature. Mean, 8 A.M., temperature.
Orissa.	Pooree	Pooree ...	30·010	30·023	—	N	134	?	?	53·5	2nd Jan.	?	56·4	?	?	65·4
		Gopalpore	30·005	30·055	—·061	NNW	209	84·2	2nd Jan.	60·4	2nd ,,	81·5	65·2	73·4	+3·8	67·8
		False Point ...	30·004	30·023	—·067	NNW	141	80·4	2nd ,,	52 0	2nd ,,	78 3	57·7	68·0	+0·2	65·6
	Cuttack	Cuttack ...	29·902	30·018	—·049	Calm	21·9	84·8	28th Dec.	55·6	1st ,,	82·3	59·7	71·3	+0·5	64·0
	Balasore	Balasore ..	29·986	30·048	—·059	NNW	94 8	81·3	28th ,,	51·0	3rd ,,	79·2	55·7	67·4	+1·3	60·9
South-West Bengal.	South-West Midnapore / South 24-Pergunnahs	Sangor Island	30·003	30·030	—·068	North-erly.	175	78·2	29th ,,	55·9	2nd ,,	75·9	59·8	67·9	+1·3	63·8
	Midnapore	Midnapore ..	29·883	30·042	—·109	N	48·6	81·3	28th & 29th Dec.	52·2	31st Dec. to 3rd Jan.	79·0	55·2	67·4	—	62·1
	24-Pergunnahs ... ... / Howrah ... .. / Hooghly	Calcutta	30·006	30 029	—·077	N	69	79·5	28th ,,	52·8	1st ,,	76·6	56·4	66·5	+1·3	60·5
	Burdwan	Burdwan	29·920	30·027	— 089	WNW	37·1†	80·5	28th ,,	52·3	2nd ,,	77·6	55·9	66·8	+1·4	59·7
	Bankoora	Bankoora ...	29·703	30·023	— ·078	W	66·7	79·1	28th & 29th Dec.	52·0	2nd ,,	77·3	55·3	66 3	+1·4	59·8
	Beerbhoom ... ... / West Burdwan	Raneegunge	29·697	30·051	—·073	W & WNW	61·0	79·5	28th & 29th Dec.	52·2	2nd ,,	78·3	55·4	66·8	+1 9	59·1
	Moorshedabad	Berhampore...	29·949	30·020	— 068	North-westerly.	42·4	78·1	28th ,,	53·2	2nd ,,	75·7	55·1	65·5	+1·2	57·8
	Nuddea	Krishnaghur...	29·981	30·051	—·056	WNW	75·8	80·3	28th ,,	49·0	1st ,,	77·2	53·8	65·5	+2·2	59·2
	Jessore ... ... / Khoolna	Jessore ..	29·980	30·015	—·079	Calm & NW.	39·7	80·7	28th ,,	52·5	2nd ,,	77 1	56·5	66·9	+2·1	59·0
East Bengal.	Chittagong	Chittagong	29 904	29·998	—·094	W	42·6	80·6	28th ,,	56·6	2nd ,,	78 2	58·7	68·5	+2·1	63·5
	Chittagong Hill Tracts	Demagiri .	Observations not received.													
	Backergunge	Barrisal ..	29·995	30·008	—·009	Calm & NW	38·2	79·3	28th Dec.	55·1	1st ,,	76·6	56·4	66·5	+2 1	60·6
	Noakholly	Noakholly ...	29·968	30·014	—	Calm	73·1	81·3	28th ,,	53·0	2nd ,,	77·6	54·5	66·1	—	62·3
	Furreedpore	Furreedpore...	29·978	30 029	—·063	Calm	42·9	73 8	29th Dec. & 3rd Jan.	53·5	1st ,,	73·6	56·6	65·1	+1·8	60·7
	Dacca	Dacca ...	29·972	29·996	—·090	North-erly.	72·6	80·6	28th Dec.	54·3	1st & 2nd Jan.	77·9	56·6	67·3	+1·2	61·7
	Tipperah	Commillah ...	29·964	30·021	—·061	N	15·9	80·4	28th ,,	54·0	2nd ,,	78·2	55·4	66 7	+3·1	63·5
	Mymensingh	Mymensingh	29·946	30·007	—·079	Calm	32·2	78·9	28th ,,	53·4	28th Dec.	76·3	54·9	65·6	+2 7	59·1
North Bengal.	Bogra	Bogra .	29·925	29·9:2	—·083	NW	26·2	78·8	28th ,,	52·1	1st Jan.	76·7	53·8	65·2	+0·5	58·0
	Pubna	Serajgunge ..	29·950	29·999	—·088	W & WNW	8·7	78·9	28th ,,	51·5	1st ,,	77·0	54·4	65·6	+2·7	59·3
	Rajshahye	Rampo Beau leah.	29·942	30·015	— 069	N	78·3	78·4	28th ,,	51·7	1st ,,	75·7	54 3	65·0	+3·5	58 9
	Maldah	Maldah ...	29·951	30·037	—	NW	83·5	78·0	28th ,,	50·4	2nd ,,	76·5	52·0	64·2	—	60·0
	Dinagepore	Dinagepore	29·901	30·030	—·052	NW	47·9	78 1	28th ,,	49 3	31st Dec. & 1st Jan.	76·4	50 9	63·6	+1·4	56·3
	Rungpore	Rungpore	29·905	30·039	—·057	NNW	22	77·0	28th ,,	49·1	31st Dec.	76·1	51·4	63·8	+2·0	56·1
	Julpigoree ... ... / Cooch Behar	Julpigoree ...	29·753	30 058	—·076	N	?	?	?	50·9	30th ,,	?	52·8	?	?	56·4
	Darjeeling Hill Tracts ...	Darjeeling ..	22·950	—	—	NE	74·4	55·0	29th ,,	36·7	3rd Jan.	53·7	38·1	45·9	+6·0	41·8
North Behar.	Purneah ... ... / North Bhagulpore ...	Purneah ...	29 894	30·031	—·082	Calm	27·6	75·2	28th ,,	48·0	28th Dec.	73 8	49·0	61·4	+0·6	52·8
	Mozufferpore	Mozufferpore	Observations suspended.													
	Durbhunga	Durbhunga ..	29·873	30·052	—·067	WsW	51·1	76·4	28th Dec.	51·2	1st Jan.	75·1	53·0	64·0	+2·2	56·5
	Chumparun ..	Motihari ...	29·805	30·049	—·05)	Variable	94·7	75·6	28th ,,	44·9	1st ,,	74·2*	48·0	61·0*	+0·7	53·3
	Sarun ...	Chupra ..	Observations incomplete.													
South Behar.	Shahabad	Dehree ..	29 603	30·073	—·061	SSW	152·9	76·8	1st Jan.	47·8	3rd ,,	76·5	52·0	64·2	+3·7	56·9
		Buxar ..	29·802	30·063	—·064	WNW	79·7	76 3	1st ,,	47·9	2nd ,,	74·2	51·1	62·7	+1·8	55·6
		Arrah ...	29·884†	30·094†		WSW	63·1	77·3	1st ,,	47·6	2nd ,,	74·8	49·0	61·4	+2·6	54 3
	Gya	Gya ...	29·659	30·065	—·061	S	119·0	78·5	1st ,,	49·3	2nd ,,	75·6	51·4	63·6	+1·0	55 9
	Patna ...	Bankipore ...	29·861	30·057	—·079	Calm & W	43·0	76·7	1st ,,	50·2	2nd ,,	74 4	51·6	63·0	+2·5	56·6
	South Bhagulpore / Monghyr	Bhagulpore ...	29·862	30·034	—·071	WNW	43·9	77·3	1st ,,	40·1	1st & 2nd Jan.	75·3	50·4	62·9	+1·8	55·2
	Sonthal Pergunnah ..	Doomka ...	29·514	30·040	—	NNW	46·5	77·6	28th Dec.	46·8	2nd ,,	75·2	51·0	63·1	—	56·1
Chutia Nagpur.	Hazaribagh	Hazaribagh ..	27·964	30·069	—·063	South-westerly.	193·4	75·2	29th ,,	47·4	2nd ,,	72·1	50·3	61·2	+1·0	57·0
	Lohardugga ... ... / Manbhoom	Ranchee ...	27·833	30·058	—·064	Variable	112·3	75·5	29th ,,	45·1	3rd ,,	73·1	49·5	61·3	+1·3	56·5
	Singbhoom	Chyebassa ...	29·254	30·061	—	SSW	25·7	80·5	29th ,,	49·0	2nd ,,	78·7	52·8	65·8	—	59·7

* Means of five days. | † Means of six days.

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the la
The *humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The numb
are the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the p
stations in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

...r the week ending Friday, the 3rd of January 1890.

Average humidity at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	Of week. Mean for district.	Of week. Normal mean.	District observations. Rainfall. Since 1st of December 1889. Mean for district.	Since 1st of December 1889. Normal mean.	Since 1st of December 1889. Variation.	Since May 15th, 1889. Mean for district.	Since May 15th, 1889. Normal mean.	Since May 15th, 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
86	0·7	Nil	Nil	0·02	0·35	0·86	−0·51	74·88	55·18	+19·70	0·0	0·1	Pooree	Pooree	Orissa.
78	0·6	Nil											Gopalpore		
87	0·4	Nil											False Point		
75	2·6	Nil	Nil	0·01	0·05	0·58	−0·53	64·24	51·55	+14·69	0·0	0·1	Cuttack	Cuttack	
84	0·7	Nil	Nil	0·10	0·02	0·38	−0·36	49·89	52·65	−2·76	0·0	0·2	Balasore	Balasore	
87	1·0	Nil	Nil	0·06	0·04	0·40	−0·36	58·43	62·04	−3·61	0·0	0·1	Saugor Island	South-West Midnapore	South-West Bengal.
														South 24-Pergunnahs	
72	1·0	Nil	Nil	0·14	Nil	0·39	−0·39	46·29	51·14	−4·85	0·0	0·2	Midnapore	Midnapore	
82	0	Nil	Nil	0·09	Nil	0·38	−0·38	53·38	51·25	+2·13	0·0	0·2	Calcutta	24-Pergunnahs	
														Howrah	
														Hooghly	
72	0	Nil	Nil	0·02	Nil	0·21	−0·21	43·83	46·31	−2·48	0·0	0·1	Burdwan	Burdwan	
72	1·1	Nil	Nil	0·01	Nil	0·31	−0·31	55·88	52·29	+3·59	0·0	0·1	Bankoora	Bankoora	
76	0	Nil	Nil	0·02	Nil	0·15	−0·15	52·44	51·18	+1·26	0·0	0·1	Raneegunge	Beerbhoom	
														West Burdwan	
87	0	Nil	Nil	0·04	Nil	0·18	−0·18	51·15	50·02	+1·13	0·0	0·1	Berhampore	Moorshedabad	
85	0	Nil	Nil	0·07	Nil	0·21	−0·21	51·49	48·90	+2·59	0·0	0·2	Krishnaghur	Nuddea	
93	0·3	Nil	Nil	0·07	0·00	0·03	−0·27	53·39	52·71	+0·68	0·0	0·2	Jessore	Jessore	
														Khoolna	
91	2·7	Nil	Nil	0·00	0·42	0·62	−0·20	100·02	113·04	−13·02	0·0	0·2	Chittagong	Chittagong	East Bengal.
			Nil	0·05	0·68	0·60	+0·08	65·13	80·65	−15·52	0·0	0·2	Demagiri	Chittagong Hill Tracts	
91	0	Nil	Nil	0·05	0·24	0·48	−0·24	77·82	76·37	+1·45	0·0	0·2	Barrisal	Backergunge	
90	0	Nil	Nil	0·20	0·26	1·01	−0·75	90·29	106·01	−15·72	0·0	0·3	Noakholly	Noakholly	
91	0	Nil	Nil	0·05	0·02	0·18	−0·16	60·23	55·44	+4·79	0·0	0·1	Furreedpore	Furreedpore	
86	1·3	Nil	Nil	0·04	Nil	0·29	−0·29	74·59	59·25	+15·34	0·0	0·1	Dacca	Dacca	
85	0	Nil	Nil	0·07	0·02	0·44	−0·42	55·45	68·87	−13·42	0·0	0·2	Commillah	Tipperah	
93	1·4	Nil	Nil	0·09	Nil	0·24	−0·24	87·63	67·22	+20·41	0·0	0·2	Mymensingh	Mymensingh	
86	0	Nil	Nil	0·05	0·01	0·19	−0·18	64·81	56·94	+7·87	0·0	0·1	Bogra	Bogra	North Bengal.
90	0·3	Nil	Nil	0·06	0·08	0·17	−0·09	55·07	52·90	+2·17	0·0	0·1	Sorajgunge	Pubna	
82	0	Nil	Nil	0·01	Nil	0·14	−0·14	54·30	53·32	+0·98	0·0	0·1	Rampore Beauleah	Rajshahye	
86	0	Nil	Nil	0·03	Nil	0·13	−0·13	39·76	53·75	−13·99	0·0	0·1	Maldah	Maldah	
80	1·6	Nil	Nil	0·01	Nil	0·19	−0·19	57·37	56·60	+0·77	0·0	0·1	Dinagepore	Dinagepore	
90	0	Nil	Nil	0·03	Nil	0·18	−0·18	85·16	73·72	+11·44	0·0	0·1	Rungpore	Rungpore	
89	0	Nil	Nil	0·01	Nil	0·17	−0·17	117·13	111·20	+5·93	0·0	0·1	Julpigoree	Julpigoree	
														Cooch Behar	
87	2·9	Nil	Nil	0·05	Nil	0·34	−0·34	132·75	120·29	+12·46	0·0	0·2	Darjeeling	Darjeeling Hill Tracts	
94	0·9	Nil	Nil	0·05	Nil	0·14	−0·14	74·71	58·15	+16·56	0·0	0·1	Purneah	Purneah	Chutia Nagpur Range.
														North Bhagulpore	
			Nil	0·06	Nil	0·14	−0·14	48·66	42·63	+6·03	0·0	0·2	Mozufferpore	Mozufferpore	
87	0	Nil	Nil	0·09	Nil	0·17	−0·17	51·84	44·10	+7·74	0·0	0·2	Durbhunga	Durbhunga	
89	0	Nil	Nil	0·05	Nil	0·23	−0·23	63·55	46·14	+17·41	0·0	0·2	Motihari	Chumparun	
			Nil	0·02	Nil	0·17	−0·17	40·13	42·21	−2·08	0·0	0·1	Chupra	Sarun	
74	0	Nil											Dehree		
74	0	Nil	Nil	0·06	Nil	0·38	−0·38	40·07	39·62	+0·45	0·0	0·2	Buxar	Shahabad	
82	0·1	Nil											Arrah		
67	0	Nil	Nil	0·06	Nil	0·28	−0·28	37·07	40·92	−3·85	0·0	0·2	Gya	Gya	
75	0·3	Nil	Nil	0·06	Nil	0·18	−0·18	43·49	40·81	+2·68	0·0	0·2	Bankipore	Patna	Patna Range.
67	0	Nil	Nil	0·04	Nil	0·11	−0·11	42·43	43·08	−0·65	0·0	0·2	Bhagulpore	South Bhagulpore	
														Monghyr	
80	0	Nil	Nil	0·05	Nil	0·15	−0·15	54·15	50·34	+3·81	0·0	0·2	Doomka	Sonthal Pergunnahs	
64	0	Nil	Nil	0·04	Nil	0·31	−0·31	42·03	50·11	−7·08	0·0	0·1	Hazaribagh	Hazaribagh	Chutia Nagpur Range.
71	0·9	Nil	Nil	0·06	Nil	0·42	−0·42	44·34	48·64	−4·30	0·0	0·2	Ranchi	Lohardugga	
			Nil	0·03	Nil	0·23	−0·23	38·33	46·45	−8·12	0·0	0·1		Manbhoom	
75	0·6	Nil	Nil	0·03	Nil	0·41	−0·41	48·76	50·81	−2·05	0·0	0·2	Chyebassa	Singbhoom	

ton years. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
17 years. The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at the subdivisional

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 3rd of January 1890.

Geological division.	District.	Station.	Rainfall. Saturday, 28th December 1889.	Sunday, 29th December.	Monday, 30th December.	Tuesday, 31st December.	Wednesday, 1st January 1890.	Thursday, 2nd January.	Friday, 3rd January.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of December 1889.	Average total rainfall from 1st of December 1889.	Total rainfall since 16th May 1889.	Average rainfall from 16th May 1889 to date.
...ssa ...	Pooree ...	Pooree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·21	0·74	80·63	51·06
		Khurdah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·54	76·57	56·25
		Banpur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·14	1·29	65·50	49·92
		False Point ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	1·04	0·84	76·80	63·25
		Gop ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Pipli ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	Cuttack	Jagatsingpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	73·97	46·73
		Banki ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·87	52·43	40·26
		Cuttack ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	75·18	56·02
		Kendrapara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·28	0·51	72·03	52·78
		Jajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·74	57·64	53·03
		Dharmsala ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·25	?
		Salipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	?
	Balasore ...	Chandbali ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·13	0·69	54·64	51·99
		Bhuddruck ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·42	57·60	51·29
		Sorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	46·05	50·86
		Balasore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·45	46·61	57·49
		Jellasore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	39·50	53·39
		Baripodah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	54·79	53·51
...UTH-WEST BENGAL.	Midnapore ...	Contai ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·05	0·46	55·13	61·01
		Saugor Island	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·03	0·40	56·74	66·74
		Tumlook ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	49·40	50·87
		Midnapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	46·26	48·32
		Ghattal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	43·19	54·19
		Kukrahaty ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·65	?
		Heria ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	65·06	?
		Bhagwanpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·72	?
		Garbetta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	?
	24-Pergunnahs	Diamond Harbour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·04	0·35	63·41	57·05
		Canning Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·17	?	57·80	?
		Alipore Jail ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·52	51·80	55·32
		Barrackpore...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	51·79	49·45
		Dum-Dum ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	64·58	51·19
		Baraset ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	57·61	49·38
		Busseerhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	60·92	54·17
	Howrah ...	Howrah .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·42	59·12	51·42
		Mohesreka ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·49	54·64	51·66
		(*Ooloberiah.*)													"
	Hooghly ..	Serampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	55·27	49·75
		Hooghly ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	36·93	47·79
		Jehanabad ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·03	0·23	41·16	54·68
	Burdwan ...	Culna ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	41·32	43·96
		Burdwan ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	47·07	47·52
		Cutwa ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	43·11	47·35
		Raneegunge ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	55·83	48·09
		Mankur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·71	?
	Bankoora ...	Bankoora ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	50·79	51·16
		Bishenpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	57·40	51·60
		Maliara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23		51·58
		Khatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	65·91	53·73
		Indas ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	?
		Kotalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	?
		Anda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·44	?
		Gangajalghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·17	?
		Raipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	?
		Sonamukhi ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·33	?
	Beerbhoom	Bh. Soory ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	59·06	53·27
		Hetampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	47·07	53·50
		Rampore Haut	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	47·78	51·02
		Bolpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·97	?
		Murarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	?
	Nuddea ...	Ranaghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	55·80	46·61
		Kishnaghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	42·05	45·74
		Chooadanga ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	49·81	50·72
		Meherpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	53·05	47·22
		Kooshtea ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	55·91	54·05
	Khoolna ...	Satkhira .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·01	0·43	58·51	54·82
		Bagirhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·31	0·30	54·00	60·82
		Khoolna ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·18	0·42	55·78	54·25
		Nakipur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·30	?	?	?
	Jessore ...	Narail .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	49·47	45·36
		Jessore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	62·35	53·80
		Jhenidah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	50·36	53·02
		Magoorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	56·49	48·92
		Bongong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	46·01	51·42
	Moorshedabad	Kandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	55·38	50·70
		Berhampore...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	46·16	50·77
		Lalbagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	47·13	50·55
		Azimgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13		50·65
		Jungipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	55·01	48·68
		Lalgola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	59·02	50·39
		Jiagunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·25	?
		Akkriguj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	42·81	?
		Patkabari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
...ST BENGAL	Chittagong ...	Cox's Bazar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·13	0·45	123·59	135·06
		Chittagong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·71	0·75	76·42	93·82
		Kutubdia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·05	?	113·09	?
		Satkanya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·10	?	63·66	?
	Chittagong Hill Tracts.	Ranganati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·40	0·64	63·04	63·18
		Ruma ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·95	0·55	67·20	79·85
	Backergunge	Patuakhally ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·05	0·56	67·20	67·16
		Perozepore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·20	0·34	72·16	69·37
		Burrisal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·44	0·39	73·92	67·09
		Bhola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·27	0·64	79·26	81·52

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 3rd of January 1890—contd.

Meteorological Division.	District.	Station.	Rainfall. Saturday, 28th December 1889.	Sunday, 29th December.	Monday, 30th December.	Tuesday, 31st December.	Wednesday, 1st January 1890.	Thursday, 2nd January.	Friday, 3rd January.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of December 1889.	Average total rainfall from 1st of December 1889.	Total rainfall since 15th May 1889.	Average rainfall from 15th May 1889 to date.
...ST BENGAL —concld.		*Gournaddi* ...	...	.....	.....	.....	.....	.....	.....	Nil	Nil		?		?
		Bauphal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·35	?	92·89	?
	Noakholly ...	Noakholly ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·12	0·75	102·17	107·31
		Fenny ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·40	1·25	78·38	106·15
		Harishpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·39	?	82·36	?
		Ramganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	80·75	?
	Furreedpore	Madaripore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·00	0·19	60·86	54·97
		Furreedpore...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	63·80	55·93
		Goalundo ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	56·29	52·61
	Dacca ...	Munshigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	76·33	69·61
		Dacca ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	73·09	58·03
		Naraingunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	80·36	59·45
		Manickgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	67·99	49·59
		Joydebpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	66·61	?
	Hill Tipperah	Agartola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	44·08	60·95
	Tipperah ...	Comilla ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·08	0·62	62·17	75·49
		Chandpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	64·82	75·27
		Brahmunberia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	50·68	61·00
		Ramchandrapore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·14	?
		Nasirnagar...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30·59	?
		Daudkandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	52·29	?
		Kasba ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	62·44	?
		Laksham ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·09	?
	Mymensingh...	Kishoregunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	69·56	60·58
		Atia (*Tangail*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·02	0·10	61·00	54·08
		Mymensingh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	96·55	73·63
		Jamalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	85·14	64·75
		Netrokona ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	125·92	72·61
		Subornakhali	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·43	?
		Durgapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·98	?
		ShereporeTown	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·09	?
		Dewanganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	56·31	?
NORTH BENGAL.	Pubna ...	Pubna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·04	0·15	40·87	53·80
		Serajgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·13	0·17	60·26	52·42
	Bogra ...	Sherepore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	62·66	57·08
		Nowkhilla ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	60·96	53·87
		Bogra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·03	0·14	70·63	60·17
		Panchbibi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	64·00	55·41
	Rajshahye ...	Beauleah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	46·20	52·52
		Nattore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	58·84	54·31
		Naogaon ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	57·87	50·64
		Lalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30·72	?
		Manda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·27	?
	Maldah ...	Maldah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	50·53	51·89
		Chanchal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	28·06	56·20
		Gajol ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·79	?
		Sibganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·77	?
	Dinagepore ...	Mohadebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	53·63	55·83
		Churamon ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	51·82	51·92
		Raigunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	52·25	57·26
		Dinagepore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	67·84	63·02
		Balcorghat .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	61·28	50·90
		Thakoorgaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·47	?
	Rungpore ...	Bhawanigunge (*Gyabanda*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	87·55	61·29
		Rungpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	74·41	73·96
		Kurigram ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	90·97	73·83
		Bagdogra (*Nilphamari*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	87·09	84·04
		Ulipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	70·00	?
	Julpigoree ...	Julpigoree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	123·27	110·45
		Alipore Door	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·58	?
		Fallacotta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	127·43	?
		Debiganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	89·02	?
		Bhagatpore (*Nagrakatta*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	138·51	?
	Cooch Behar..	Dinhatta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	98·00	59·72
		Cooch Behar...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	125·34	117·86
		Mickilgunge...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	121·37	105·21
		Matabhanga...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	117·63	111·16
	Darjeeling Hill.	Buxa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·01	0·51	191·08	191·71
		Silliguri ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	120·71	102·50
		Darjeeling ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	127·87	108·14
		Kalimpong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	91·36	82·66
		Kurseong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	168·25	?
...RTH BEHAR	Purneah ...	Kissengunge...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	102·37	69·81
		Arrareah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	79·61	63·27
		Purneah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	63·15	61·16
		Gondwara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Balarampore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Matiari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Kaliaganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	North Bhagulpore.	Maddapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	60·85	49·00
		Soopool ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	67·26	47·74
		Protabganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·85	?
	Durbhunga ...	Tajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	42·44	42·71
		Durbhunga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	50·41	45·35
		Madhubani ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	63·11	44·36
		Rahera ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·96	?
		Ecshera ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·84	?
	Mozufferpore	Sitamarhi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	55·00	42·60
		Mozufferpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	48·41	44·79
		Hajipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	42·52	41·41
		Pare ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	37·69	?
		Mahua ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41·02	?
		Bishar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Pupri ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	47·60	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 3rd of January 1890—concld.

Meteorological Division.	District.	Station.	Rainfall. Saturday 28th December 1889.	Sunday, 29th December.	Monday, 30th December.	Tuesday, 31st December.	Wednesday, 1st January 1890.	Thursday, 2nd January.	Friday, 3rd January.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of December 1889.	Average total rainfall from 1st of December 1889.	Total rainfall since 16th May 1889.	Average rainfall from 16th May 1889 to date.
North Behar —concluded.	Chumparun...	Motihari ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	74·79	44·20
		Bettiah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	52·29	47·49
		Bagaha ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·87	?
		Burhurwa ...	.....	.....	.....	.....	.....	.....	.....				?	51·70	?
	Sarun ...	Gopalgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	35·48	42·73
		Newan ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	44·20	43·24
		Chuprah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	40·74	39·94
South Behar	Shahabad ..	Buxar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	47·44	37·88
		Dehree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·67	42·66	39·31
		Bhaboosh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	38·16	40·28
		Sasseram ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	29·41	40·32
		Arrah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	42·09	39·72
		Mohaniah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Gya ..	Aurungabad...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	35·42	42·30
		Gya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	39·35	42·08
		Nowadah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	39·59	39·44
		Jehanabad ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	33·40	39·44
		Arwal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34·34	?
		Daudnagar ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	26·09	?
		Sherghati ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	29·29	?
		Rainsli ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17·92	?
		PakriBarawan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·90	?
	Patna ...	Patna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	51·49	41·46
		Dinapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	45·53	41·02
		Behar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	41·08	41·33
		Barrh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	35·83	39·37
		Bickram ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·28	?
		Hilsa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	35·21	?
	Monghyr ...	Begoosarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	47·62	39·63
		Monghyr ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	41·07	46·09
		Jamui ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	30·48	42·36
		Gogri ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·10	?
		Sheikpura ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·32	?
	South Bhagulpore.	Bhagulpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	45·06	41·76
		Banka ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	38·34	43·23
		Kolgong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·97	?
		Bangaon ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Sonthal Pergunnahs.	Rajmehal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	59·90	52·06
		Godda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	40·04	47·14
		Pakour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	73·59	55·08
		Nya Doomka .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	56·75	54·71
		Deoghur ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	40·40	50·20
		Jamtara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	45·21	48·74
		Mohagama ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	56·41	?
		Nanihat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·87	
Chutia Nagpur.	Hazaribagh ...	Pachamba ... (*Giridi*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	38·90	47·10
		Hazaribagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	49·10	46·56
		Semtagurah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	36·24	46·41
		Mahudi Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36		47·27
		Jhoomra Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	43·00	52·05
		Barhi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·36	?
		Chatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·04	?
		Keraydeha ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·35	?
		Ramghar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	Lohardugga...	Lohardugga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	45·24	50·46
		Ranchi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	53·61	51·35
		Palamow ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	34·16	42·69
		Silli ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·80	?
		Balumat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Hossainabad...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·40	?
		Garwah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28·77	?
	Singbhoom	Chyebassa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·61	46·76	51·05
		Chakradharpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·80	?
		Ghatsilla ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·70	?
		Baharagora...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·80	?
	Manbhoom ...	Purulia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	45·46	49·5
		Gobindpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	33·19	44·5
		Raghunathpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·91	?
		Barrabhoom	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·32	?
		Jhalda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·42	?
		Chas ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·26	?

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the ret are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 7th January* 1890.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 3RD JANUARY 1890.

THE meteorology of the week ending the 27th of December 1889 had been important from the formation of a cyclonic storm in the south of the Bay which had advanced in a north-westerly direction, crossing the Madras coast between Masulipatam and Nellore on the afternoon or evening of December 26th. An advance of humid winds had passed over Bengal in connection with the storm, and heavily-clouded skies and in a few cases light rain showers had occurred over the southern districts of the province. With the gradual disappearance of the storm, and on its passing inland on the 26th, the weather in Bengal began to improve, and on the 26th and 27th conditions were decidedly less disturbed than they had been, while the skies had even commenced to clear.

The gradual return to the normal conditions for the cold weather season which had therefore commenced at the close of last week, continued at the beginning of the present week, and by the middle of the week conditions had become nearly normal. In the earlier part of the week, therefore, temperature, and particularly the night temperatures, fell rather rapidly, humidity also decreased, and the sky cleared rather quickly, while rainfall became entirely absent.

Pressure—Rose very slowly on the first day of the week, it then fell moderately for the next three or four days, commencing to rise again rather briskly on the 2nd January, which rise continued on the 3rd. The mean pressure of the province for the week has, however, been very considerably in defect of the normal, the defect usually ranging from five to about eight hundredths of an inch. This defect has been fairly equally distributed over the whole province.

Temperature—Has fallen generally during the week, but still the average mean temperature of the province has been nearly 2° above the normal. This excess has been largest in South-West and East Bengal and in South Behar, where the excess has equalled between two and three degrees.

The general temperature recorded during the week in the different districts of the province can be seen from the following table, where the average maximum, minimum and mean temperatures at nine typical stations are compared with their normal values for the same period. It will be seen that exceptionally high day temperatures have been recorded at Darjeeling, where the actual is almost 10° higher than the normal. The night temperatures at the same station exceed the normal by three degrees. Generally speaking, however, the excess temperatures are fairly equally divided over both day and night:—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 3rd January 1890.

	Normal mean maximum temperature for the week ending 3rd January.	Actual mean maximum temperature for the week ending 3rd January 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 3rd January.	Actual mean minimum temperature for the week ending 3rd January 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 3rd January.	Actual mean daily temperature for the week ending 3rd January 1890.	Variation of actual mean from the normal.
Cuttack	82·3	82·8	+0·5	59·2	59·7	+0·5	70·8	71·3	+0·5
Calcutta	75·2	76·6	+1·4	55·2	56·4	+1·2	65·3	66·5	+1·2
Dacca	76·7	77·9	+1·2	55·4	56·6	+1·2	66·1	67·3	+1·2
Burdwan	76·5	77·6	+1·1	53·9	55·9	+2·0	65·4	66·8	+1·4
Patna	71·9	74·4	+2·5	48·7	51·6	+2·9	60·5	63·0	+2·5
Gya	73·9	75·6	+1·7	50·9	51·4	+0·5	62·6	63·6	+1·0
Purneah	74·2	73·8	−0·4	47·1	49·0	+1·9	60·8	61·4	+0·6
Hazaribagh	71·0	72·1	+1·1	49·3	50·3	+1·0	60·2	61·2	+1·0
Darjeeling	44·5	53·7	+9·2	34·8	38·1	+3·3	39·9	45·9	+6·0

Rainfall—Has been entirely absent from the province throughout the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 3rd of January 1890 :—

Meteorological Divisions.	Temperature.						Rainfall.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of December 1889.		Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
Orissa*	84·8	51·0	80·4	50·6	70·0	+1·5	Nil	0·05	−0·05	0·0	0·2	−0·2	0·12	0·58	62·01	53·54
South-West Bengal ...	81·3	49·6	77·2	55·9	66·4	+2·3	Nil	0·06	−0·06	0·0	0·1	−0·1	0·01	0·29	52·37	51·59
East Bengal	81·3	53·0	76·9	56·2	66·5	+2·2	Nil	0·07	−0·07	0·0	0·2	−0·2	0·15	0·42	75·53	73·75
North Bengal*	78·9	49·1	76·4	52·8	64·6	+1·8	Nil	0·02	−0·02	0·0	0·1	−0·1	0·01	0·17	73·12	69·87
North Behar*	76·4	44·9	74·4	50·0	62·1	+1·5	Nil	0·05	−0·05	0·0	0·1	−0·1	Nil	0·16	57·66	48·21
South Behar	78·8	47·6	75·1	51·1	63·1	+2·6	Nil	0·05	−0·05	0·0	0·1	−0·1	Nil	0·22	44·16	43·35
Chutia Nagpur	75·5*	45·1*	72·6*	49·9*	61·2*	+1·1*	Nil	0·05	−0·05	0·0	0·1	−0·1	Nil	0·33	43·08	48·89

* Pooree, Julpigoree, Chupra and Chyebassa not included.

Meteorological Office, Bengal; *The 7th January* 1890.

A. Pedler,
Meteorological Reporter to the Govt. of Bengal.

Abstract of the results of Meteorological Observations taken at the Alipore Observatory in the month of December 1889.

		Date.	Hour
	Inches.		
The mean pressure of the month	29·987		
The average pressure of December from 24 years' registers ...	30·027		
The highest pressure in the month	30·137	18th	10
The lowest pressure in the month	29·837	31st	16
The range of pressure	0·301		
	Hours.		
The total number of hours of bright sunshine during the month	254·6		
The maximum possible number of hours of sunshine ...	332·8		
	⊖		
The mean temperature of the month	66·2		
The average temperature of December from 24 years' registers	68·0		
The highest temperature in the month	80·1	26th.	
The lowest temperature in the month	51·3	14th.	
The range of temperature during the month	28·8		
The mean daily range of temperature	19·2		
The greatest range of temperature in one day	23·2	14th.	
	Per cent.		
The mean humidity of the month	74		
The average humidity of December from 24 years' registers ...	71		
	Inches.		
The mean vapour tension of the month	0·474		
The average vapour tension of December from 9 years' registers	0·476		
The mean cloud proportion of the month	1·49		
The average cloud proportion of December from 12 years' registers	1·74		
	Inches.		
The total rainfall of the month	0·03		
The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground)	0·03		
The average fall of December from 48 years' registers ...	0·23		
The greatest fall in 24 hours	0·02	25th.	
	Days.		
The number of rainy days in the month	2		
The average number of rainy days in December from 24 years' registers	1		
	⊖		
The mean maximum equilibrium temperature of solar radiation during the month	129·7		
The mean difference of sun and air temperatures	53·4		
The greatest sun temperature	137·2	2nd.	
The greatest excess of sun over air temperature	61·3	2nd.	
The mean temperature of the nocturnal radiation thermometer on woollen cloth	50·0		
The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground	7·2		
The greatest depression of the nocturnal radiation thermometer below the minimum air temperature	9·5	15th.	
	Miles.		
The mean movement of the wind per day	54·3		
The greatest movement of the wind in one day	93·0	24th.	
The greatest movement of the wind in one hour	11·0	8th 11 to noon.	

The number of hours with winds from each of the 8 points—

N. 336, N.E. 91, E. 42, S.E. 9, S. 5, S.W. 6, W. 28, N.W. 115, Calm 112.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park Street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore ·003 lower. The diurnal range of [illegible] 2·38 lower [illegible]

C. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;
Calcutta, the 6th January 1890.

Results of the Meteorological Observations taken at the Alipore Observatory from 29th December 1889 to 4th January 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature.				Hygrometry.				Wind.		Rain.	Weather.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1889.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Dec.	29th	128·7	9·3	30·000	68·0	76·5	16·4	60·1	61·2	0·450	56·0	66	NNE, N and NNW	85	Nil	Chiefly clear, ≏.
,,	30th	128·5	9·1	29·969	66·3	76·5	18·3	58·2	60·5	·452	56·1	71	N and NNW ...	77	,,	Clear, ≏.
,,	31st	128·4	9·2	·897	64·1	74·7	20·6	54·1	58·9	·432	54·9	74	NE, WNW and NW	53	,,	Clear, ≏, =.
1890.																
Jan.	1st	126·5	8·7	·861	64·3	75·7	22·8	52·9	57·5	·385	51·6	68	SW, WNW and calm	70	,,	Clear, ≏, =.
,,	2nd	129·1	9·1	·922	63·9	74·8	21·1	53·7	57·3	·387	51·8	67	W and NNW ..	75	,,	Clear, ≏.
,,	3rd	125·8	8·8	·954	64·0	74·7	20·4	54·3	58·6	·421	54·2	71	N and NNW ...	46	,,	Chiefly clear, ≏, =.
,,	4th	134·7	7·1	·947	65·7	75·9	18·7	57·2	61·9	·504	59·2	80	NNW and calm ..			Partially cloudy, ≏.

	Inches.
The mean pressure of the seven days	29·936
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...	30·031
	Hours.
The total number of hours of bright sunshine	61·3
The maximum possible number of hours of sunshine	75·2
	°
The mean temperature of the seven days	65·2
The average temperature of the corresponding period for 24 years, S.-G.'s Office	67·0
The extreme variation of temperature	23·6
The maximum temperature	76·5
	Miles.
The highest velocity of the wind in one hour up to noon of the 4th January 1890	9
	lbs.
The highest pressure of wind on one square foot	Not measurable.
	%
The mean relative humidity	71
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office	71
	Inches.
The total fall of rain from 29th December 1889 to 4th January 1890 ...	Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	Nil
The total fall from 1st January 1889 to 4th January 1890	57·47
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	63·24

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

≏ dew; = fog.

	Inches.
The total rainfall in the year 1889	57·47
The average rainfall of the corresponding period for 24 years, S.-G's. Office ...	63·24

C. Little,

For Meteorological Reporter to the Govt. of India.

Meteorological Office, Govt. of India;

Abstract of the Results of the Barometric and Thermometric Observations taken at 10 a.m. at the Meteorological Office, Chowringhee, in the month of December 1889.

	Inches.	Date.
The mean pressure at 10 A.M. during the month	30·063	
	°	
The mean temperature at 10 A.M. during the month	70·5	
The highest temperature during the month	81·4	24th and 26th.
The lowest temperature during the month	52·1	14th.
The absolute range of temperature during the month	29·3	
The mean daily range of temperature during the month ...	20·0	
The greatest range of temperature in one day during the month ...	23·8	14th.
	%	
The mean 10 A.M. humidity during the month	67	
	Inches.	
The mean 10 A.M. vapour tension during the month	·501	
The total rainfall of the month	0·05	
The greatest fall in 24 hours	0·05	26th.
	Days.	
The number of rainy days in the month	1	

C. LITTLE,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA,
The 6th January 1890.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 29th December 1889 to 4th January 1890.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature. Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Hygrometry. Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	Rainfall
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Dec. 1889 ...	29th ...	30·086	68·6	77·1	17·0	60·1	70·0	61·7	·440	55·4	60	
,, ,, ...	30th ...	·080	66·7	75·9	18·5	57·4	68·1	62·2	·482	57·9	70	
,, ,, ...	31st ...	·063	65·4	75·9	21·0	54·9	68·6	63·2	·509	59·4	72	
Jan. 1890 ...	1st ...	29·951	65·5	75·9	20·9	55·0	68·6	60·7	·427	54·5	61	
,, ,, ...	2nd ...	30·006	65·3	76·1	21·7	54·4	68·6	61·2	·443	55·6	63	
,, ,, ...	3rd ...	·021	65·2	75·5	20·6	54·9	67·6	60·2	·424	54·4	62	
,, ,, ...	4th ...	29·996	67·3	77·7	20·8	56·9	69·8	63·6	·506	59·3	69	

	Inches.
The mean 10 A.M. pressure of the seven days	30·029
	°
The mean temperature of the seven days	66·3
The extreme variation of temperature	23·3
The maximum temperature	77·7
	%
The mean 10 A.M. relative humidity of the seven days	65
	Inches.
The total fall of rain from 29th December 1889 to 4th January 1890 ...	Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. LITTLE,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE. INDIA ;
The 6th January 1890.

MEMORANDUM.

THE chief features in connection with the vital statistics of the principal Municipalities in Bengal for the week ending 21st December 1889, are the following:—

1. That births and deaths were registered in these Municipalities at the rates, respectively, of 25·2 and 30·2 per 1,000 of population, as opposed to 26·9 and 31·6 per 1,000 in the preceding week ending 14th December, indicating a retrogression in the registration of both the events

2. That these events were returned in the highest proportions from the following Municipalities:—

Births.

	Ratio per *mille.*
Arrah	50·2
Narainganj	41·4
Serampore	39·3
Hughli and Chinsurah	37·7
Rampore Beauleah	36·8
Ranaghat	35·9
Comillah	34·7
Bhagulpore	34·4
Durbhanga	33·0
Howrah	32·1
Santipore	31·5
Jessore	30·6

Deaths.

	Ratio per *mille.*
Poori	90·2
Jessore	73·5
Hughli and Chinsurah	72·2
Serampore	70·7
Narainganj	70·4
Utterpara	56·6
Purneah	48·5
Comillah	46·2
Burdwan	45·8
Ranaghat	41·9
Bhagulpore	34·4
Rampore Beauleah	34·2
Monghyr	33·4
Gya	32·1
Chittagong	30·5

3. That the mortality from the principal death-causes stood as follows, in comparison with that of the preceding week:—

	Ratio per *mille* during the weeks ending—	
	21st December 1889.	14th December 1889.
Cholera	2·4	4·7
Small-pox	·2	·2
Fever	12·8	13·4
Bowel-complaints	5·2	5·0
Injury	·5	·4
Other causes	9·1	7·9

indicating chiefly that there was a noticeable decrease in the death-rate from cholera with an increase in that from the maladies classed under the head of "Other causes."

4. That while only one town (Poori, mortality 10·5 per 1,000 of population) exhibited fatal results from small-pox, and that to a noticeable extent, and injury shewed no conspicuous fatality anywhere, the under-mentioned Municipalities returned the highest death-rates from cholera, fever, bowel-complaints, and "Other causes":—

Cholera.

	Ratio per *mille.*
Narainganj ...	29·0
Serampore ...	7·8
Dacca ...	7·8
Hughli and Chinsurah ...	6·6
Howrah ...	2·9

Fever.

	Ratio per *mille.*
Jessore ...	61·2
Purneah ...	38·1
Poori ...	37·7
Hughli and Chinsurah ...	31·1
Burdwan ...	30·5
Rampore Beauleah	26·3
Darjiling ...	22·2
Chittagong ...	21·1

Bowel-complaints.

	Ratio per *mille.*
Serampore ...	27·5
Hughli and Chinsurah ...	19·7
Comillah ...	15·4
Poori ...	12·6

Other causes.

	Ratio per *mille.*
Poori ...	25·2
Ranaghat ...	23·9
Narainganj ...	20·7
Comillah ...	19·2
Serampore ...	15·7
Bhagulpore ...	15·4
Monghyr ...	14·4
Midnapore ...	12·4
Gya ...	12·3
Hughli and Chinsurah ...	11·5
Durbhanga ...	10·2
Chupra ...	10·1

5. That the mortality according to *Sex*, *Class* and *Age* stood as shown below:—

According to Sex.

	Ratio per *mille.*
Males	32·7
Females	27·5
Ratio of male deaths to every 100 female deaths	128

According to Class.

	Ratio per *mille.*
Christians	7·5
Hindus	30·9
Mahomedans ...	29·1

According to Age.

	Ratio per *mille.*
Under 1 year ...	204·9
1 and under 5 years ...	32·5
5 „ 10 „ ...	17·9
10 „ 15 „ ...	11·9
15 „ 20 „ ...	11·6
20 „ 30 „ ...	17·7
30 „ 40 „ ...	22·3
40 „ 50 „ ...	25·7
50 „ 60 „ ...	40·3
60 years and upwards ...	87·8

The 6th January 1890.

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

1	2	3			4			5			6	7							8							9	10		11		12
DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—															Sex.				
					NUMBER OF—			RATIO PER 1,000 OF POPULATION PER ANNUM.				Disease.																				
												DEATHS FROM—							RATIO PER 1,000 OF POPULATION PER ANNUM.								DEATHS.		RATIO PER 1,000 OF POPULATION PER ANNUM.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	Males.	Females.	Males.	Females.	Ratio of male deaths to every 100 female deaths.
Burdwan ...	Burdwan	18,063	1 ,017	34,080	5	8	13	7·6	12·2	19·8	62	...	...	20	5	...	5	30	...	...	30·5	7·6	..	7·6	45·8	27·5	19	11	54·7	35·7	172
Midnapore ...	Midnapore ..	16,927	16,633	33,560	2	10	12	3·1	15·5	18·6	20	...	...	3	...	...	8	11	...	...	4·6	...	..	12·4	17·0	21·7	4	7	12·3	21·9	57
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	12	11	23	19·7	18·0	37·7	109	4	...	19	12	2	7	44	6·6	...	31·1	19·7	3·3	11·5	72·2	59·1	29	16	91·8	52·6	175
Serampore ...	Serampore ...	13,359	12,937	26,496	11	9	20	21·6	17·7	39·3	122	4	...	9	14	1	8	36	7·8	...	17·7	27·5	2·0	15·7	70·7	64·4	22	14	84·4	56·3	157
	Utterpara	3,046	2,464	5,510	1	2	3	9·4	18·9	28·3	50	1	...	2	2	...	1	6	9·4	...	18·9	18·9	...	9·4	56·6	84·9	4	2	63·3	42·2	200
Howrah ..	Howrah	53,153	37,660	90,813	31	25	56	17·8	14·3	32·1	124	5	...	16	15	...	15	51	2·9	...	9·1	8·6	...	8·6	29·2	40·1	21	25	25·4	34·5	104
	Bali	7,836	6,979	14,815	4	3	7	14·0	10·5	24·6	133	1	...	3	3	...	...	7	3·5	...	10·5	10·5	...	...	24·6	21·1	3	4	19·9	29·8	75
Nuddea ..	Kishnaghur ...	13,263	14,214	27,477	6	6	12	11·3	11·3	22·7	100	...	...	7	...	...	5	12	...	...	13·2	...	...	9·5	22·7	20·8	4	8	15·7	29·3	50
	Ranaghat	4,028	4,655	8,683	1	5	6	6·0	29·9	35·9	20	...	...	3	...	...	4	7	...	...	19·0	...	...	23·9	41·9	24·0	4	3	51·6	33·5	133
	Santipore	13,708	15,979	29,687	11	7	18	29·2	12·3	31·5	157	...	...	2	...	...	1	3	...	...	3·5	...	...	1·7	5·2	17·5	2	1	7·6	3·3	200
Jessore ...	Jessore	4,880	3,665	8,495	3	2	5	19·4	12·2	30·6	150	...	...	10	...	...	2	12	...	...	61·2	...	...	12·2	73·5	91·8	7	5	75·4	70·9	140
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	10	4	14	26·3	10·5	36·8	257	...	...	10	...	...	3	13	...	...	26·3	...	...	7·9	34·2	21·0	9	4	43·5	23·0	225
Darjiling ...	Darjiling	4,579	2,439	7,018	1	...	1	7·4	...	7·4	No female births.	..	...	3	...	...	...	3	...	..	22·2	..	...	...	22·2	22·2	1	2	11·4	42·6	50
Dacca ...	Dacca	42,782	37,379	80,161	17	6	23	11·0	3·9	14·9	283	12	...	9	8	1	11	41	7·8	...	5·8	5·2	·6	7·1	26·6	38·3	19	22	23·1	30·6	86
	Naraingunj ...	7,605	4,956	12,561	4	6	10	16·8	24·8	41·4	66	7	...	3	2	...	5	17	29·0	...	12·4	8·8	...	20·7	79·4	124·2	11	6	75·2	63·0	183
Chittagong ...	Chittagong ...	13,340	8,790	22,130	2	1	3	4·7	2·3	7·0	200	1	...	9	1	..	2	13	2·3	...	21·1	2·3	...	4·7	30·5	21·1	7	6	27·3	35·5	116
Tipperah ...	Comillah	8,153	5,353	13,506	3	6	9	11·6	23·1	34·7	50	...	...	3	4	..	5	12	...	...	11·6	15·4	...	19·2	46·2	34·7	8	4	51·0	38·9	200
Patna	Patna City ...	78,762	61,475	160,237	26	11	37	8·4	3·6	12·0	236	6	...	16	5	1	12	43	1·9	...	5·2	2·6	·3	3·9	14·0	12·3	29	14	19·1	8·9	207
Gya	Gya	38,290	37,831	76,121	17	19	36	11·6	13·0	24·6	89	2	...	27	...	...	18	47	1·4	...	18·4	..	...	12·3	32·1	35·5	22	25	29·9	34·4	88
Shahabad ...	Arrah	20,960	22,505	43,465	24	18	42	23·7	21·5	50·2	133	...	...	6	3	1	...	10	...	...	7·2	3·6	1·2	...	12·0	22·7	4	6	9·9	13·9	63
Mozufferpore .	Mozufferpore ...	23,084	19,658	42,742	2	7	9	2·4	8·5	10·9	28	..	...	7	3	2	5	17	..	...	8·5	3·6	2·4	6·1	20·7	14·6	10	7	22·5	19·5	142
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	28	14	42	22·0	11·0	33·0	200	...	..	18	...	...	13	29	...	...	12·6	...	...	10·2	22·8	34·6	12	17	15·5	27·3	70
Sarun	Chupra	25,116	26,554	51,670	17	10	27	17·1	10·1	27·2	170	...	...	4	5	1	10	20	...	...	4·0	5·0	1·0	10·1	20·1	14·1	13	7	20·9	13·7	185
Bhagulpore ...	Bhagulpore ...	29,640	27,813	57,453	17	21	38	15·4	19·0	34·4	80	3	...	13	5	...	17	38	2·7	...	11·5	4·5	...	15·4	34·4	22·6	23	15	40·4	28·0	153
Monghyr ...	Monghyr	28,154	28,360	57,520	14	19	33	12·7	17·2	29·8	73	...	...	13	8	...	16	37	...	...	11·8	7·2	...	14·4	33·4	34·4	18	19	33·2	33·6	94
Purneah ...	Purneah	8,423	6,553	15,016	4	1	5	18·8	3·5	17·3	400	...	...	11	2	1	...	14	...	...	58·1	4·5	3·5	...	48·5	34·6	9	5	55·3	39·7	180
Poori	Poori	13,247	11,537	24,784	6	4	10	12·6	8·4	21·0	150	2	5	15	6	...	12	43	4·2	10·5	37·7	12·6	...	25·2	90·2	53·9	28	15	109·9	67·6	186
	Total ...	550,980	510,568	1,061,574	279	235	514	13·7	11·5	25·2	118	48	5	262	106	10	185	616	2·4	·2	12·8	5·2	·5	9·1	30·2	31·6	346	270	32·7	27·5	128

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Class. Deaths among— Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Ratio per 1,000 of Population per annum. Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan ...	Burdwan	...	21	9	...	...	...	46·1	45·6	...	...
Midnapore ...	Midnapore ...	...	10	1	...	...	...	29·1	7·2	...	...
Hughli ...	Hughli and Chinsurah	...	34	10	...	...	...	63·9	54·3	...	...
Serampore ...	Serampore ...	...	23	8	...	...	..	57·7	413·5	...	...
	Utterpara	...	5	1	...	...	...	48·8	252·6	...	...
Howrah ...	Howrah	...	40	11	...	...	...	36·5	27·9	..	..
	Bali	...	6	1	...	...	...	23·3	39·7	...	...
Nuddea ...	Kishnaghur ...	1	5	6	...	...	91·7	14·0	37·7	...	...
	Ranaghat	...	6	1	...	...	...	42·6	38·1	...	...
	Santipore	...	2	1	...	...	...	5·0	5·8	...	...
Jessore ...	Jessore	...	8	4	...	...	...	92·2	54·4	...	...
Rajshahye ...	Rampore Beauleah	...	7	6	...	...	...	36·7	31·8	...	...
Darjiling ...	Darjiling	...	3	...	...	...	...	34·0	...	...	...
Dacca	Dacca	...	28	13	...	...	...	38·1	17·2	...	...
	Narainganj ...	...	10	7	...	...	...	82·2	59·1	...	...
Chittagong ...	Chittagong ...	...	1	12	...	...	...	9·0	40·9	...	..
Tipperah ...	Comillah	...	4	8	...	...	...	35·0	58·3	...	...
Patna	Patna City ...	...	32	11	...	...	...	14·0	14·0	...	...
Gya ...	Gya	...	41	6	...	...	...	35·5	19·4	...	..
Shahabad ...	Arrah	...	5	5	...	...	...	8·4	21·0	...	...
Mozufferpore ..	Mozufferpore ...	...	12	5	...	...	...	20·8	20·8	...	...
Durbhanga ...	Durbhanga ...	...	22	7	...	...	...	23·6	20·7	...	...
Sarun	Chupra	...	14	6	...	...	...	18·4	26·2	...	...
Bhagulpore ...	Bhagulpore ...	...	26	12	...	...	..	34·0	36·2	...	...
Monghyr ...	Monghyr	...	29	8	...	...	...	33·7	33·1	...	...
Purneah ...	Purneah	...	8	6	...	...	...	46·3	55·1	...	...
Poori ...	Poori	...	43	...	...	...	...	91·1	...	...	...
	TOTAL ...	1	450	165	...	...	7·5	30·9	29·1	...	...

MORTALITY ACCORDING TO— Age.

DISTRICTS.	NAMES OF MUNICIPALITIES.	Deaths: Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	1	5	3	...	1	3	4	6	1	6
Midnapore ...	Midnapore ...	2	...	...	1	...	1	...	2	3	2
Hughli ...	Hughli and Chinsurah	9	4	1	1	...	9	6	6	4	4
Serampore ...	Serampore ...	5	5	1	1	1	2	5	4	3	9
	Utterpara	1	2	1	...	...	...	2	...	...	...
Howrah ...	Howrah	7	4	2	2	3	12	4	3	2	12
	Bali	...	1	1	...	1	1	1	...	1	1
Nuddea ...	Kishnaghur ...	5	...	..	...	...	...	1	...	4	2
	Ranaghat	2	...	1	...	..	...	1	3	...	...
	Santipore	1	...	...	..	...	..	...	...	1	1
Jessore ...	Jessore	4	...	..	1	...	2	3	1	1	...
Rajshahye ...	Rampore Beauleah	3	1	2	..	...	.	...	2	1	4
Darjiling ...	Darjiling	..	...	...	...	...	..	1	2	...	...
Dacca	Dacca	4	6	...	3	4	8	6	3	2	5
	Narainganj ...	1	1		1	...	4	4	4	...	2
Chittagong ...	Chittagong ...	4	1	1	...	...	2	4	...	...	1
Tipperah ...	Comillah	4	1	...	..	...	1	2	1	1	2
Patna	Patna City ...	6	3	4	4	1	2	4	6	3	10
Gya ...	Gya	8	7	1	1	1	2	4	1	8	14
Shahabad ...	Arrah	2	1	1	...	...	1	1	...	2	2
Mozufferpore ..	Mozufferpore ...	4	2	3	1	1	..	2	1	2	1
Durbhanga ...	Durbhanga ...	10	...	5	1	1	...	3	1	2	6
Sarun	Chupra	3	3	1	1	...	1	2	2	4	3
Bhagulpore ...	Bhagulpore ...	4	7	4	1	...	2	3	4	6	7
Monghyr ...	Monghyr	8	2	2	...	1	7	3	4	...	10
Purneah ...	Purneah	1	1	1	1	1	4	1	2	1	1
Poori ...	Poori	1	1	3	2	2	8	8	4	8	6
	TOTAL ...	100	58	38	22	18	72	75	62	60	111

MORTALITY ACCORDING TO— Age. Ratio per 1,000 of Population per annum.

DISTRICTS.	NAMES OF MUNICIPALITIES.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	78·9	115·2	66·9	...	16·6	19·7	30·2	70·6	21·2	210·5
Midnapore ...	Midnapore ...	140·0	...	...	17·1	...	7·1	...	27·9	75·6	56·8
Hughli ...	Hughli and Chinsurah	552·8	93·7	18·0	21·0	...	75·4	54·7	74·8	80·0	100·3
Serampore ...	Serampore ...	366·2	144·0	20·7	23·4	23·8	19·3	52·3	61·6	81·5	336·4
	Utterpara	323·0	247·0	111·6	...	...	...	98·0	...	...	...
Howrah ...	Howrah	176·4	37·5	16·5	15·8	21·3	27·5	14·8	13·3	18·9	166·4
	Bali	...	52·1	45·8	...	39·0	15·5	15·6	...	49·6	71·0
Nuddea ...	Kishnaghur ...	524·2	..	...	...	...	...	12·1	...	98·7	60·2
	Ranaghat	502·4	...	46·6	...	...	...	41·7	155·4	...	...
	Santipore	61·5	...	...	..	...	...	...	...	22·6	26·5
Jessore ...	Jessore	1,072·2	..	...	78·2	...	51·6	102·0	49·5	92·4	...
Rajshahye ...	Rampore Beauleah	334·2	36·7	50·0	...	...	...	...	42·4	41·9	216·0
Darjiling ...	Darjiling	...	...	...	..	...	...	36·3	150·3	...	...
Dacca	Dacca	109·6	42·3	...	19·6	28·5	27·2	26·8	18·6	22·0	46·7
	Narainganj ...	166·4	45·6	...	45·8	...	77·9	97·2	149·3	...	159·5
Chittagong ...	Chittagong ...	369·4	26·4	20·8	...	...	22·5	62·4	...	...	65·3
Tipperah ...	Comillah	700·3	39·8	...	...	...	18·8	52·2	39·6	64·9	153·4
Patna	Patna City ...	72·4	10·7	12·4	14·4	4·7	3·6	8·9	16·6	11·0	37·7
Gya ...	Gya	232·4	57·3	7·4	7·7	9·9	7·1	16·3	5·3	63·3	141·4
Shahabad ...	Arrah	80·7	11·7	10·1	...	...	6·6	8·1	...	33·6	36·1
Mozufferpore ..	Mozufferpore ...	217·8	25·7	34·7	13·1	17·2	...	14·9	10·4	32·0	21·4
Durbhanga ...	Durbhanga ...	334·0	...	33·2	9·4	12·9	...	14·0	7·0	23·7	97·7
Sarun	Chupra	110·6	30·2	8·7	10·4	...	5·6	13·4	17·1	50·3	45·9
Bhagulpore ...	Bhagulpore ...	174·2	67·2	35·4	8·3	...	9·5	16·8	33·0	73·3	101·1
Monghyr ...	Monghyr	280·1	16·7	14·7	...	13·8	35·2	17·5	32·6	...	145·9
Purneah ...	Purneah	183·7	43·0	32·9	43·5	52·3	63·3	18·2	56·1	55·5	64·4
Poori ...	Poori	171·6	23·9	69·6	55·4	55·9	78·7	102·6	46·9	186·5	172·8
	TOTAL ...	204·9	32·5	17·9	11·9	11·6	17·7	22·3	25·7	40·3	87·8

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,
The 6th January 1890.

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 4th January 1890, *as compared with the corresponding week of the previous year.*

Nature of Cargo.	Week ending Saturday, the 4th January 1890.			Week ending Saturday, the 5th January 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	2,090	2,70,433	4,613	1,670	2,91,865	5,181
Jute	268	2,49,550	2,914	143	74,625	1,336
Firewood	102	51,795	763	151	79,020	1,173
Other articles	977	2,32,255	3,673	1,353	2,71,610	4,004
Total	3,437	8,04,033	21,963	3,317	7,17,120	11963

Weekly Return of Traffic Receipts on Indian Railways.

EASTERN BENGAL STATE RAILWAY.

(Including N. B., Dacca, K. and D., and Assam-Behar Sections.)

Approximate Return of Traffic for week ended 21st December 1889, *on 747 miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated), including steam-boat.	Total earnings.	Traffic Train-mile run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	137,060	73,630 0 0	6,25,330 0	1,74,300 0 0	14,730 0 0	2,62,690 0 0	21,680	35,300	56,980
Or per mile of railway ...	183	99 0 0	837 0	233 0 0	†3 0 0	335 0 0	.....	.....	.....
For previous 24 weeks of half-year	*3,456,348	15 82,803 0 0	*1,53,21,426 0	38,72,874 0 0	4,17,567 0 0	*58,73,244 0 0	531,086	710,791	1,241,877
Total for 25 weeks ...	3,593,408	16,56,433 0 0	1,59,46,756 0	40,47,174 0 0	4,32,297 0 0	61,35,934 0 0	552,766	746,091	1,298,857
Comparison.									
Total for corresponding week of previous year	121,027	63,751 0 0	6,08,962 0	1,74,741 0 0	17,248 0 0	2,55,740 0 0	21,374	33,678	55,052
Per mile of railway corresponding period of previous year ...	180	95 0 0	905 0	260 0 0	†4 0 0	359 0 0	.....	.....	.....
Total to corresponding date of previous year	3,404,474	15,42,237 0 0	1,53,72,275 0	39,63,960 0 0	4,20,977 0 0	59,27,174 0 0	518,292	767,547	1,285,839

* Audited up to week ending 9th November 1889.
† Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

Receipts for week ending 22nd December 1888.			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889-90.	Total decrease 1889-9
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
673	2,55,740	380	747	2,62,600	352	673	78,82,646	287	722	*82,71,375	302	3,88,729	....

* Audited up to week ending 9th November 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 21st December 1889, on 125 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	25,060	11,160 0 0	30,470 0	2,690 0 0	110 0 0	13,870 0 0	3,606	2,066	5,672
Or per mile of railway	200	89 0 0	244 0	21 0 0	1 0 0	111 0 0	.....	.....	.....
For previous 24 weeks of half-year	*664 817	2,32,622 0 0	*13,52,092 0	1,22,151 0 0	5,362 0 0	*3,60,135 0 0	86,087	54,372	140,459
Total for 25 weeks ...	689,877	2,43,782 0 0	13,82,562 0	1,24,751 0 0	5,472 0 0	3,74,005 0 0	89,693	56,438	146,131
Comparison.									
Total for corresponding week of previous year	23,974	9,698 0 0	42,206 0	2,570 0 0	62 0 0	12,330 0 0	3,606	2,066	5,672
Per mile of railway corresponding period of previous year ...	192	78 0 0	338 0	21 0 0	.....	99 0 0	.....	.....	.....
Total to corresponding date of previous year	666,203	2,22,582 0 0	14,47,211 0	1,10,695 0 0	1,908 0 0	3,65,185 0 0	90,318	61,781	152,099

* Audited up to week ending 9th November 1889.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

Receipts for week ending 22nd December 1888.			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked	Receipts.	Per mile worked.	Mean mileage worked	Receipts.	Per mile worked.	Mean mileage worked	Total receipts	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	12,330	99	125	13,870	111	125	5,26,087	111	125	*5,53,853	117	26,866	.....

* Audited up to week ending 9th November 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 21st December 1889, on 86 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	14,190	5,570 0 0	47,620 0	4,610 0 0	360 0 0	10,540 0 0	2,547	2,281	4,828
Or per mile of railway ...	165	65 0 0	554 0	54 0 0	4 0 0	123 0 0	.....	.....	.....
For previous 24 weeks of half-year	*371,293	1,21,065 0 0	*6,92,070 0	58,837 0 0	5,436 0 0	*1,85,338 0 0	60,125	20,137	80,260
Total for 25 weeks ...	385,483	1,26,635 0 0	7,39,690 0	63,447 0 0	5,796 0 0	1,95,878 0 0	62,670	22,418	85,088
Comparison.									
Total for corresponding week of previous year	14,860	4,996 0 0	15,861 0	1,784 0 0	180 0 0	6,960 0 0	2,510	594	3,104
Per mile of railway corresponding period of previous year	173	58 0 0	184 0	21 0 0	2 0 0	81 0 0	.....	.....	.....
Total to corresponding date of previous year	355,125	1,12,792 0 0	3,77,913 0	30,731 0 0	4,733 0 0	1,48,256 0 0	62,764	16,338	79,102

* Audited up to week ending 9th November 1889.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for week ending 22nd December 1888.			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked	Receipts.	Per mile worked	Mean mileage worked	Receipts.	Per mile worked	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	6,960	81	86	10,540	123	86	2,13,247	65	86	*2,71,045	83	57,798	.....

* Audited up to week ending 9th November 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 21st December 1889, on 27¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	3,048	1,065 0 0	20,200 0	996 0 0	18 0 0	2,079 0 0	509	254	763
Per mile of railway	112	39 0 0	741 0	36 0 0	1 0 0	76 0 0	.....	.....	.....
For previous 23 weeks of half-year	76,161	27,375 0 0	2,16,088 0	13,953 0 0	1,547 0 0	42,875 0 0	12,143	9,892	22,035
Total for 24 weeks	79,209	28,440 0 0	2,36,288 0	14,949 0 0	1,565 0 0	44,954 0 0	12,652	10,146	22,798
COMPARISON.									
Total for corresponding week of previous year	2,770	1,106 0 0	15,296 0	842 0 0	6 0 0	1,954 0 0	509	472	981
Per mile of railway corresponding week of previous year	102	41 0 0	561 0	31 0 0	...	72 0 0	.....	.....	...
Total to corresponding date of previous year	75,709	27,086 0 0	2,91,339 0	17,145 0 0	2,086 0 0	46,317 0 0	12,725	10,070	22,795

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

Receipts for week ending 22nd December 1888.			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27¼	1,954	72	27¼	2,079	76	27¼	72,745	72	27¼	70,773	70	...	1,972

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 21st December 1889, on 273 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	39,085	17,198 0 0	1,90,906 0	20,928 0 0	4,998 0 0	43,124 0 0	6,373	5,529	11,902
Per mile of railway	145	63 0 0	699 0	77 0 0	3 0 0	143 0 0*	.....	..	..
For previous 23 weeks of half-year	962,988	3,52,630 0 0	40,58,067 0	4,07,534 0 0	90,631 0. 0	8,50,195 0 0	127,674	128,882	256,556
Total for 24 weeks	1,002,073	3,69,228 0 0	42,48,973 0	4,28,462 0 0	95,629 0 0	8,93,319 0 0	134,047	134,411	268,458
COMPARISON.									
Total for corresponding week of previous year	36,121	16,440 0 0	1,30,016 0	14,972 0 0	3,604 0 0	35,022 0 0	5,269	5,391	10,660
Per mile of railway corresponding week of previous year	132	60 0 0	480 0	55 0 0	1 0 0	116 0 0*	.....	.....	.....
Total to corresponding date of previous year	968,728	3,36,508 0 0	32,69,767 0	2,94,075 0 0	75,892 0 0	7,06,505 0 0	129,783	127,760	257,543

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

Receipts for week ending 22nd December 1888.			Receipts for week ending 21st December 1889.			Total receipts from 1st April 1888 to 22nd December 1888.			Total receipts from 1st April 1889 to 21st December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
273	35,022	128	273	43,124	158	263·37	12,04,145	124	273	14,17,078	140	2,13,533	...

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.	Rs.
Approximate earnings for week ending 14th December 1889	8,195
Corresponding week last year	12,291
Decrease	4,096
Receipts from 1st July to 14th December 1889	2,62,051
From 1st July to 15th December 1888	2,85,932
Decrease	23,881

Compared with 1887, there is an increase of Rs. 23,142 for the corresponding period.

	Miles.
Miles open week ending 14th December 1889	51
Corresponding week last year	51

	Rs.	A.	P.
Receipts per mile open week ending 14th December 1889	160	11	0
Corresponding week last year	241	0	0
Decrease	80	5	0

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[REGISTERED No. 29.]

No. 3 of 1890.

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WEDNESDAY, JANUARY 15, 1890.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 155A.

GENERAL.—*The 30th December* 1889.—Moulvi Dilwar Hossein Ahmed, Deputy Collector, is appointed to perform the functions of a Collector under section 4 of Act VII (B.C.) of 1880 in the district of Gya.

The 11th January 1890.—Baboo Gunga Nath Roy, Deputy Magistrate and Deputy Collector, Sewan, Sarun, is transferred to the Sudder station of the district of Noakhally.

The 13th January 1890.—Baboo Gopi Krishna Lall, Sub-Deputy Collector, Godda, Sonthal Pergunnahs, is transferred to the Sudder station of the district of Singbhoom.

The 14th January 1890.—Mr. C. Cuthbertson, Officiating Under-Secretary to the Government of Bengal, in the Financial and Municipal Departments, is confirmed in that appointment with effect from the 21st November 1889.

Mr. E. N. Baker, Officiating Deputy Commissioner, Manbhoom, is allowed leave for one month, under article 291 of the Civil Service Regulations, with effect from the date on which he availed himself of it.

Moulvi Fuzlul Karim, Deputy Magistrate and Deputy Collector, Thakurgaon, Dinagepore, is allowed leave for three months, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

Baboo Baroda Kanta Gangooly, Temporary Deputy Magistrate and Deputy Collector, Rajshahye, is transferred to Dinagepore, and is appointed to have charge of the Thakurgaon sub-division of that district, during the absence, on leave, of Moulvi Fuzlul Karim, or until further orders.

Baboo Parbutty Churn Roy, Deputy Magistrate and Deputy Collector, Darjeeling, is allowed leave for twenty-seven days, under article 291 of the Civil Service Regulations, with effect from the forenoon of the 3rd proximo.

No. 131.—*The 31st December* 1889.—In exercise of the powers conferred by section 12 of the Criminal Procedure Code (Act X of 1882), the Chief Commissioner invests Mr. F. C. French, C.S., Assistant Commissioner, Darrang, with the powers of a Magistrate of the third class.

No. 113.—*The 2nd January* 1890.—Mr. E. C. S. Baker, Assistant Superintendent of Police, reported his return to duty at Cachar from leave on the forenoon of the 18th November 1889.

No. 114.—Mr. L. St. J. Brodrick, Assistant Superintendent of Police, reported his return to duty at Kohima on the 23rd November 1889, and received executive charge of the treasury on the 30th idem.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT,—FORESTS.

NOTIFICATION.

The 10th January, 1890.—Messrs. H. D. D. French and H. H. Haines, Assistant Conservators of Forests of the third grade, are promoted to the second grade of Assistant Conservators, with effect from the 11th November, 1889.

P. NOLAN,
Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT—(OPIUM).

NOTIFICATION.

The 14th January, 1890.—Mr. W. Cracroft, Sub-Deputy Opium Agent of Ghazipore, is allowed leave for three months, under article 369 of the Civil Service Regulations, with effect from the 1st December, 1889.

Mr. A. W. Osborne, Assistant Sub-Deputy Opium Agent, Benares Agency, is appointed to act as Sub-Deputy Opium Agent of Ghazipore, during the absence, on leave, of Mr. W. Cracroft, or until further orders.

Mr. G. Dalziel is appointed to act as Assistant Sub-Deputy Opium Agent, Benares Agency, with effect from the 1st December, 1889, in the vacancy caused by the absence, on leave, of Mr. W. Cracroft.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 14th January, 1890.—Under section 3 of Act V (B.C.) of 1875, the Lieutenant-Governor is pleased to order that a survey shall be made in respect of all lands comprised in the pergunnahs of Rohang Serai and Chowbiskud, in the district of Pooree, and that the boundaries of estates, tenures, mouzahs, and fields in the said pergunnahs be demarcated on the lands to be surveyed.

2. For the purposes of such survey, the Collector of Pooree is appointed to be Superintendent, and Mr. A. K. Raye is appointed to be Assistant Superintendent of Survey, under section 4, Act V of 1875. Mr. A. K. Raye is also appointed to be Settlement Officer in respect of these lands under section 3, Act VIII of 1879.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 14th January, 1890.—Under section 3, Act V (B.C.) of 1875, the Lieutenant-Governor is pleased to order that a survey be made of the tracts specified below in the Cuttack district, and that the boundaries of estates, tenures, mouzahs, and fields in the said tracts be demarcated on the lands to be surveyed. The boundaries are as follows:—

TRACT I.

North and East.—The Brahmini, Kimiria, and Biropa rivers.
South and West.—High Leval Canal from Chawdwar to No. 15 Distributary.

TRACT II.

North and East.—By Brahmini river.
West.—Ramda and Sargara hills.
South.—Thalor mouzah.

For the purposes of such survey, the Collector of Cuttack is appointed to be Superintendent of Survey.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 8th January, 1890.—Under clause (2) of section 14 of Act XXI of 1883, (the Indian Emigration Act), and with reference to the notifications, dated the 2nd and 23rd April, 1889, respectively, the Lieutenant-Governor approves the resumption, by Mr. R. W. S. Mitchell, of the duties of Emigration Agent at Calcutta for British Guiana and Natal.

P. NOLAN,
Secretary to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 156A.

The 9th January 1890.—The Lieutenant-Governor accepts the resignation tendered by Baboo Sattya Doyal Banerjee of his appointment as an Honorary Magistrate of the Serampore General Bench II, in the district of Hooghly.

The Lieutenant-Governor accepts the resignation tendered by Baboo Jagendra Chunder Chatterjee of his appointment of Honorary Magistrate of the Cutwa Bench, in the district of Burdwan.

Syed Mohammed Abdul Hossein is appointed to be an Honorary Magistrate of the abovementioned Bench, and is vested with the powers of a Magistrate of the third class.

Baboo Rajendra Narain Nundy is appointed to be an Honorary Magistrate of the First General Bench at the Sudder station of the Hooghly district, and is vested with the powers of a Magistrate of the second class.

The 13th January 1890.—Baboo Anund Chandra Bose, Temporary Sub-Deputy Collector, in charge of the Kalkini Estates in Furreedpore, is vested with the powers of a Magistrate of the second class.

Baboo Sarada Prosad Mookerjee, B.L., is appointed to act as an Additional Munsif in the district of Sarun, to be ordinarily stationed at Sewan, during the absence, on leave, of Baboo Lal Singh, or until further orders.

Moulvi Mohammad Suleman is appointed to be an Honorary Magistrate of the Bankipur Bench, and is vested with the powers of a Magistrate of the third class.

Baboo Jib Lal is appointed to be an Honorary Magistrate of the Aurungabad Bench, in the district of Gya, and is vested with the powers of a Magistrate of the third class.

The 14th January 1890.—Baboo Satish Chunder Bose, Deputy Magistrate and Deputy Collector, Balasore, is vested with the power to try summarily the offences mentioned in section 260 of the Code of Criminal Procedure.

Baboo Prosonno Kumar Gupta, B.L., is appointed to act as a Munsif in the district of Hooghly, to be ordinarily stationed at the Sudder station of that district, during the absence, on leave, of Baboo Soshi Bhusan Sen, or until further orders.

Baboo Rajani Kanta Chatterjee, B.L., is appointed to act as a Munsif in the district of Mymensingh, to be ordinarily stationed at Jamalpore, during the absence, on leave, of Baboo Saroda Prosad Bose, or until further orders.

Mr. J. C. Lloyd, Sub-Deputy Collector, Sungoo, Chittagong Hill Tracts, is vested with the powers of a Magistrate of the second class.

Mr. B. K. Mullick, Assistant Magistrate and Collector, Chittagong, is vested with the powers of a Magistrate of the third class.

Mr. F. J. Monahan, Officiating Joint-Magistrate and Deputy Collector, Serajgunge, Pubna, is appointed, under the provisions of section 22, Act X of 1882, to act as a Justice of the Peace within the territories under the Lieutenant-Governor's control.

GRANT OF LEAVE TO MUNSIFS.—*The 7th January* 1890.—Baboo Soshi Bhusan Sen, Munsif of Hooghly, is allowed leave for one month, viz., ten days under article 309 of the Civil Service Regulations, and the remaining period under article 306(*b*) of the same Regulations, with effect from the 18th January 1890, or from the date on which he may be relieved.

Baboo Saroda Prosad Bosu, Munsif of Jamalpore, in the district of Mymensingh, is allowed leave for one month and twelve days, under article 306(*b*) of the Civil Service Regulations, with effect from the date on which he may be relieved.

The 8th January 1890.—Baboo Kali Krishna Chowdry, Munsif of Kaligunge, in the district of Dacca, is allowed leave for twenty-one days, under article 306 (*b*) of the Civil Service Regulations, with effect from the date he availed himself of it.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 14th January 1890.—The Lieutenant-Governor sanctions the abolition of the outpost at Bhowanipur, and the establishment of an outpost at Sondeshkhali subordinate to the Hasnabad police-station, in the district of the 24-Pergunnahs.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—BENGAL.

ESTABLISHMENT.

The 13th January 1890.

No. 4.—*Corrigendum.*—In Bengal Government Notification No. 457 of the 17th ultimo, *for* 16th instant *read* 15th instant as the date on which Mr. W. B Bestic returned from furlough.

MILITARY.

The 14th January 1890.

No. 9.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the public expense for a public purpose, viz., for the construction of a road from Sarisha to Hooghly Point in the villages of Kamarpole, Rekha, Kooshberiah, Mathur, Mankhonca, Gonnarah, Asanpore, Moheswara, Mokundapore, Bhowanipore, Doorgapore and Noorpore in pergunnah Mooragacha, and Kultukri and Kankjole in pergunnah Penchakooli, district 24-Pergunnahs, it is hereby declared that for the above purpose land measuring 195 bighas, more or less, by standard measurement, length 39 530 feet, breadth varying from 75 feet to 25 feet, more or less, is required within the aforesaid villages.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

ESTABLISHMENT.

The 14th January 1890.

No. 10.—The following notifications, issued by the Government of India, Public Works Department, are republished for information :—

No. 9.—*The 8th January* 1890.—The services of Mr. J. Woodside, Assistant Engineer, second grade, are placed at the disposal of the Director-General of Railways

No. 15.—*The 10th January* 1890.—Under section 4 of the Indian Railway Act of 1879, the Governor-General in Council is pleased to sanction the use of Locomotive Engines or other motive power and carriages and wagons to be drawn or propelled thereby on the Sitamarhi and Kanwa Ghât extensions of the Tirhoot State Railway.

E. J. MARTIN,
Secy. to the Govt. of Bengal, P. W. Dept.

ESTABLISHMENT.

The 13th January 1890.

No. 5.—Adverting to the Notification of this Department, No. 462, dated the 18th ultimo, Baboo Nogendra Nath Mookerjee, Apprentice Engineer, is posted to the Mahanuddy Division.

No 6.—Mr. H. E. Pellereau, Assistant Engineer, passed the Departmental Standard examination as laid down in Public Works Code, Chapter II, paragraph 14, on the 6th November 1889.

No. 7.—In continuation of Notification No. 446, dated the 14th ultimo, Mr. K. H. Stephen, Executive Engineer, fourth grade, is posted to the Buxar Division, which he joined on the afternoon of the 1st instant.

IRRIGATION.

The 13th January 1890.

No. 8.—*Notification.*—It is hereby notified that the Bhangore khall on the Eastern Canals will be closed to traffic for silt clearance from the 28th January 1890 for about six weeks.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

IRRIGATION.

The 9th December 1889.

No. 442.—*Notification.*—In exercise of the powers conferred on him by section 99 of Act III (B.C.) of 1876, the Hon'ble the Lieutenant-Governor is pleased to pass the following rule for the Orissa Canals :—

Beali lands in a five-year lease, if not irrigated, are to be exempted from assessment provided "Beali" is not followed by "sarud" or any other *irrigated* crops in the same year.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

PUBLIC WORKS DEPARTMENT,—MARINE.

[First Publication.]

NOTIFICATION No. 3Mne.

The 7th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 3).

JAPAN.

YEZO—SOUTH WEST COAST.

Non-existence of Waywoda rock.

THE British Admiralty has given notice (No. 422 of 1889) of the non-existence of Waywoda (Voevoda) rock in the sea of Japan.

This rock was originally reported by the Russian corvette *Voevoda*, when proceeding from Hakodate to Peter the Great bay. It was seen at a distance of 3 miles from the ship at 7h. P M. on 28th June 1859, during thick weather, and estimated to be about 12 feet above water; the position assigned by dead reckoning, being lat. 42° 16′ N., long. 137° 18′ E.

The rock was searched for on two occasions by French vessels of war without success prior to 1886. In September 1886, eight of Her Majesty's ships passed near the assigned position of the rock, in such a manner that an area of 40 miles in latitude and 62 miles in longitude was examined, and no sign of the rock was observed.

In June 1888, an American whaling barque reported having seen two rocks from 8 to 12 feet high, about 500 yards apart, in lat. 42° 30′ N., long. 137° 5′ E., or about 15 miles north-westward of the *Voevoda's* reported position.

Consequent on this latter report a further special search has been made by five of Her Majesty's ships on the China station throughout 7th September 1889. During this search the position of the rocks reported by the American whaling barque, as well as that of the Waywoda rock, was passed over without seeing any signs of a rock above water, or obtaining any soundings indicative of shallow ground.

After a careful review of the above circumstances, it is considered that the objects seen by both the *Voevoda* and the American whaling barque were floating, and therefore the rock has been removed from the Admiralty Charts.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 6th January* 1890.

[First Publication.]

NOTIFICATION No. 4Mne.

The 7th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 4).

JAPAN.

KIUSIU—NORTH-WEST COAST.

Sunken rocks in Iki Channel, and on south coast Iki sima.

THE British Admiralty has given notice (No. 434 of 1889) of the existence of the undermentioned sunken rocks lying in Iki channel, and on the south coast of Iki sima:—

1. A rock, with a depth of $1\frac{3}{4}$ fathoms, lies near the fairway in Iki channel, with Yebosi sima light-house bearing S. 75° E., and the eastern extreme of Na sima North.

   Position, lat. 33° 42′ 35″ N., long. 129° 52′ 20″ E.

2. A rock, with a depth of $2\frac{1}{4}$ fathoms, lies in Iki channel, with the north extreme of Na sima, in line with the Watch-house on Iki sima, bearing N. 87° W., and Akasi saki, the north-east extreme of Iki sima, N. 41° W.

   Position, lat. 33° 44″ 40′ N., long. 129° 54′ 10″ E.

3. A rock, with a depth of $1\frac{3}{4}$ fathoms, lies off the south coast of Iki sima, with Ko saki bearing S. 73° W., distant $4\frac{1}{4}$ cables.

   Position, lat. 33° 42′ 25″ N., long. 129° 43′ 30″ E.

4. A rock (*Tsurizone rock*), with a depth of 1¾ fathoms, lies 4¼ cables southward of Hira sima, with Ko saki bearing N. 86° E., and western extreme of Naga sima N. 7° W.

Position, lat. 33° 41′ 35″ N., long. 129° 37′ 50″ E.

5. A rock (*Sorazone rock*), with a depth of 3¼ fathoms, and 5 cables in extent in a north and south direction, lies nearly in the fairway of the southern entrance to Go no Ura, 6 cables distant from Tskuye sima, and with the north-west extreme of that islet in line with the north extreme of Hira sima.

Position, lat. 33° 43′ 5″ N., long. 129° 39′ 40″ E.

6. A rock (*Ozone rock*), awash at low water spring tides, is an extension of the shoal shown on Admiralty Chart No. 127, on the eastern side of entrance to Go no Ura; it lies 3½ cables from the coast of Iki sima, with the south extreme of Haru sima bearing S. 86° W., and north-east extreme of Oö sima N. 45° W.

7. The rock (*Hirase rock*) in the northern part of Go no Ura, and shown on Admiralty Charts as "Covers," lies a little westward of the position given, with Tskuye sima bearing S. 27° W., distant $1\frac{8}{10}$ miles.

CAUTION.—There are many rocks and shoals near the coasts in this locality as yet not charted. Careful navigation is therefore needed.

The depths given are at low water spring tides.

(*The bearings are Magnetic, Variation 4° Westerly in* 1889).

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 6th January* 1890.

[First Publication.]

NOTIFICATION No. 5Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 5).

TASMANIA.

BASS AND BANKS STRAITS.

Intended alteration in colour of light-houses.

THE British Admiralty has given notice (No. 439 of 1889) that on 1st January 1890, or as soon after as may be, the light-houses on the coasts of Tasmania, together with those on King island and Kent group (Bass strait) and on Goose and Swan islands (Banks strait), will be painted entirely white.

At present the lower parts of the light-houses are painted white, and the upper parts red.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[First Publication.]

NOTIFICATION No. 6Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 6).

ARABIAN SEA.

NINE DEGREES CHANNEL.

Unsuccessful search for reef reported north-east of Minikoi Island.

THE following Notice to Mariners (No. 443 of 1889), issued by the British Admiralty, is republished with reference to Nos. 80 and 85, dated, respectively, the 23rd August and 6th September last, issued by this office:—

In consequence of a reef having been stated to exist in the Nine Degrees channel, about 50 miles north-east of Minikoi island, in lat. 8° 48′ N., long 73° 40′ E., by the Master

of the S.S. *Noord Braband*, August 1889, who reported it as being 3 miles in length in a south-east and north-west direction, an examination of the locality has been made by Commander R. F. Hoskyn, R.N., in charge of the India Marine Survey, with the following result:—

The examination, carried out in the I.G.S.S. *Investigator*, and extending over three days, from 2nd to 4th November 1889, embraced the reported position of the reef between lat. 8° 35′ and 9° 5′ N., and long. 73° 15′ to 74° 0′ E. The least depth found on the suspected spot was 1,179 fathoms, gray ooze, and no indication was afforded by the soundings of the existence of shallow water. On one occasion, however, some patches of what appeared to be discoloured water were observed; but they were all examined and proved to be merely the reflection of clouds in smooth streaks of water.

Throughout the time the weather was uniformly fine, and favourable for observations, and the positions of the soundings were satisfactorily determined.

Considering the detailed nature of this examination by Commander Hoskyn, and the fact of the locality being near the track of shipping using the Nine Degrees channel, the existence of this extensive danger is considered disproved.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[First Publication.]

NOTIFICATION No. 7Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 7).

AUSTRALIA—EAST COAST.

PIONEER RIVER APPROACH.

Sunken rock north-eastward of Round Top island.

THE British Admiralty has given notice (No. 444 of 1889) of the existence of a sunken rock lying about 6 cables north-eastward of Round Top island, Pioneer river approach.

This rock (*Taroba rock*), with about 19 feet over it at low water, lies with the following bearings:—

Round Top island summit	... S.W. ½ S.
Flat Top island light-house	... West.

Position: lat. 21° 9′ 45″ S., long. 149° 17′ 50″ E.

(*The bearings are Magnetic. Variation 7° Easterly in* 1889.)

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[First Publication.]

NOTIFICATION No. 8Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 8).

AUSTRALIA—SOUTH COAST.

PORT PHILLIP ENTRANCE.

Submarine telegraph cable between Swan island and Observatory Point.

THE British Admiralty has given notice (No. 446 of 1889) that a submarine telegraph cable has been laid between Swan island and Observatory Point within the entrance to port Phillip.

The cable is laid from Swan beacon to Pope's Eye fort (situated near the white pile beacon on the south-west part of that shoal) and thence to Observatory Point.

CAUTION.—Mariners are warned that anchorage within 4 cables on either side of this cable is prohibited.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[Second Publication.]

NOTIFICATION No. 1Mne.

The 6th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 1).

BAY OF BENGAL.

BURMA COAST.

The floating light-vessel "Colombo" replaced below Elephant Point.

WITH reference to Notice to Mariners, No. 115, dated the 28th November last, issued by this Office, the Officiating Port Officer of Rangoon has given notice that the floating light-vessel *Colombo* has been replaced off the Spit below Elephant Point, and the schooner *Pharos* removed.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 4th January* 1890.

[Second Publication.]

NOTIFICATION No. 2Mne.

The 6th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 2).

BAY OF BENGAL.

ORISSA COAST.

Inner bar-buoy adrift.

A TELEGRAPHIC communication has been received from the Collector of Customs, Balasore, that the *inner bar-buoy* has drifted out of position.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th January* 1890.

[Third Publication.]

NOTIFICATION No. 206Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 125).

AFRICA—EAST COAST.

MOZAMBIQUE CHANNEL.

Additional soundings north-eastward of St. Lazarus Bank.

WITH reference to Notice to Mariners, No. 67, dated 2nd July last, issued by this office, the British Admiralty has given notice (No. 403 of 1889) that some further soundings have been obtained by H. M. Surveying Ship *Stork* to the north-eastward of the bank as defined in that Notice, which indicate the existence of either another bank, or of an extension of the slope of the St. Lazarus bank for some 30 miles. No sounding less than 320 fathoms was obtained, but until the ground is more thoroughly searched, vessels should avoid passing over this area to the north-eastward of the St. Lazarus bank.

The soundings obtained are as follows:—

(1) Lat. 11° 55′ S., long. 41° 28′ E. ... ... 320 fathoms
(or 9 miles northward of a depth of 1,080 fathoms previously obtained).
(2) Lat. 11° 48½′ S., long. 41° 35$\frac{3}{10}$′ E. ... ... 460 fathoms.
(3) Lat. 11° 38½′ S., long. 41° 39½′ E. ... ... 807 ditto.
(4) Lat. 11° 32′ S., long. 41° 41′ E. ... ... 910 ditto.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[Third Publication.]

NOTIFICATION No. 207Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 126).

AUSTRALIA—EAST COAST.

INNER ROUTE.

Shoal north-eastward of two isles.

THE British Admiralty has given notice (No. 405 of 1889) of the existence of a coral shoal lying about 1½ miles north-eastward of two isles:—

This shoal, with a depth of 6 fathoms, is 8 cables in length within the 10-fathoms line in a north-east and south-west direction; from the shoalest part, South Direction island bears N. 13° E., distant 11 miles, and cape Flattery summit N. 76° W., distant $7\frac{7}{10}$ miles.

Position, lat. 15° 0′ S., long. 145° 30′ E.

Also the following information concerning g reef and Sand Bank, lying respectively about 5½ and 7 miles eastward of Two isles:—

g reef, as heretofore charted, does not exist.

Sand bank, now named g reef, is 4 cables in length in an east and west direction, with a width of 2½ cables, it is steep-to, and has a small sandy head near its west extreme which dries 6 feet at low water spring tides; from this head, cape Flattery summit bears N. 83° W., distant $13\frac{5}{10}$ miles, and South Direction island N. 18½° W., distant $10\frac{8}{10}$ miles.

Position, lat. 15° 0½′ S., long 145° 36′ E.

Unsuccessful search for shoal north-west of Look-out point.

FURTHER information has been received that a shoal spit extends in a north-westerly direction from Look-out Point for a distance of 2¼ miles, having a least depth of 6 feet, with the summit of the point bearing S. 45° E., distant 2 miles; it is steep-to on its eastern edge, the water deepening quickly from 2 to 6 and 7 fathoms; on the north-western side it deepens more gradually.

The position heretofore given for the 2¼ fathoms shoal is about 8 cables northward of the extreme of the spit, and depths of 6½ to 7½ fathoms, over even ground were obtained around that spot with no sign of shoal water.

Consequent on the foregoing, it is considered that the *Decapolis* grounded on the spit about 2 miles north-west of Look-out point, and the 2¼ fathoms shoal has been removed from the Admiralty Charts.

NOTE.—Cape Flattery summit in line with the red beacon on Sand cay (about 2½ miles south-east of Look-out point), bearing S. 38° E., leads eastward of the shoal ground off Look-out point; and end of range in line with Round hill, bearing S. 82° W., leads 4 cables northward of it.

By direction of the Government of Bengal,
E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[Third Publication]

NOTIFICATION No. 208Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 127).

JAPAN.

SIMONOSEKI STRAIT—WESTERN ENTRANCE.

Fixed light on Narusi rock.

THE British Admiralty has given notice (No. 415 of 1889) that on 21st September 1889 a light would be exhibited from the beacon (which has been rebuilt during the present year) on Narusi rock, north side of western entrance to Simonoseki strait:—

The light is a *fixed* white light, visible from the bearing of S. 86°E., through north, to S. 43° W.; it is elevated 17 feet above high water, and should be seen in clear weather from a distance of three miles.

The beacon, constructed of stone and circular in shape, is painted white.

Position, lat. 33° 54′ 45″ N., long. 130° 54′ 50″ E.

NOTE—The light is kept burning day and night by automatic arrangement without the constant attendance of a keeper. Should the light be extinguished by accident, there may be some delay in re-lighting it.

(*The bearings are Magnetic, and are given from seaward. Variation 4° Westerly in* 1889.)

By direction of the Government of Bengal,
E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 21st December* 1889.

[Third Publication.]

NOTIFICATION No. 209Mne.

The 30th December 1889.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 129).

ARABIAN SEA.

BOMBAY COAST.

"Chaldea Rock" buoy placed in position.

WITH reference to Notice to Mariners, No. 106, dated 26th October last, the Collector of Salt Revenue, Bombay, through the Director of Indian Marine, has given notice that the *Chaldea Rock* buoy was put in its position on the 3rd ultimo.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 28th December* 1889.

JAIL DEPARTMENT.

No. 87.—*The 7th January* 1889.—Surgeon-Major R. L. Dutt made over charge of the Backergunge Jail to Assistant Surgeon K. Sanyal on the afternoon of the 25th December 1889.

No. 125, *dated 8th January* 1890.—Surgeon-Major J. O'Brien made over charge of the Burdwan Jail to Surgeon-Major Gordon Price on the forenoon of the 30th December 1889.

A. S. LETHBRIDGE,
Inspector-General of Jails, Bengal.

HIGH COURT NOTICE.

Dates of Criminal Sessions for the year 1890.

No. of Sessions.	Day of the week.	Date.
First Sessions	Monday	February, 17th.
Second „	Ditto	April, 28th.
Third „	Ditto	July, 14th.
Fourth „	Ditto	September, 1st.
Fifth „	Ditto	December, 8th.

By order,

J. G. APCAR, *Clerk of the Crown.*

HIGH COURT, CROWN OFFICE, *the 13th January* 1890.

HIGH COURT—Original Side.

NOTIFICATION.

Calcutta, 10th January 1890.

THE Hon'ble the Chief Justice of the High Court of Judicature at Fort William in Bengal has appointed Hamilton Maxwell, Esquire, of No. 7, George Street, Edinburgh, Scotland, a Member of the Society of Writers to Her Majesty's Signet, a Commissioner within all parts of Scotland for the purpose of taking under the Law in force in British India the acknowledgment of married women of deeds to be executed by them in respect of property in British India.

By order,
R. BELCHAMBERS, *Registrar.*

NOTIFICATION.

The following list of days, to be observed in the year 1890 *as close holidays in the Subordinate Civil Courts, has been prepared, and is published by the High Court of Judicature at Fort William in Bengal in the exercise of the power vested in it by Section* 15 *of Act XII of* 1887.

Names of Holidays.	English date.	Bengali date.	Days of the week.	Number of days.	Remarks.
New Year's Day and the two days following ...	January, 1st to 3rd	Pous (1296) 18th to 20th	Wednesday to Friday	3 days.	
Uttarayan Sankranti (*a*)	,, 12th	,, ,, 29th	Sunday	1 day ...	(*a*) This holiday is to be observed in the district of Sylhet only, instead of Dashahara Ganga Snan.
Bassant Panchami	,, 25th and 26th	Magha ,, 13th and 14th	Saturday and Sunday	2 days.	
Shiba Ratri	February 17th and 18th	Falgoon ,, 6th and 7th	Monday and Tuesday	2 ,,	
Dole Jattra and the day following	March 6th and 7th	,, ,, 23rd and 24th	Thursday and Friday	2 ,,	
Baroni Ganga Snan (*b*)	,, 18th	Chaitra ,, 6th	Tuesday	1 day ...	(*b*) This holiday is not to be observed in the district of Dacca.
Ashtami or Brahmaputra Snan (*c*)	,, 28th	,, ,, 16th	Friday	1 ,, ...	(*c*) This holiday is to be observed in the district of Dacca only, instead of Baroni Ganga Snan.
Sri Ram Nabami	,, 29th	,, ,, 17th	Saturday	1 ,,	
Good Friday and the day following, including Shube-Barat.	April 4th and 5th	,, ,, 23rd and 24th	Friday and Saturday	2 days.	
Mahabishub Sankranti	,, 12th	,, ,, 31st	Saturday	1 day.	
Bengali New Year's Day (*d*)	,, 13th	Baisakh (1297) 1st	Sunday	1 ,, ...	(*d*) This holiday is to be observed in the district of Chittagong only, instead of Dashahara Ganga Snan.
Eed-ul-Fitr (*e*)	May 21st and 22nd	Jaistha ,, 8th and 9th	Wednesday and Thursday	2 days ...	(*e*) If the moon be not visible on 20th of May, then the Courts will be closed on 22nd and 23rd of May.
Empress' Birthday	,, 24th	,, ,, 11th	Saturday	1 day.	
Dashahara Ganga Snan (*f*)	,, 29th	,, ,, 16th	Thursday	1 ,, ...	(*f*) 1. Ras Purnima, *vide infra*, is to be observed in Orissa, instead of this day. 2. Uttarayan Sankranti, *vide supra*, is to be observed in the district of Sylhet, instead of this day. 3. The 1st Bysack of the Bengali year, *vide supra*, is to be observed in the district of Chittagong instead of this day.
Eclipse of the Sun	June 17th	Assar ,, 4th	Tuesday	1 ,,	
Ruth Jattra (*g*)	,, 18th	,, ,, 6th	Thursday	1 ,, ...	(*g*) This holiday is not to be observed in the districts of Bhagulpore, Gya, Patna, Sarun, Shahabad and Tirhoot.
Ulta Ruth (*h*)	,, 27th	,, ,, 14th	Friday	1 ,, ...	(*h*) This holiday is not to be observed in the districts of Bhagulpore, Gya, Patna, Sarun, Shahabad, Tirhoot and Sylhet.
Eed-uz-Zoha (*i*)	July 28th and 29th	Sraban ,, 13th and 14th	Monday and Tuesday	2 days ...	(*i*) If the moon be not visible on the 18th of July, then the Courts will be closed on the 29th and 30th of July.
Janma Ashtami	August 7th and 8th	,, ,, 23rd and 24th	Thursday and Friday	2 ,,	
Monosha Puja (*j*)	,, 15th	,, ,, 31st	Friday	1 day ...	(*j*) This holiday is to be observed in the district of Sylhet only, instead of Ulta Ruth.
Mohurrum (*k*)	,, 23rd to 27th	Bhadra ,, 8th to 12th ...	Saturday to Wednesday	5 days ...	(*k*) If the moon be not visible on 17th of August, then the Courts will be closed from 24th to 28th of August.
Dussehra Vacation, including Mahaloya, Akhiri Chahar Shumba, Durga and Lukhi Pujas, Fateha Doas Dahum, Kali Puja, and Bhratriditia.	October 13th to November 14th ...	Assin ,, 28th to Kartick 29th ...	Monday to Friday	33 ,,	
Kartick Puja	November 15th and 16th	Kartick ,, 30th and Aghran 1st ...	Saturday and Sunday	2 ,,	
Jaggadhatri Puja (*l*)	,, 20th and 21st	Aghran ,, 5th and 6th	Thurday and Friday	2 ,, ...	(*l*) This holiday is not to be observed in the districts of Bhagulpore, Gya, Patna, Sarun, Shahabad and Tirhoot.
Chutter Mela (*m*)	,, 24th to 30th	Kartick (1298F.) 28th to Aghran 4th, corresponding with Aghran (1297B) 9th to 15th.	Monday to Sunday	7 ,, ...	(*m*) This holiday is to be observed in the districts of Bhagulpore, Gya, Patna, Sarun, Shahabad and Tirhoot only.
Ras Purnima (*n*)	,, 26th	Aghran (1297) 11th	Wednesday	1 day ...	(*n*) This holiday is to be observed in Orissa only, instead of Dashahara Ganga Snan.
Christmas Day, and two days before and one day after.	December 24th to 27th	Pous ,, 10th to 18th	Wednesday to Saturday	4 days.	

By order,

C. W. M. Brett, *Registrar.*

High Court, *the 6th December* 1889.

General Letter No. 4, dated Calcutta, the 18th December 1889.

From—C. M. W. BRETT, Esq., Registrar,

To—The Sessions Judge / Magistrate of

HIGH COURT.
ENGLISH DEPARTMENT.
CRIMINAL.

IT has been brought to the notice of the Court that there is a diversity in the procedure followed regarding the levy of Court-fees in non-cognizable cases instituted by Municipalities or District Boards. Attention is, therefore, requested to Section 19, Clause XVIII of the Court Fees Act VII of 1870, under which no Court-fee is leviable on a complaint preferred by a Municipal Officer. Court-fees should, however, be levied for processes issued in non-cognizable cases instituted by such officers, such fees being, on conviction of the accused, recovered from him under section 31 of the Court-fees Act.

2. It should, however, be noticed that the processes alluded to above do not come within Chapter V, Rule I, Sub-Rule III, page 91 of the Criminal Rules and Orders.

NOTIFICATION.

THE undermentioned Mukhtar having withdrawn the security deposited by him under the Rules of the Court has ceased to be a Mukhtar of the High Court in its Appellate Side. His certificate has been cancelled and his name removed from the roll—

NAME.	Number in list.	Number in register.
Syed Hedayet Hossain	57	40 of 1883

By order of the High Court,
C. M. W. BRETT, *Registrar.*

HIGH COURT, *the 6th January* 1890.

NOTIFICATION.

THE security deposited on behalf of the undermentioned Mukhtar having been withdrawn, and he having failed to deposit a fresh security required under the Rules of the Court, has ceased to be a Mukhtar of the High Court in its Appellate Side. His certificate has been cancelled and his name removed from the roll—

NAME.	Number in list.	Number in register.
Gunesh Dutt	43	138 of 1883

By order of the High Court,
C. M. W. BRETT, *Registrar.*

HIGH COURT, *the 6th January* 1890.

TREASURY NOTICE.

BABOO KHAGENDRA NATH MITRA, Deputy Collector, has been placed in charge of the Monghyr Treasury, and is authorized to draw bills on other treasuries.

CHUNDER NARAIN SINGH, *for Offg. Commissioner.*

EDUCATION DEPARTMENT, BENGAL.

ORDERS BY THE VICE-CHANCELLOR AND SYNDICATE OF THE CALCUTTA UNIVERSITY.

NOTICE.

IT is hereby notified for general information that a Convocation of the University of Calcutta for conferring degrees will be held at the Senate House, College Square, on Saturday, the 18th January, at 3 P. M.

Graduates of the University in academic costume are admissible on presenting themselves at the Senate House at 2 P. M.

CHARLES H. TAWNEY, *Registrar.*

SENATE HOUSE, *the 7th January* 1890.

RESULT OF THE MIDDLE SCHOLARSHIP EXAMINATION, 1889.

[The names of candidates for scholarships are printed in italics.]

No.	Name of candidate.	Age.	School.	Marks gained in the compulsory subjects.		Total.	Remarks.
				English.	Arithmetic.		
	First Division.	Yrs. M.					
1	*Augustus Hamilton* ...	11 11	*St Thomas's, Howrah* ...	220	133	708	*Scholarship.*
2	Alice Wright ...	17 8	Female Normal School ...	220	111	685	
3	Blanche Carpenter ...	16 9	Loretto Convent, Darjeeling ...	206	129	648	
4	*Albert G. E. Shuttleworth* ...	13 11	*St. Paul's, Darjeeling* ...	158	140	628	*Scholarship.*
5	Ada Groening ...	15 4	Loretto Convent, Darjeeling ...	222	60	614	
	Second Division.						
1	*Bertram Higgs* ...	13 10	*Welland Memorial* ...	166	148	591	*Scholarship.*
2	*Roderick O'Connor* ...	14 4	*Loretto Priory, Hazaribagh* ...	152	128	589	*Scholarship.*
3	Claire de Vere ...	15 0	Loretto Convent, Darjeeling ...	199	80	579	
4	Geraldine Fordyce ...	19 8	Female Normal School ...	239	44	578	
5	Henry J. E. Fleming ...	16 9	Doveton College ...	196	132	569	
	Francesca D'Souza ...	14 8	*Calcutta Girls'* ...	144	121	569	*Scholarship.*
7	Helen Gaspar ...	16 2	Female Normal School ...	216	132	560	
8	Mabel Wittenbaker ...	17 11	Ditto ditto ...	202	91	554	
9	*John A. Vertannes* ...	13 11	*St. Paul's, Darjeeling* ...	113	157	546	*Scholarship.*
10	Kumodine Ghosh ...	16 10	Female Normal School ...	150	118	536	
11	*Alfred J Thomas* ...	14 10	*Calcutta Free* ...	157	97	531	*Scholarship.*
12	*John Lyons* ...	13 8	*Welland Memorial* ...	119	138	530	*Scholarship.*
13	*Sara Howard* ...	13 10	*Miss O'Brien's* ...	155	80	525	*Scholarship.*
14	Walter Debnam ...	16 1	Calcutta Boys' ...	142	119	519	
	Helen Hill ...	14 11	*Darjeeling Girls'* ...	199	121	519	
16	*Helen Eames* ...	14 3	*Doveton Institution* ...	128	99	515	
17	Annie Burgess ...	18 2	Loretto House ...	154	129	511	
18	Sydney Betts Fox ...	15 4	St. Paul's, Darjeeling ...	156	95	504	
	Mary Shircore ...	14 1	*Calcutta Girls'* ...	133	111	504	
20	Eunice Korper	16 3	Pratt Memorial ...	202	73	499	
21	*Stella D'Rozario* ...	14 10	*Doveton Institution* ...	104	83	497	
22	Matilda Harper ...	16 2	Loretto House ...	164	67	490	
23	*Janet Wetherill* ...	14 8	*Doveton Institution* ...	156	55	485	
24	*Reginald R. Reaks* ...	14 6	*St. Paul's, Darjeeling* ...	148	84	483	
25	*Amy Wight*	13 8	*La Martinière Girls'* ...	121	147	478	
26	Lilian West	15 0	La Martinière Girls' ...	139	140	473	
27	Annette S. K. Williamson ...	22 7	Doveton Institution ...	181	68	468	
28	Eliza Stuart	17 3	Calcutta Girls' ...	150	80	457	
29	Alice Leopold	16 2	Ditto ...	152	87	452	
30	Mary Lucas	16 8	La Martinière Girls' ...	135	112	451	
31	*Arther Withers*	13 7	*St. Michael's, Coorjee* ...	116	106	450	
	Third Division.						
1	Emily Peal	16 11	Loretto Priory, Hazaribagh ...	87	126	441	
2	William H. Belchambers ...	16 5	Doveton College ...	130	81	438	
3	Reginald L. Lawrence ...	16 3	St. Paul's, Darjeeling ...	99	160	437	
4	*John Jewell*	14 11	*St. Thomas's, Howrah* ...	128	95	435	
5	Lilian Roberts	19 4	Female Normal School ...	167	63	432	
6	*Ethel Ager*	13 10	*Convent, Cuttack* ...	124	92	426	
7	Eliza Aitken ...	17 1	La Martinière Girl's ...	113	112	423	
	Wm. H. Babonan ...	15 6	Private student ...	131	100	423	
9	Walter E. Hillier ...	15 11	St Paul's, Darjeeling ...	123	94	420	
10	Amy Cohen ...	14 11	Calcutta Girls' ...	124	102	411	
11	*Mary Gantzer* ...	14 4	*Loretto Priory, Hazaribagh* ...	110	105	410	
12	Carr A. Vertannes ...	15 0	St. Paul's, Darjeeling ...	93	84	406	
13	Irene Sells ...	17 4	Darjeeling Girls' ...	150	49	403	
14	Raphael M. Cohen ...	16 5	Jewish Boys' ...	86	108	402	
	Eva H. Schumacher ...	14 5	*Miss. O'Brien's* ...	151	63	402	
16	Eden G. Dobson ...	16 5	St. Paul's, Darjeeling ...	112	112	420	
17	*Emily Wallace* ...	13 8	*Welland Memorial* ...	139	112	397	
18	Cecil B. C. Bullock ...	16 2	St. Paul's, Darjeeling ...	131	115	396	
	Alice Cantwell ...	14 1	*Loretto House* ...	116	110	396	
20	Beatrice Stark ...	15 3	Calcutta Girls' ...	106	51	395	
21	Thomas Brocken ...	15 0	St. Michael's, Coorjee ...	94	83	394	
22	*Sydney E. Ansell* ...	14 6	*St. Paul's, Darjeeling* ...	83	87	384	
23	Cuthbert Foster ...	15 2	St. Michael's, Coorjee ...	104	104	383	
24	Lilian Burgess ...	16 6	Loretto House ...	106	74	380	
25	*Eustace P. Jones* ...	13 1	*Miss O'Brien's* ...	123	80	378	
26	Michael Gillespie ...	15 7	St. Michael's, Coorjee ...	97	110	376	
27	*John Atkinson* ...	14 11	*St. Joseph's, Calcutta* ...	101	75	374	

No.	Name of candidate.	Age.	School.	Marks gained in the compulsory subjects.		Total.	Remarks.
				English.	Arithmetic.		
	THIRD DIVISION—*concluded.*	Yrs. M.					
28	William J. Marshall	16 11	Calcutta Boys'	79	113	373	
29	John C. Hill	15 6	St. Paul's, Darjeeling ...	103	89	371	
30	Zoe Vardon	15 8	Miss O'Brien's	112	85	367	
31	*Eugene Chinall*	14 9	*Calcutta Free*	141	44	366	
32	*Jochebed Cohen*	14 8	*Jewish Girls'*	97	93	355	
33	*Gerald Gantzer*	13 6	*St. Thomas's, Howrah* ...	125	62	347	
34	Lilla Adams	16 8	Pratt Memorial	131	64	345	
35	Aloysius Hill	17 0	St. Michael's, Coorjee ...	103	67	343	
	Albert E. Swann	14 1	*Calcutta Free*	91	65	343	
37	Virginia LeCun	15 4	Loretto House	101	73	331	
38	Ida Dunn	21 0	Female Normal School ...	118	56	327	
	Edmund C. Rondeau ...	14 8	*Doveton College*	81	86	327	
	Gertrude Watling	14 8	*Pratt Memorial*	104	81	327	
41	Mona Blond	18 8	Calcutta Girls'	94	70	315	
42	Amelia Fleming	19 9	Private student	136	63	309	
43	William L. W. Renny ...	15 4	St. Paul's, Darjeeling ...	78	94	308	
	Daisy Wight	15 2	La Martinière Girls' ...	91	103	308	
45	Cissira Ghosh	17 11	Loretto House	102	54	306	

A. M. NASH,
Inspector of European Schools, Bengal.

CALCUTTA UNIVERSITY.

NOTICE.

THE University examinations in Arts, Law, Medicine, and Engineering, 1890, will be held on the undermentioned dates—(This cancels the previous notifications):—

Entrance Examination on Monday, the 24th February, and following days.

F. A. and B. A. Examinations on Monday, the 10th March, and following days.

M. A. and Premchand Roychand Examinations on Monday, the 10th November, and following days.

B. L., Honours in Law, L. M. S., and Preliminary Scientific (L. M. S.) Examinations on Monday, the 7th April, and following days.

M. B., Preliminary Scientific (M. B.), M. D., and F. E. Examinations on Monday, the 5th May, and following days.

L. E. and B. E. Examinations on Monday, the 7th July, and following days.

Applications from candidates for admission to the Entrance, F. A., and B. A. Examinations must be lodged with the Registrar on or before the 10th January.

Applications from candidates for admission to the M. A. Examination must be lodged with the Registrar on or before the 11th August.

Applications from candidates for admission to the B. L. and Honours in Law Examinations must be lodged with the Registrar on or before the 7th March.

Applications from candidates for admission to the L. M. S. and Preliminary Scientific (L. M. S.) Examinations must be lodged with the Registrar on or before the 24th March.

Applications from candidates for admission to the M. B. Preliminary Scientific (M. B.) Examinations must be lodged with the Registrar on or before the 21st April.

Applications from candidates for admission to the M. D. Examination must be lodged with the Registrar on or before the 5th April.

Applications from candidates for admission to the F. E. Examination must be lodged with the Registrar on or before the 21st April.

Applications from candidates for admission to the L. E. and B. E. Examinations must be lodged with the Registrar on or before the 23rd June.

All candidates from the same institution must appear at one and the same place of examination.

By order of the Vice-Chancellor,

CHARLES H. TAWNEY, *Registrar.*

SENATE HOUSE, *the 7th January* 1890.

Prize Essay for Native Ladies.

THE following subject has been selected for Babu Brajamohan Dutt's Prize of Rs. 40 for the year 1889-90:—

"The present condition of Bengali Women."

The conditions for the award of the prize are—

(1) That the competition be open to all educated women, being natives of Bengal, without regard to age.

(2) That the prize be given for an essay, to be written in either Bengali or Sanskrit.

(3) That the essays be sent to the Central Text-Book Committee for adjudication within six months of the date of advertisement.

(4) That each essay be accompanied by the written declaration of the husband parent, or guardian of the competitor that, to the best of his belief, she has received no assistance of any kind, direct or indirect, in writing the essay.

Candidates are requested to send their essays, not later than the 30th June 1890, to the Secretary to the Central Text-Book Committee, Office of the Inspector of Schools, Presidency Circle, Calcutta. The envelope containing the essay should be superscribed "Brajamohan Dutt Prize Essay." The name of the successful competitor will be published in the *Calcutta Gazette*.

The winner of the prize in any year may, if she pleases, again compete. If she is adjudged to have sent in the best essay in such subsequent competition, her name will be published in the *Gazette*, but the prize will be awarded to the next eligible candidate.

No prize will be awarded if, in the opinion of the judges, the best essay sent in is not such as to deserve a prize.

A. CROFT,
Director of Public Instruction.

The 28th December 1889.

Examination of Candidates for Pleadership and Mookhtarship in Mofussil Courts subordinate to the High Court.

THE next examination of candidates for Pleadership will be held in the Senate House of the Calcutta University on *Wednesday and Thursday, the 19th and 20th of February* 1890, instead of on Monday and Tuesday, the 24th and 25th of February as originally notified.

The next examination of candidates for Mookhtarship will be held at Calcutta, Patna, Dacca, Cuttack, Gauhati, and Sylhet on *Wednesday and Thursday, the 19th and 20th of February* 1890, instead of on Monday and Tuesday, the 24th and 25th of February as originally notified.

Two papers will be set each day for the Pleadership Examination at 10 A.M. and 2 P.M., respectively, and the two papers for the Mookhtarship candidates will be set on the 19th February at the same hours.

Under no circumstances will any candidate be admitted to the examination-room after these hours.

The candidates will be required to produce at the examination extracts from the Register, which will be furnished to them by the District Judge through whom their applications have been sent to the Board of Examiners.

No candidate will be allowed to enter the examination-room with any memoranda or loose papers of any description (with the exception of the extracts abovementioned).

All writing materials will be provided, with the exception of pens, which the candidates must bring with them.

HENRY T. HYDE,
Secy. to the Board of Exmrs. for Pleadership and Mookhtarship.

NOTICE.

IN accordance with the Resolution of the Government of Bengal in the General Department, dated the 6th March 1886, published on page 541 of the *Calcutta Gazette* of the 31st of the same month, notice is hereby given that an examination for the admission of female students to the certificate class of the Calcutta Medical College will be held in the Theatre of that College on Tuesday, the 11th February 1890, and following days.

Hours and Subjects of Examination.

Tuesday.—English dictation, Grammar and Composition—from 1 to 4 P.M.

Wednesday.—History of England and India. Geography: General, and of India in particular—from 1 to 4 P.M.

Thursday.—Arithmetic: the first four rules, vulgar and decimal fractions, and proportion—from 1 to 4 P.M.

Candidates should apply in writing to the Principal of the Medical College, Calcutta, not later than Saturday, the 8th February, for permission to appear at the examination.

Applications for permission to reside in the Sarnamayi Hostel should be addressed to the Honorary Secretary to the Bengal Branch of the Countess of Dufferin's Fund, 86, Chowringhee, Calcutta.

A. CROFT,
Director of Public Instruction.

The 6th January 1890.

NOTIFICATIONS OF THE BOARD OF REVENUE.

No. 1594B.

NOTICE is hereby given that the Second Sale of Opium, the provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall Street, on Monday, the 3rd February 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. They may be ascertained by reference to the Notification issued on the 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Board of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th February 1890, respectively, that is to say, no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 8th February 1890, and no Bank of Bengal Receipts in full payment of lots will be accepted after 3-30 P.M. of Tuesday, the 18th February 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the opium manufactured at the Patna and Ghazeepore Factories will be brought to sale during the year 1890 about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so:—

DATES.			Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Monday, 3rd March	1890	...	2,250	2,500	4,750
On or about Wednesday, 2nd April	,,	...	2,250	2,500	4,750
On or about Thursday, 1st May	,,	...	2,250	2,500	4,750
On or about Monday, 2nd June	,,	...	2,250	2,500	4,750
On or about Wednesday, 2nd July	,,	...	2,250	2,500	4,750
On or about Monday, 4th August	,,	...	2,250	2,500	4,750
On or about Monday, 1st September	,,	...	2,250	2,500	4,750
On or about Wednesday, 1st October	,,	...	2,250	2,500	4,750
On or about Monday, 3rd November	,,	...	2,250	2,500	4,750
On or about Monday, 1st December	,,	...	2,250	2,500	4,750
TOTAL		...	22,500	25,000	47,500

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L.P., CALCUTTA, *the 30th December* 1889.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that a bye-election will be held on the 8th March next, in Ward No. III of the Birnagore Municipality, in the district of Nuddea, for the purpose of electing a Commissioner for the ward in the place of Baboo Priya Nath Chatterjee, who has ceased to be a Commissioner by being absent from six consecutive meetings.

A. SMITH, *Commissioner.*

COMMR'S. OFFICE, PRESIDENCY DIVISION, CALCUTTA, *the 11th January* 1890.

NOTIFICATION.

IT is hereby notified for general information that at the bye-election held on the 10th ultimo in Ward No. II of the Maniktolla Municipality, Baboo Jagodiswar Mittra has been duly elected a Commissioner for that Ward in the place of Baboo Gouri Sunker Ghosal, deceased.

A. SMITH, *Commissioner.*

COMMR.'s OFFICE, PRESY. DIVN., CALCUTTA, *the 9th January* 1890.

NOTIFICATION.

It is hereby notified for general information that a bye-election will be held on the 7th March next in Ward No. III of the Ranaghat Municipality, in the district of Nuddea, to elect a Commissioner for that Ward in the place of Baboo Jadunath Mokerjea, resigned.

A. SMITH, *Commissioner.*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the* 13*th January* 1890.

NOTIFICATION.

It is hereby notified for general information that at the bye-election held on the 21st ultimo in Ward No. III of the City Moorshedabad Municipality, Baboo Indra Chand Nahata, has been duly re-elected as Commissioner for the Ward.

A. SMITH, *Commissioner.*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the* 13*th January* 1890.

NOTIFICATION.

It is hereby notified for general information that at the bye-election held in Ward No. 1 of the Municipality in Deoghur in the Sonthal Pergunnahs on the 23rd December last, Baboo Bichan Dutt Jha was elected Commissioner of the Municipality at that station, *vice* Baboo Rassick Lall Tewary, deceased.

C. C. STEVENS, *Offg. Commissioner.*

BHAGULPORE, *the* 10*th January* 1890.

NOTIFICATION.

It is hereby notified for general information that a bye-election will be held in the Sewan Municipality, in the district of Sarun, on the 24th February next, to elect Municipal Commissioners in place of Baboo Ramphal Sah, resigned, and of Shaikh Atta Hossein who has ceased to be a Commissioner under the operation of section 20 of the Municipal Act.

J. BOXWELL, *Offg. Commissioner.*

PATNA, COMMR.'S OFFICE, *the* 4*th January* 1890.

NOTIFICATION.

It is hereby notified for general information that at the election held under section 27 Act III (B.C.) of 1884, on Friday, the 20th December 1889, Baboo Devendra Nath Hait has been elected a Commissioner of the Tumlook Municipality, in the district of Midnapore, *vice* Baboo Uma Charan Missra, resigned.

N. S. ALEXANDER, *Commissioner.*

COMMR.'S OFFICE, BURDWAN DIVN., *the* 8*th January* 1890.

NOTIFICATION.

The 8*th January* 1890.—It is hereby notified for general information, under Rule 21 of the Election Rules, that an election will be held, under section 27 of Act III (B.C.) of 1884, on Saturday, the 8th February 1890, in Ward No. III of the Naraingunge Municipality, in the district of Dacca, for the purpose of electing a Municipal Commissioner in the place of Mohamad Pir Baksha, who has ceased to be a Commissioner under section 20 of the Act.

A. L. CLAY, *Offg. Commissioner.*

Pearl Fishery in Ceylon, 1890.

The following notice is published for general information.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,
Secretary to the Govt. of Bengal.

PEARL FISHERY, 1890.

NOTICE is hereby given that a Pearl Fishery will take place at Marichikaddi, in the Island of Ceylon, on or about 20th February 1890. The bank to be fished is the Muttuvarathu Paar, 5 to 7½ fathoms water, lying off Dutch Bay, partly fished in March last, now estimated to contain oysters sufficient to employ 100 boats for 30 days with average loads of 8,000, each boat fully manned with divers per day.

2. It is therefore necessary that such boatowners and divers as may wish to be employed at the said fishery should be at Marichikaddi on or before 15th February next, and it is notified that the first day's fishing will take place on or about 20th February, if possible.

3. Marichikaddi is on the mainland, eight miles by sea south of Sillavaturai, and supplies of good water and provisions can be obtained there equal to Sillavaturai.

4. The fishery will be conducted on account of Government, and the oysters put up to sale in such lots as may be deemed expedient.

5. The arrangements of the fishery will be the same as have been usual on similar occasions.

6. All payments to be made in ready money in Ceylon currency.

7. Drafts on the Banks in Colombo or bills on the Agents of this Government in India, at ten days' sight, will be taken, on letters of credit being produced to warrant the drawing of such drafts or bills.

8. For the convenience of purchasers, the Treasurer at Colombo and the different Government Agents of Provinces will be authorised to receive cash deposits from parties intending to become purchasers, and receipts of these officers will be taken in payment of any sums due on account of the fishery.

9. No deposit will be received for a less sum than Rs. 250.

By His Excellency's command,

E. NOEL WALKER,
Colonial Secretary.

COLONIAL SECRETARY'S OFFICE, COLOMBO, *the 19th December* 1889.

Statement of the valuation and produce of 15,000 *Oysters taken from the Muttuvarathu Paar in November* 1889.

DESCRIPTION.	Size in Basket.	Number.	Quantity in Chevvu.	Kalangey and Manchady.	Total Kalangey and Manchady.	Value.	Total value.	Per Chevvu.	Per Kalangey.
				K. M.	K. M.	Rs. C.	Rs. C.		
1 Anatári	20	1	45/320	0 0 7/8	.....	5 91	.....	12 star pagodas	.....
2 Kuruval Kalippu...	.....	1	60/320	0 0 9/16	.....	5 25	.....	8 ditto ...	.....
3 Pisal	.....	1	... ...	0 0 1/2	0 1 5/8	0 22	11 38	.....	2 star pagodas.
4 Ani	30	1	23/320	0 0 5/16	.....	6 29	.....	25 star pagodas	.....
5 Pisal	.....	2	.....	0 0 11/16	.....	0 24	.....	.....	2 star pagodas.
6 Kodai	.....	4	.....	0 0 15/16	0 1 13/16	0 16	6 69	.....	1 ditto.
7 Kalippu	50	3	28/320	0 0 13/16	.....	3 32½	.....	8 star pagodas	.....
8 Kuruval	.....	4	.....	0 1 1/16	.....	1 25	.....	.....	6 star pagodas.
9 Pisal	.....	3	.....	0 0 13/16	.....	0 30½	.....	.....	2 ditto.
10 Kodai	.....	2	.....	0 0 7/16	0 3 5/16	0 7½	4 95½	.....	1 ditto.
11 Ani	80	3	20/320	0 0 5/16	.....	5 40½	.....	25 star pagodas	.....
12 Anatári	.....	3	15/320	0 0 3/16	.....	2 62½	.....	16 ditto ...	.....
13 Kalippu	.....	6	40/320	0 1	.....	3 50	.....	8 ditto ...	.....
14 Kuruval	.....	18	.....	0 2 1/16	.....	2 88½	.....	.....	6 star pagodas.
15 Pisal	.....	19	.....	0 3 1/16	.....	1 38	.....	.....	2 ditto.
16 Kodai	.....	4	.....	0 0 15/16	0 9 5/16	0 10	15 95½	.....	1 ditto.
17 Vadivu	100	.....	2 3 4/16	1 3					
18 Excluding	200	.....	1 2 9/16	1 5 1/2	4 2 5/16	190 31	190 31	15 star pagodas	.....
19 Madanku	400	.....	1 2 11/16	1 13 5/16					
			4 11 1/16						
20 Túl	600	.....	.....	1 7 5/16					
21 ,, ...	800	.....	.....	0 14 5/16	2 17	49 87½	49 87½	... ..	5 star pagodas.
22 ,, ...	1,000	.....	.....	0 15 5/16					
23 Másu-túl	.....	.....	.....	1 18 1/2	1 18 1/2	16 90	16 90	.....	2½ ditto.
					9 13 1/2	.....	296 6½		
24 Shell Pearls ...	.....	.....	.....	0 9	0 9	.....	3 93½	.....	.....
					10 2 1/2	.....	300 0		

Average per 1,000 Oysters, Rs. 20.

J. DONNAN, Inspector of Pearl Banks.
M. SEEMANPILLAI, Mudaliyár, Adikar of Musalai, &c.
Signed also by 4 Pearl Merchants.

Silávatturai, the 29th November 1889.

The Calcutta Gazette.

WEDNESDAY, JANUARY 15, 1890.

PART I A.

Orders and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following orders, issued by the Government of India, in the Military Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

Fort William, the 10th January 1890.

VOLUNTEER CORPS.

APPOINTMENTS.

No. 35.—*Calcutta Naval Volunteers*—

Mr. Carlton Cathcart Collingwood to be Lieutenant to complete the establishment.

Mr. George Pointon and Mr. William Thomas Wawn to be Sub-Lieutenants to complete the establishment.

Mr. Samuel Reed to be Paymaster, and the Reverend Herbert Octavius Moore to be Honorary Chaplain to complete the establishment.

No. 36.—*Calcutta Volunteer Rifle Corps*—

Mr. Charles Malcolm Sinclair to be Second Lieutenant, *vice* McLaughlin, resigned.

No. 37.—*Dacca Volunteer Rifle Corps*—

Mr. George Nixon to be Second Lieutenant, *vice* Finlayson, resigned.

PROMOTIONS.

No. 38.—*Calcutta Volunteer Rifle Corps*—

Lieutenant W. M. Jones to be Captain, *vice* Whitehead, resigned.

RESIGNATIONS.

No. 39.—*Calcutta Volunteer Rifle Corps*—

Captain H. A. Erskine resigns his commission.

E. H. H. COLLEN,
Secretary to the Govt. of

The Calcutta Gazette.

WEDNESDAY, JANUARY 15, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 7th January 1890.—It is hereby notified that, under section 11 of Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the following gentlemen to be members of the several Local Boards in the district of Jessore :—

Local Boards.	Names of members.
Sudder ...	Raja Gyanada Kanta Roy. Baboo Jadu Nath Mozumdar. „ Umesh Chandra Ghose. „ Dharani Dhur Haldar. Revd. R. H. Tregillces.
Narail	Syed Ahmad. Baboo Jagendra Nath Sen, M.A. „ Bepin Behari Bose. „ Kiron Chandra Roy.
Jhenidah ...	Mr. Charles Tweedie. Baboo Haranath Chatterjee. „ Ramottam Ghose Chowdhuri.
Magura ...	Mr. J. H. Oatts. Moulvi Afsaruddin Khan Chowdhury. Baboo Tarak Chandra Sen.
ngong ...	Baboo Gyanada Sanker Bose. „ Kamakhya Nath Acharjee. „ Sura Nath Chowdhuri. „ Harish Chandra Roy. „ Bama Charan Bose.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th January 1890.—It is hereby notified for general information that, under the power vested in the Local Government by clause 2, section 30 of Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to exclude from the operation of the said Act the road from the foot of the hill fort at Buxar to the railway station, which lies within the limits of the Buxar Municipality. The Lieutenant-Governor is also pleased to authorize its transfer to the charge of the District Board of Shahabad.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 9th *January* 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Ananda Chandra Sen to be a Commissioner of the Kendraparah Municipality, in the district of Cuttack, *vice* Baboo Ram Prosad Das, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

ERRATUM.

The 9th January 1890.—In paragraph 3 of Government notification, dated the 2nd December 1889, published at pages 267-68, Part IB of the *Calcutta Gazette* of the 4th idem, containing the names of the members of the Ghattal Local Board, in the district of Midnapore, *for* "Hasi Bakaulla" *read* "Kasi Bakaulla" and *for* "Baboo Radha Krishna Seal" *read* "Baboo Radha Kishore Seal."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 10th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Dr. R. M. Blaker to be a Commissioner of the Dinagepore Municipality, *vice* Assistant Surgeon Kali Prosunno Kumar.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 11th January 1890.—It is hereby notified that, under section 11, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the following gentlemen to be members of the several Local Boards in the district of Furreedpore :—

Local Boards.	Names of Members.
Furreedpore...	The Road Cess Deputy Collector for the time being, *ex-officio*. Choudhuri Fateh Ali. Baboo Khorgeswar Bose. Moulvie Abdur Rahim.
Goalundo ...	Baboo Abhay Shankar Mozoomdar. Moulvie Faiz Baksh Choudhuri. Baboo Akhay Kumar Sarkar.
Madaripore...	Baboo Kherod Chandra Rai. Munshi Basiraddin Ahmed. Baboo Dwarkanath Sen. Syud Abdur Rub Choudhury.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 11th January 1890.—It is hereby notified that, under section 19, Act III (B.C.) of 1885, Mr. W. A. Elliot has been elected by the members of the Chupra Local Board in the district of Sarun to be a member of the District Board of Sarun, *vice* Mr. C. B. Boileau.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 11th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Dr. G. Price and Baboo Nogendra Nath Ghose to be Commissioners of the Burdwan Municipality in the district of Burdwan, *vice* Dr. R. L. Dutt, transferred, and Mr. H. R. Reily who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

ERRATUM.

The 11th January 1890.—In the notification dated the 2nd September 1889, published at page 189, Part IB of the *Calcutta Gazette* of the 4th idem, appointing Mr. Elliot to be a member of the Chupra Local Board, *for* Mr. W. N. Elliot *read* Mr. W. A. Elliot.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 12th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Dr. W. Beatson to be a Commissioner of the Bhagulpore Municipality in the district of Bhagulpore, *vice* Dr. G. Price, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th January 1890.—It is hereby notified that, under section 11, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the following gentlemen to be members of the several Local Boards in the district of Khoolna :—

Local Boards.	Names of Members.
Khoolna	The Civil Medical Officer. Baboo Ambica Charan Sen, B.L. Munshi Abdul Ahad Sardar. Baboo Indu Bhusan Mozumdar, B.A.
Bagirhat	Baboo Gobind Chandra Das. „ Ashutosh Chakravarti. „ Rajendra Kumar Ghosh. „ Kailash Chandra Sen.
Satkhira	Baboo Poresh Nath Chatterjee. „ Girijanath Roy Chowdhuri. „ Nepal Kristo Ghosh. „ Asutosh Roy Chowdhuri. Moulvie Abdul Aziz.

The Lieutenant-Governor is pleased to appoint the following gentleman, under section 10 of the Act, to be a member of the Bagirhat Local Board :—

Baboo Mohim Chandra Ganguli.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th January 1890.—It is hereby notified that, under section 16, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Haribulhab Bose to be a Commissioner for Ward No. IX of the Cuttack Municipality, in the district of Cuttack, *vice* Baboo Hem Chandra Ghose, who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th January 1890.—It is hereby notified that, under section 19, clause (3) of the Bengal Local Self-Government Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint Baboo Prasanna Kumar Karfarma, Deputy Magistrate and Deputy Collector, and Baboo Gunga Govinda Sarkar, Assistant Surgeon, to be members of the District Board of Bogra in the place of Baboo Kailash Govinda Das and Dr. R. M. Blaker, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th January 1890.—It is hereby notified that the Lieutenant-Governor approves, under section 25, Act III (B. C.) of 1885, the election by the members of the Midnapore Local Board, in the district of Midnapore, of Baboo Kartic Chandra Mitra to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th January 1890.—It is hereby notified that the Lieutenant-Governor approves, under section 25, Act III (B. C.) of 1885, the election by the members of the Contai Local Board, in the district of Midnapore, of Baboo Upendra Narain Mozumdar to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th January 1890.—It is hereby notified that the Lieutenant-Governor approves, under section 25, Act III (B. C.) of 1885, the election by the members of the Tumlook Local Board, in the district of Midnapore, of Baboo Umesh Chandra Kotal to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th January 1890.—It is hereby notified that the Lieutenant-Governor approves, under section 25, Act III (B. C.) of 1885, the election by the members of the Ghattal Local Board, in the district of Midnapore, of Baboo Probodhe Chundra Bose to be their Chairman.

H. J. S. COTTON,
Jy. Secy. to the Govt. of Bengal.

ERRATUM.

The 13th January 1890.—In paragraph 1 of notification, dated the 2nd December 1889, published at page 267, Part IB of the *Calcutta Gazette* of the 4th idem, notifying the names of gentlemen elected to be members of the several Local Boards in the district of Midnapore, *for* "Syud Enamali" of the Tumlook Local Board *read* "Syed Jonabali."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 14th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Dr. F. C. Nicholson to be a Commissioner of the Dacca Municipality, *vice* Dr. C. J. W. Meadows.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 10th January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Naraingunge Municipality for a public purpose, viz., for a road from Bandar to Baidyabazar road, called Nabigunge road, in the villages of Nabigunge, Mundamala, Ekrampur and Bandar, pergunnah Shonargan, zillah Dacca, it is hereby declared that for the above purpose a piece of land measuring, more or less, 53 bighas 10 cottahs and 12 chittacks of standard measurement, is required. The land is bounded on the North by the Baidyabazar road; on the South by the Bandar road and Rali Brothers' cooly line; and on the West and East by the land belonging to Nabigunge, Mundamala, Ekrampur and Bandar villages.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, JANUARY 15, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Monghyr will be put up for sale at the Collector's Office of that district on 28th January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.		*I.—Permanently-settled estates.*		Rs. A. P.	Rs. A. P.	Rs. A. P.
13	Joas, pergunnah Salemabad.	613 14 0	.....	2a. 13g. 6c. 13b. ...	Kuldip Narain Singh and others.	102 5 0	.....	104 6 0
13	Ditto ...	613 14 0	.....	3a. 3d. 18c. 6f. 14r. ...	Ramman Singh and others.	122 10 0	.....	74 10 6
283	Belohhi, pergunnah Amerthu.	641 1 0	.....	2a. 8d.	Gopal Singh and others ...	96 3 0	.....	10 1 0
283	Ditto ...	641 1 0	.....	3a.	Ramadheen Rai and others.	120 1 0	.....	29 1 0
602	Parora, pergunnah Ballia.	830 15 0	.....	1 dam	Lachmi Kumri	2 10 0	.....	0 2 0
602	Ditto ...	830 15 0	.....	1a. 11d. 1c. 1d. 4r. 2p.	Lal Mohun Mullik and others.	132 2 0	.....	1 5 6
629	Sultanpur Tetri, pergunnah Ballia.	893 0 0	.....	11a. 9d. 1k.	Sheik Tohower Hossain and others.	639 5 0	.....	131 15 0
804	Taluqa Tulsipur and others, pergunnah Malki.	932 10 0	.....	1a. 16d. 2d.	Manohar Lal and others...	110 15 3	.....	52 12 9
830	Ganga Persad, pergunnah Malki.	588 3 0	.....	2a. 1c. 1k. 9r.	Reet Lal Singh and others	121 2 0	.....	61 5 3
1451	Bhowanandpur *alias* Ramdeari, pergunnah Malki.	1,166 13 0	.....	1a. 5g. 1c. 3d.	Shew Dyal Singh and others.	91 9 0	.....	21 14 0
1451	Ditto ...	1,166 13 0	.....	5g. 2c. 8d. 2k. 5f. ...	Mussamut Amrito Kumri and others.	20 15 0	.....	3 15 0
1451	Ditto ...	1,166 13 0	.....	16g. 2c. 6d.	Bhojraj Singh and others	60 12 0	.....	14 11 0
2308	Chuckangra, pergunnah Amerthu.	1,083 14 0	.. ...	1a. 15d. 11c. 2b. 4f. 8b.	Shah Mohamad Hossain and others.	120 7 0	.....	29 14 0
2317	Imamnagar, pergunnah Amerthu.	513 14 0	Whole ...	.....	Syed Tassaduk Hossain and others.	.....	0 13 6	.....
2746	Halsi, pergunnah Amerthu.	1,504 1 0	.....	13a. 10d. 5c. 2b. ...	Beni Singh and others ...	1,292 0 0	.....	220 14 0
2779	Mahiuddinagar Karik, pergunnah Amerthu.	564 11 0	.....	3a.	Kokil Singh and others ...	95 3 0	.....	11 14 0
2779	Ditto ...	564 11 0	.....	2a.	Rohim Singh and others...	120 9 0	.....	0 14 0
5359	Mohamedpur Fataha, asli and dakhli, pergunnah Emadpur.	708 0 0	.....	12a.	Moulvi Asrafuddin Ahmad and others.	531 0 0	.....	18 14 9
				II.—Temporarily-settled estates.				
1433	Akberpur Barari, pergunnah Malki.	765 13 0	.....	14a.	Kharag Singh and others	685 14 0	.....	60 8 6

Monghyr Collectorate, the 4th December 1889.

T. E. COXHEAD, Officiating Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Chittagong, will be put up for sale at the Collector's Office of that district on the 31st January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
	Thapas Town and Ranzan—							
2 / 2	Taruf Ajoidha Ram, Fattiabad.	723 13 0	Yes: the whole estate is to be sold.	.....	Pran Kristo Das, Ram Shabak Das and others.	.....	49 8 8	.....
	Thanas Patya, Futtickcherry, Hathazari, and Satkania—							
25 / 51	Taruf Alearkhan ...	1,006 0 9	No: only shares are to be sold.	Separate accounts having been opened under Act XI of 1859, share No. 1, Asad Ali Khan; share No. II, Akber Ali Khan; share No. III of the remaining proprietors.	Share No. 1, proprietor Anwar Ali Khan.	468 7 5	.....	139 1 6
					Share No. 2, Asharaf Ali Khan and Jandah Bibi and others.	811 6 3	.....	240 14 2
					Share No. 3, Uzir Ali and Anwar Ali Khan.	326 3 1	.....	96 13 0
								476 12 8
	Thanas Futtickcherry, Hathazari, Patya, Ranzan, Town, and Zowargunge—							
28 / 54	Taruf Anandi Ram, Kanongoe.	849 6 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 10, Ram Joy Mohazan; share No. 11, Ram Joy Mohazan; share No. 13, Sudder Ali, and share No. 24, Bishambur.	Share No. 10, Kali Kumar, Durgakripa De.	12 11 0	.....	3 13 3
					Share No. 11, Kali Kumar, Durgakripa De.	14 14 0	.....	4 6 6
					Share No. 13, Asharaf Ali Aminolla, *alias* Gurun Meah.	11 0 0	.....	3 4 3
					Share No. 24, Kali Kumar and Durgakripa De.	53 15 5	.....	16 0 6
								27 7 6
	Thanas Hathazari, Ranzan, and Town—							
29 / 55	Taruf Aziz Nasarat ...	791 12 0	Yes: the whole estate is to be sold.	.....	Sheik Karam Ali Meah.	.....	235 0 1	.....
	Thana Futtickcherry—							
37 / 64	Taruf Annundy Manollah	1,160 0 8	Ditto ...	.....	Nemai Charan Nandi, Gunashila.	.....	59 1 6	.....
	Thana Ramgan—							
88 / 391	Taruf Basanta Ram, Fatehabad.	557 14 3	Ditto ...	.....	Anunda Mohon, Samad Ali and Sreemati Meherjan Bibi and others.	.....	31 1 0	.....
	Thanas Hathazari, Futtickcherry, Patya, Town, and Satkania—							
92 / 401	Kismut Balaram Sircar Baboit, taruf Sonoullah Khan.	1,063 11 3	Ditto ...	.....	Gris Chandra Rakhit and Guru Das Rakhi	.....	315 12 6	.....
	Thanas Bhatiari, Hathazari, Ramoo, Zorwargunge, Patya, and Satkania—							
116 / 523	Kismut Bissessari Baboit, taruf Gouri Sankur.	1,228 12 9	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 13 of the remaining proprietors.	Share No. 13, Mohabat Ali, Mahamed Hossen, Kali Charan and others.	404 13 11	.....	3 13 6
	Thanas Futtickcherry, Hathazari, Patya, Town, Satkania, and Ramoo—							
257 / 1283	Taruf Jubber Dust Khan...	6,538 11 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 1, Fazal Ahamud.	Share No. 1, Fazal Ahamud and Bazal Samad.	2,043 14 5	.....	209 13 5
	Thanas Futtickcherry, Hathazari, Patya, and Satkania—							
284 / 1467	Taruf Karim Khan ...	715 12 0	Yes: the whole estate will be sold.	.....	Anwar Ali Khan ...	.....	210 0 0	.....
	Thanas Patya and Satkania—							
286 / 1469	Taruf Komur Kulli ...	1,015 13 0	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 10, Dwarka Nath Kundo.	Dwarka Nath Kundo	68 10 5	.....	20 5
	Thana Ranzan—							
305 / 1552	Taruf Kanuz Fernandes...	1,640 5 3	Yes: the whole estate will be sold.	.....	Gris Chandra Roy Rakhit, Guru Das Roy Rakhit, and others.	.....	486 15 0	.....
	Thana Bhatiari—							
336 / 1751	Taruf Modun Chowdhury	688 6 5	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 4, Koshalya.	Shib Prosad Shukul	141 10 0	.....	42 0 9
	Thanas Hathazari and Ranzan—							
372 / 1889	Taruf Mohomad Shafi Nazir.	558 7 3	Yes: the whole estate will be sold.	.....	Susty Charan Sen, Bhairub Chandra Chowdhury and others.	.....	165 12 8	.....

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
383 / 1900	Thana Zorwargunsa— Taruf Mohomed Monohur	666 15 6	Yes : the whole estate will be sold.	.....	Sreemati Raiso Nissa Chowdhuria.	.....	198 0 0	.....
	Thanas Hathazari, Patya, Ranzan and Town—							
480 / 2432	Kismut Pran Kristo, Gopi Mohun, Guru Das and Haridas Roy Baboit, taruf Jugul Kissor Chowdhury.	3,353 14 6	No : only shares will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2, Akhil Chandra Roy, share No. 6 of the remaining proprietors.	Share No. 2, Akhil Chandra Roy.	381 8 9	.....	113 4 4
					Share No. 6, Gris Chandra Roy, on behalf of minor Bhikon Chandra and Esof Ali and others.	1,329 2 8	.....	365 4 7
								478 8 11
	Thanas Futtickcherry, Patya, Hathazari, Ranjan and Town—							
481 / 433	Taruf Pran Bullab ...	944 5 5	No : only a share will be sold.	Ditto, share No. 2, Mohesh Chandra Chowdhury.	M h sh Chandra Chowdhury and Obhoy Charan Chowdhury and others.	116 0 8	.....	35 0 9
	Thana Ranzan—							
51 / 2538	Taruf Raghob Juggodish	515 0 3	Ditto ...	Ditto, share No. 12 of the remaining proprietors.	Gunga Das, Brejo Mohon and others.	133 2 1	.....	24 3 7
	Thanas Patya, Ranzan, Town, and Hathazari—							
51 / 2544	Taruf Ram Mohon Sen ...	884 11 3	Yes : the whole estate will be sold.	.....	Prasanna Kumar and Ali Meah.	.....	129 13 6	.....
	Thanas Chakaria, Patya, Ra zan, and Town—							
527 / 2554	Taruf Ram Sondur Kanongoe.	849 6 6	No : only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2 of the remaining proprietors.	Srimoti Latifa Khatun.	681 6 6	.....	202 3 9
	Thanas Zorwargunge, Patya, Ranjan and Satkania—							
535 / 2565	Taruf Ram Kishore Kanongoe.	818 11 10	Ditto ...	Ditto, share No. 6, Ram Chandra Biswas and Bangshi Badon Biswas.	Mohesh Chandra Bhuttacharjee.	14 11 0	.....	4 5 9½
	Thanas Patya and Town—							
569 / 2929	Taruf Sachi Roshun ...	752 11 0	No : shares will be sold.	Ditto, share No. 1, Shoek Sadak Ali ; share No. 2, Keramut Ali.	Share No. 1, Sadut Ali Chowdhury.	82 5 3	.....	24 7 1
					Share No. 2, Anwar Ali Chowdhury.	188 2 9	.....	17 10 3
								42 1 4
	Thanas Bhatiari, Hathazari, Zowargunge, Patya, Ranzan, Town and Satkania—							
573 / 2933	Taruf Sachi Ram Kanongoe.	26 12 9	No : shares will be sold.	Separate account having been opened under Act XI of 1859, share No. 1, Lal Mohomed ; share No. 16, Dwarka Nath Kanongoe ; share No. 52, Ram Kumar Dey and others ; share No. 63 of the remaining proprietors.	Share No. 1, Lal Mohamed.	4 14 3	.....	1 7 3
					Share No. 16, Dwarka Nath Kanongoe on behalf of Lakhi Narain Chackro.	4 4 6	.....	1 4 3
					Share No. 52, Ram Kumar Brejo Bashi.	0 10 6	.....	0 2 11
					Share No. 63 of the remaining proprietors Asanullah Chowdhury and others.	293 0 3	.....	83 8 9
								86 7 2
	Thanas Hathazari, Patya, Ranzan and Town—							
590 / 3054	Taruf Shib Durga Sharan...	2,942 8 9	No : only a share will be sold.	Ditto, share No. 8, Shoobal Chandra Das.	Shoobal Chandra Das.	25 14 5	.....	7 9 5
	Thana Chakaria—							
606 / 3113	Taruf Sheremast Khan Chowdhuri.	527 6 6	Ditto ...	Ditto, share No. 1, Fazal-ahamed.	Share No. 1, Fazal-ahamed, Fazal Samad and others.	165 10 0	49 2 8	.....

N. B.—The amounts in columns 8 and 9 represent arrears, the latest day for payment of which was 25th September 1889.

Chittagong Collectorate, the 14th December 1889. G. H. ALLEN, for Offg. Collector

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Patna will be put up for sale at the Collector's Office of that district on 3rd February 1890, corresponding with 28th Magh 1297 F.S. (Monday), for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue for the kist of 28th September 1889 :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
11	Berhna Lashkaripur Buzurg, pergunnah Bhimpur.	1,038 0 0	Whole...	.....	Kesho Lal and Kissen Prosad and others.	... ..	0 5 0	.....
12	Berhna Lashkaripur Buzurg Nisf, pergunnah Bhimpur.	2,129 0 0	.....	15a. 19d.	Kesho Lal and others, non-applicants.	2,122 5 6	.....	539 13 0
17	Indowt, pergunnah Shahjehanpur.	1,015 0 0	Whole...	.....	Syed Wajid Hosain and others.	.....	9 15 0	.....
20	Sani Hissa Nisf, pergunnah Biswak.	1,255 2 8	.....	1a. 5d. 7k. 17b. 6ph. 10t.	Mussamut Naziran and others, applicants for separation of accounts.	99 13 0	.....	14 4 8
20	Ditto ...	1,255 2 8	.....	1a. 11d. 18k. 6r. 8ph. 9r. 4t. ...	Mussamut Rohiman and others, applicants for separation of accounts.	124 2 11	.....	11 10 5
21	Bhadsara, pergunnah Masaudha.	1,314 5 6	.....	Gopepur 1a. 4p.	Hardoot Narain Singh, applicant for separation of accounts.	3 2 5	.....	6 4 10
28	Chainpur Shekhopur Barhampur, pergunnah Azimabad.	913 0 0	.....	Shekhopur 3a.	Rameshwar Singh and others, applicants for separation of accounts.	57 1 0	.....	11 1 8
28	Ditto ...	913 0 0	.....	Shekhopur 2a.	Rambollab Singh, applicant for separation of accounts.	38 0 8	.....	0 0 1
28	Ditto ...	913 0 0	.....	Shekhopur 13a. 1d. 11k. 19b. 14ph. 16r. 17rot. 10balki. Barhampur 6a. 18d. 6k. 13b. 7ph.	Gowri Shanker and Parkash Singh and others, non-applicants.	210 6 8	.....	3 0 6
40	Bazidpur Parthu, pergunnah Telladha.	533 5 4	.....	9a. 8p.	Mussamut Jharokha Koer and others, non-applicants.	322 3 8	.....	3 0 5
47	Hissah Chawanda, pergunnah Biswak.	906 10 8	.....	6a. 16k. 13b. 6ph. 13r.	Malik Zohurul Haq and others, non-applicants.	342 5 0	.....	9 11 3
65	Chak Kudarman, pergunnah Phulwari.	821 5 3	.....	Chak Kudarman 4a. 9d. 3k. 6b. 13ph. 7r.; Keshwarpur Digha 1a. 3d. 1k. 1b. 5ph.	Sheikh Lal Mohommad and others, non-applicants.	113 13 0	.....	9 8 5
65	Sokhulpur, pergunnah Pilich.	745 11 2	.....	10d. 14k. 4b. 6ph. 5t.	Chowdhry Harbans Narain Singh, applicant for separation of accounts.	24 15 9	.....	1 8 9
65	Ditto ...	745 11 2	.....	6a. 12d. 1k. 15b. 13ph. 19r. 5t. Tilwari.	Bidhi Chand and others, non-applicants.	306 4 3	.....	1 12 11
69	Poona Chharyari, pergunnah Pilich.	1,068 12 5	Whoe ...	.....	Baboo Dwarka Nath, Manager, Court of Wards, in charge of the estates of lunatic Debi Prasad.	.....	130 11 4	.....
70	Gobindpur Berhna, pergunnah Bhmpur.	624 0 0	Do. ...	.....	Durga Singh and others.	.....	12 3 0	.....
78	Deara Mohaze Kothi Shora, pergunnah Azimabad.	854 5 7	.....	4a.	Sheo Persad Singh and others, applicants for separation of accounts.	213 9 5	.....	30 3 4
78	Ditto ...	854 5 7	.....	7a. 1p. 10k.	Mussamut Woluyti Jan and others, non-applicants.	380 6 11	.....	14 8 1
98	Doiya, pergunnah Biswak.	1,169 11 6	Whole...	.....	Syed Ali Hossein and others.	.....	8 7 6	.....
101	Kapsiyawan, pergunnah Pilich.	1,813 6 1	.....	14a. 8d. 12k. 13b. 15ph.	Syed Majibor Rohuman, Manager of the estate of Debi Persad, lunatic, applicant for separation of accounts.	1,035 2 0	.....	74 12 10
102	Kaila, pergunnah Pilich.	854 6 5	Whole...	.....	Mussamat Sharfan and others.	.....	7 6 3	.....
102	Dowlatpur Deoria, pergunnah Balia.	871 7 0	Do. ...	.....	Mussamut Bibi Makhdooman and others.	.....	19 1 3	.....
104	Ekasra, pergunnah Biswak.	1,338 12 2	Do. ...	.....	Mir Enayat Hosain and others.	.....	0 13 3	.....
113	Mohammadpur, pergunnah Pilich.	538 10 8	.....	Mohammadpur 11a. 11d. 10k.; Sekandarpur 16a. Yarpur Balwa 8a.	Babu Parsidh Narain Singh and others, non-applicants.	309 10 8	.....	2 9 5
126	Ghostawan, pergunnah Biswak.	659 8 11	.....	10a. 11d. 19k. 11b. 18ph. 14r. 2t. ...	Mussamut Fakhran Nissa *alias* Nanhi Begum and others, non-applicants.	436 13 8	.....	10 9 9
128	Norari, pergunnah Pilich.	1,174 6 5	Whole ..	.....	Babu Parandip Narain Singh and others.	... ..	72 8 5	.....
129	Baruhi Khass, pergunnah Mannir.	565 2 0	.....	11a. 19p.	Reta Singh and others, non-applicants.	415 0 3	.....	46 11 5
135	Mirzapur Berhna, pergunnah Bhimpur.	737 0 0	Whole...	.....	Mussamut Soobanso Kuer and Ram Sahai Singh and others.	.....	60 0 9	.....
135	Khagura, pergunnah Shahjehanpur.	1,405 14 6	Do. ...	.....	Mussamut Bibi Khadaija and others.	.....	100 9 3	.....

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, the specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
142	Peer Barhawna, pergunnah Pilich.	Rs. A. P. 580 2 8	.....	5*a.* 12*d.* 12*k.* 10*b.*, 3*ph.* 2*t.* ...	Mussamut Sharfan and others, non-applicants.	Rs. A. P. 204 3 3	Rs. A. P.	Rs. A. P. 6 2 2
147	Qasbe Barhawna, pergunnah Pilich.	5,712 0 0	.....	Qasbe Barhowna 2*a.*; Korut 2*a.*; Barara 2*a.*; Arawan 2*a.*; Babhaniawan 2*a.*; Athbalpur Paithera 2*a.*	Mussamut Fasehan, applicant for separation of accounts.	714 0 6	.....	0 0 6
147	Ditto ...	5,712 0 0	.....	Qasbe Barhawna 12*a.* 5*d.* 2*k.* 10*b.* 1*ph.* 10*r.*; Korut 11*a.* 6*d.* 15*k.* 10*b.* 16*ph.* 10*r.*; Barara 12*a.* 17*d.* 10*k.* 2*b.* 7*ph.* 10*r.*; Arawan 12*a.* 17*d.* 10*k.* 2*b.* 7*ph.* 10*r.*; Babhaniawan 13*a.* 5*d.* 2*k.* 10*b.*; Athbalpur Paithera 12*a.* 5*d.* 10*b.*	Syed Ahmad Hosain, father and guardian of Syed Kefayat Hosain, and others, non-applicant.	4,490 10 10	.....	338 0 5
153	Bakawan, pergunnah Gyaspur.	724 4 3	Whole...	.....	Madhut Narain *alias* Munshi Mahto and others.	.....	4 0 6	.....
154	Rampur Imi, pergunnah Pilich.	563 7 6	Do. ...	.....	Mussamut Jagpati Kuer, mother and guardian of Ram Prasad Singh and others.	.....	0 7 6	.....
158	Raipur Astha, pergunnah Pilich.	1,442 2 3	... ...	3*a.* 3*d.* 17*k.* 13*b.* 2*ph.* 10*r.* ...	Lall Narain Singh, applicant for separation of accounts.	138 13 6	.....	8 8 6
158	Ditto ...	1,442 2 3	.....	Raipur Astha 1*a.* 15*d.* 11*k.* 4*b.* 10*ph.*; Astha 1*a.* 7*d.* 11*k.* 15*b.* 7*ph.* 2*r.* 10*t.*	Shaik Abdul Hamid and others, non-applicants.	120 4 5	.....	0 7 0
169	Rampur Berhna, gunnah Bhimpur.	998 8 0	Whole ..	.....	Sham Lal Singh and others.	.....	54 15 0	.....
172	Darveshpura, &c., pergunnah Behar.	832 0 0	.....	Durveshpura 10*d.* 10*k.*; Akhtyarpur Barolli 6*a.*; Gobindpur Bhedi 8*a.*	Darshan Lal and others, non-applicants.	143 11 7	.....	14 4 10
180	Sornawan, pergunnah Pilich.	587 2 3	.....	5*a.* 18*k.* 8*b.* 5*ph.*	Permeshar Narain Singh and others, non-applicants.	184 9 3	.....	6 14 2
187	Shekh Mohammadpur, pergunnah Bhimpur.	502 14 0	.....	11*a.*	Mussamut Saliman and others, non-applicants.	407 9 6	.....	22 3 10
188	Shekh Mohammadpur Hayatpur, pergunnah Bhimpur.	704 10 11	.....	10*a.* 3*d.* 11*k.* 11*b.* 4*ph.*	Harakh Narain Singh and others, non-applicants.	448 2 11	.....	68 4 5
201	Pariawna, pergunnah Biswak.	1,706 10 0	.....	12*a.* 13*d.* 6*k.* 13*b.* 10*ph.*	Babu Luchmi Narain and others, non-applicants.	1,351 1 9	.....	0 4 3
225	Akoerpur Bhadwar, &c., pergunnah Masandha.	3,215 10 9	.....	Akhberpur Bhadwan 16*a* ; Darawan 4*a.*; Pansoohi 16*a.*; Shorampur 16*a.*; Sherpura 16*a.*; Mushanpur Lachaman 16*a.*; Mominpur Na Dawana 16*a*; Masoompur Bindowli 16*a.*; Chak Shamsuddin 16*a.*; Korara 16*a.*; Katuri Beliari 16*a.*; Rupapur 16*a.*; Palgamberpur 16*a.*; Shewdaspur Kurkuri 16*a.*; Jadapur 16*a.*; Moazzamabad Bali Pakur 16*a.*; Durgapur Anant 16*a.*; Sekaria 16*a.*; Parsoorampur Heer 16*a.*; Jalalpur Ilahi 16*a.*; Rampur Misraoli 16*a.*; Kishwarpur 16*a.*; Shahzadpur Mosi 16*a.*; Atapur Rukun 16*a.*; Bela Gobindpur 16*a.*; Alampur Jarkha 16*a.*; Raghunathpur Mera 16*a.*; Saidabad Bekram 16*a.*; Patranga 16*a.*; Ahmadabad Khoniyan 16*a.*; Pali Patowna 16*a.*; Patowna 16*a.*; Raghunathpur Jag Bandan 16*a.*; Kaurikesho 16*a.*; Kishopur 16*a.*; Masaurha Khas 16*a.*; Hadinagar 16*a.*; Nasirpur Begah 16*a.*; Bihta 16*a.*; Abdullapur Khan Qali 16*a.*; Ganga Chak Mai Nezampur 16*a.*; Dadoopur 16*a.*; Mohammadkhanpur Dara 16*a.*; Fazilpur Patan 16*a.*; Ibrahimpur Jurga 16*a.*; Rampur Gunga 16*a.* Parsoorampur Kanak 16*a.*; Bishunpur Malshahi 16*a.*; Sarawti 16*a.*; Karanpura 16*a.*	Babu Shew Nandan Persad and others, non-applicants.	2,804 11 10	.....	41 0 0
227	Narendpur Kharownia, &c., pergunnah Azimabad.	5,885 5 6	.....	Hasratpur Akarya 17*a.* 15*d.* 11*b.* 2*p.*	Racheya Singh, applicant for separation of accounts.	6 4 4	.....	3 5 3
227	Ditto ...	5,885 5 6	.....	Narendapur Kharownia 2*a.* 8*p.* ...	Jagarnath Singh and Rashunath Singh, applicants for separation of accounts.	213 7 10	.....	0 0 9
229	Ditto ...	1,185 5 7	.....	Hiranandpur 16*a.*	Jagan Lal and others, applicants for separation of accounts.	57 9 8	.....	0 2 7
229	Ditto ...	1,185 5 7	.....	Janarjanpur 2*a.*; Hasratpur Akhariya 2*a.*	Ram Lall and others, applicants for separation of accounts.	17 1 8	.....	0 3 8
229	Ditto ...	1,185 5 7	.....	Janarjanpur 2*a.*; Hasratpur Akhariya 2*a.*	Surjoo Mahto, applicant for separation of accounts.	17 1 8	.....	1 13 6
251	Amari O, Sain, &c., pergunnah Behar.	737 0 9	.....	Akhtyarpur Pawa 5*a.* 2*d.* 10*k.* ..	Chirangir Singh and others, non-applicants.	267 11 6	.....	15 2 2
295	Mirzapur Gilani, pergunnah Telladha.	1,318 0 0	.....	7*a.* 10*d.*	Moulvi Jalaluddin and others, applicants for separation of accounts.	617 13 0	.....	12 12 3
315	Saidpur Gowhar Chak Madho, pergunnah Azimabad.	503 9 1	Whole...	.....	Syed Ali Ashraf *alias* Peyari Saheb.	.....	1 4 3	.....
317	Mandaoh Gyan Koer, pergunnah Tilladha.	1,687 0 0	... ...	8*a.* 11*d.* 13*k.* 6*b.* 14*p.*	Shekh Fada Ali and others, non-applicants.	904 15 1	.....	5 4 2
347	Parthee, pergunnah Tilladha.	800 0 0	.....	6*d.* 7*b.* 12*r.*	Syed Khairat Ahmad, applicant for separation of accounts.	15 0 9	.....	0 15 0
347	Ditto ...	800 0 0	.....	3*a.* 17*d.* 7*k.* 5*b.* 5*ph.* 12*r.*	Mussamut Jharokha Koer and others, non-applicants.	190 13 3	.....	0 1 6
356	Khoda Bakhshpur, &c., pergunnah Azimabad.	3,236 0 7	.....	Pir Mohamadpur Diara 16*a.* ...	Jagan Lal Upadhia and others, non-applicants.	472 10 7	.....	87 13 11
363	Akbarpur Bhadwar, &c., pergunnah Masawdha.	1,120 4 1	.....	Saidabad 16*a.*; Kessenpur Baigam 16*a.*; Abdallapur Khan Quilli 16*a.*	Raja Ram Singh and others, applicants for separation of accounts.	10 2 3	.....	4 6 3
363	Ditto ...	1,120 4 1	.....	Azizabad Haldha 9*a.* 10*d.* 7*k.* 12*b.*; Shahzadpur Nuri 9*a.* 10*d.* 7*k.* 12*b.*; Ghowpur Bhadwar 3*a.* 3*d.* 9*k.* 4*b.*	Ram Kewal Singh and others, applicants for separation of accounts.	38 14 8	.....	2 10 6

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
363	Akharpur Bhadwar, &c., pergunnah Musawdha.	1,129 1 1	..	Dorawan 1a. 5d.; Saidabad Bekra 1a. 5p.; Shewdaspur Kurkari 1a. 5d.; Sekaria 1a. 3d.; Daryapur Aunat 1a. 5d.	Ilaichi Kuer and others, non-applicants.	79 11 1	.....	26 13 5
379	Jaipur Hathea Kandh, pergunnah Maugir.	811 1 6	.....	10a.	Gobind Persad and others, non-applicants.	506 14 11	.....	147 7 9
395	Rajapur Hassan Kurji Degha, pergunnah Phulwuri.	838 0 2	.....	Kurji Digha 8a.	Pitambar Singh and others, non-applicants.	284 7 1	.....	3 6 11
402	Dehri, &c., pergunnah Gyaspur.	3,136 0 0	.....	Dehri Dhanrar Badal Singh 10a. 10d.; Parsawan 10a. 10d.; Sarnjpura 10a. 10d.; Sarhan 10a. 10d.; Baddee Kesenpur 10a.; Chak Bano Hiranand 10a. 10d.; Chak Bano Sujar 10a. 10d.; Chak Hamed Sewdah 10a. 10d.; Chando Badul Singh Hiranand 10a. 10d.; Dhaurafpur 10a. 10d.; Chak Bhudeo 10a. 10d.; Goasa 10a. 10d.; Sherpur Mednapur 16a.; Chatarbhojpur Kesenpur 16a.	Mussamut Fahman and others, non-applicants.	2,192 12 9	.....	10 11 5
410	Ophansepur Ojhaulee Qasba Helsa, pergunnah Pilich.	549 14 1	.....	6a. 10p. 5k. 14m. 5d. 15b.	Ambika Persad Singh and others, non-applicants.	235 10 6	.....	6 1 8
430	Lodipur Hathia Kandh, pergunnah Mamir.	739 0 0	.....	6a. 8p.	Gobind Persad and others, non-applicants.	307 14 8	.....	30 0 0
476	Sartha Manpur Sartha, pergunnah Tilladha.	662 13 7	.....	7a. 15d. 10k.	Jugul Kiswar Singh and others, non-applicants.	323 1 0	.....	1 15 5
478	Ditto ..	540 14 3	Whole.	... ..	Mussamut Toola Kuer, mother and guardian of Chattor Singh, and others.	.....	33 12 11	.....
486	Panchitara, &c., pergunnah Behar.	1,160 9 0	...	Panchitara 2a.; Mohenddinpur Deokhali Khard and Buzurg 1a.; Bhagpur Owkali 6a.; Mozafferpur Pitowngia 2a.; Kaleyanpur Chistipur Azizullahpur Chistipur 10d.	Mohammad Sher and others, non-applicants.	70 9 10	.....	10 5 7
497	Poorah Nowan Sepao, pergunnah Behar.	1,398 13 0	.....	12a. 19d. 9k. 2b. 10p.	Mussamut Moriawan and others, non-applicants.	1,134 2 5	.....	6 11 7
519	Oosap, pergunnah Sanda.	957 0 0	Whole.	.....	Nawab Syed Latif Ali Khan, C.I.E., and others.	.....	7 14 5	.....
556	Kishunpur Kurawha, &c., pergunnah Gyaspur.	781 0 0	.....	14a. 10k.	Khaje Syed Hasan and others, non-applicants.	685 6 5	.....	11 3 10
572	Sandh, &c., pergunnah Sandha.	796 12 10	... .	Sandh 15a.; Rahmatpur Pakri 14a. 2d. 10k.	Mussamut Sharfan and others, non-applicants.	727 11 9	.....	8 2 2
688	Anta Raghuram, pergunnah Gyaspur.	686 10 5	.....	6d. 8k. 18b. 17ph. 11b.	Hanuman Singh *alias* Chhedi Singh, applicant for separation of accounts.	13 13 3	.....	8 9 3
688	Ditto ...	686 10 5	.....	3a. 8b. 15ph. 12b.	Shewnarain and others, non-applicants.	125 3 7	.....	26 7 7
724	Jahangirpur Magarpal, pergunnah Manair.	2,316 4 4	...	1a.	Rai Monohar Lal and others, applicants for separation of accounts.	144 12 3	.....	0 4 8
724	Ditto ...	2,316 4 4	.....	15d.	Sitapat Sahai and others, applicants for separation of accounts.	108 10 0	.....	2 9 4
724	Ditto ...	2,316 4 4	.....	1a. 11d. 17k. 15b.	Mussamut Sriana Kuer and others, non-applicants.	230 7 1	.....	10 5 2
726	Yakubpur Toongi *alias* Fatteh Ali Chak, pergunnah Behar.	651 0 0	.....	9a. 10p. 8k. 8b.	Syed Mohommad Ismail and others, non-applicants.	401 8 0	.....	40 9 7
				Second kind.				
733	Erazi Towfir Rampur Ghoghpur, pergunnah Manair.	1,236 5 11	Whole.	.....	Srikewal Singh ...	.....	2,065 15 4	.....
				First kind.				
742	Erazi Beshi Diarah Mahazi Jahangirpur Magarpal, pergunnah Manair.	1,561 8 4	.....	2a. 5d.	Kisendyal Lal and others, non-applicants.	219 11 4	.....	13 4 5
779	Saidpur Soniawan, pergunnah Gyaspur.	626 9 2	.....	7a. 8d. 5k. 5b. 14ph. 7r.	Ahmad Hosain and others, non-applicants.	290 4 4	.....	0 6 5
796	Saksohra, pergunnah Gyaspur.	2,134 6 5	.....	Luchmanpur 2a. 5p. 17k. 6b. 13d.	Mussamut Girja Kuer and others, applicants for separation of accounts.	57 9 11	.....	1 0 6

Patna Collectorate, the 6th January 1890. PEARY MOHAN BANERJEE, Dy. Collr., for Offg. Collector.

NOTICE is hereby given that or the undermentioned plots of the Nizamut lakhraj State lands situated in the district of Burdwan, Nos. 72 to 75 will be put up to sale on the spot by the Deputy Collector at the Burdwan Collectorate, and No. 89 by the Sub-divisional Officer of Culna, on Monday, the 27th January 1890, corresponding to 15th Magh 1296 B. S.

The purchasers will be subject to the following conditions of sale :—

Conditions of Sale.

1. The lands to be sold revenue-free to the highest bidder above the upset price, which will be fixed for each plot at the time of sale.

2. The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and the purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3. If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid down at once.

4. If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the lands to be again put up to sale at the risk of the defaulting purchasers, after issue of advertisement, as in the case of original sale.

5. The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mousah.	Pergunnah.	Approximate area in bighas.	Boundaries.	REMARKS.
				B. K CH.		
72	Jaigirdagra	Ukhari ...	Shamurshahi.	7 5 7	East of the Bhagar jote lands of Saroo Patan; south and west of jote lands of Budhu Mirdha; south of jote lands of Rassad Mirdha; east of a public road and of jote lands of Mohur Mirdha and of the Bhagar jote lands of Saroo Patan.	*Plot I.*—Jote of Sakir Mandal and of Nihar Bibi, wife of Edu Mandal of Nariyram.
73	Ditto ...	Ditto ...	Ditto ...	10 9 15	North of jote lands of Pitambar Charal, Kedar Chowdhury, Shek Karoo, and Shek Tooraj; west of jote lands of Hara Mirdha, Dohar Mirdha, Kedar Chowdhury and Manik Mirdha; south of jote lands of Sova Mirdha, Haroo Mirdha, Sakauddin Mirdha, Jamman Mirdha, Tarku Shek; east of jote lands of Ulfoo Mandal, Tarku Shek, Karoo Shek, and of Bhagar jote lands of Saroo Shek; south and east of jote lands of Waz Shek.	*Plot II.*—Do do.
74	Ditto ..	Ditto ...	Ditto ...	2 13 11	North of jote lands of Manik Mirdha; east of jote lands of Sona Mirdha and Dolal Khan; south of jote lands of Alvarsy Mirdha; west of jote lands of Adu Chowdhury.	*Plot III.*—Jote of Takai Mandal of Nariyram.
75	Ditto ...	Ditto ...	Ditto ...	4 13 14	North of the chowkidari chakran lands of Tincuri Hari; east of jote lands of Sakauddin Mirdha, Hara Mirdha, Sonaulla Mirdha, and Ronza Lal Charal; south of jote lands of Sonaullah Mirdha; west of the chowkidari chakran lands of Gourab Khan, Patan and Ramdhan Bagdi.	*Plot IV.*—Jote of Sakir Mandal of Nariyram.
89	Dakadda	Shyambati	Karajpur...	5 15 12	South of the jote lands of Deb Nath Pal and Kunja Mandal; east of the lakhraj jote lands of Deb Nath Pal; north of the lakhraj jote lands and of the barren land of Deb Nath Pal; west of a public road.	Jote of Sita Nath Pal and Deb Nath Pal of Shyambati.

Burdwan Collectorate, the December 1889. KEDAR NATH DUTT, for Officiating Collector.

Statement of the Affairs of the Bank of Bengal for the week ending 7th January 1890.

LIABILITIES.

	Rs.	A.	P.
Capital paid up	2,00,00,000	0	0
Reserve Fund	58,00,000	0	0
Public Deposits at Head Office ... ... Rs. 82,42,187 3 6			
Ditto ditto at Branches ,, 92,88,152 0 0	1,75,30,339	3	6
Other Deposits at Head Office and Branches	3,23,90,260	15	1
Bank Post Bills, &c.	5,00,551	3	9
Sundries	7,34,285	12	0
Rupees ...	7,69,55,437	2	4

ASSETS.

	Rs.	A.	P.
Government Securities	19,57,170	0	0
Other authorized Investments	78,72,686	0	0
Loans on Government and other authorized Securities	1,37,51,513	9	10
Accounts of credit on ditto ditto	98,79,277	6	
Bills discounted and purchased	2,42,09,322	8	
Balances with other Banks	11,30,312	12	3
Bullion	4,24,390	14	7
Dead Stock	12,29,967	3	9
Stamps	13,649	9	0
Sundries	5,72,832	13	6
	6,10,41,122	14	1
Cash and Currency Notes at Head Office ... Rs. 61,75,902 6 10			
Cash and Currency Notes at Branches ... ... ,, 97,38,411 13 5	1,59,14,314	4	3
Rupees ...	7,69,55,437	2	4

By order of the Directors,

R. L. BIRD, Chief Accott. W. D. CRUICKSHANK,

Secy. and Treasurer.

BANK OF BENGAL, Calcutta, 9th January 1890.

Rate for Demand Loans 8 per cent.

Percentage 31·1.

(3440—1)

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1889.			
Dec. 21	1 Cask, T	Order ...	S. S. "City of Khios."
1890.			
Jan. 2	5 Cases, 8218 in a block, B L B outside ...	Ditto ...	Ditto.
„ 2	11 Cases, Chulsa in a diamond	Ditto ...	Ditto.
„ 2	15 Cases, G H by S	Ditto ...	Ditto.
„ 2	1 Case, H M in a diamond, H H top ...	Ditto ...	Ditto.
„ 2	15 Packages, no mark	Ditto ...	Ditto.
„ 2	3 Bags, Y in a diamond, C R top or no mark ...	Ditto ...	Ditto.
„ 2	3 Cases, M A & Co.	Ditto ...	Ditto.
„ 2	1 Case, Revd. Robert Evans, Shangjeong, Assam ...	Ditto ...	Ditto.
2	2 Cases, K S D N in a double triangle, S K & Co. outside.	Ditto ...	Ditto.
„ 2	1 Case, L O C K E	Ditto ...	Ditto.
„ 2	2 Cases, 189 in a diamond, N P & G outside ...	Ditto ..	Ditto.
„ 2	1 Case, R in a diamond, C Y top	Ditto ...	Ditto.
„ 2	2 Bales, S D	Ditto ...	Ditto.
„ 2	4 Cases, S A T H in a diamond	Ditto ...	Ditto.
„ 2	1 Case, S S by 44 in a block	Ditto ...	Ditto.
„ 2	21 Packages, W L in a diamond, C below ...	Ditto ...	Ditto.
„ 2	8 Packages, Y in a triangle, C R top	Ditto ...	Ditto.
„ 2	4 Bundles plate iron, Chulsa in a diamond ...	Ditto ...	Ditto.
„ 2	54 Kegs, J M in a diamond	Ditto ...	Ditto.
„ 3	1 Cask, H M & Co.	Ditto ...	Ditto.
„ 3	3 Bags, Titaghur	Ditto ...	Ditto.
„ 3	1 Case, B D D S in a diamond, T N top ...	Ditto ...	S. S. "Traveller."
„ 3	1 Case, D 550 in a triangle, C H L & Co. top ...	Ditto ...	Ditto.
„ 3	2 Cases, K M B D in a diamond, S K & Co. outside.	Ditto ...	Ditto.
„ 3	1 Case, L N B N in a diamond, G A & Co. outside...	Ditto ...	Ditto.
„ 3	2 Cases, L O C K E	Ditto ...	Ditto.
„ 3	5 Cases, P M & S	Ditto ...	Ditto.
„ 3	5 Cases, P in a triangle, B G top	Ditto ...	Ditto.
„ 3	5 Bales, S in a diamond, L B top	Ditto ...	Ditto.
„ 3	1 Case, Mr. N. C. Jellico	Addressed ...	Ditto.
„ 3	1 Parcel, H & Co. in a diamond, G J A outside, Rangoon below.	Order ...	Ditto.
„ 3	83 Bundles hoop iron, white or no mark	Ditto ...	Ditto.
„ 3	4 Packages iron, no mark	Ditto ...	Ditto.
„ 3	7 Packages iron, C by 26 in a diamond, or no mark...	Ditto ...	Ditto.

The 11th January 1890. (3445—1) G. H. SIMMONS, Vice-Chairman.

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sál beams and scantlings supplied from this depôt will be as follows :—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 „ „ 2-12 „
23 „ „ 2-14 „
24 „ „ 3 „

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 „ 2-4 „
Under 7 feet „ 2 „

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests.
Bahramghat Division
Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent Botanic Garden, Calcutta, *for cash only*, at the following rates :—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent Botanic Garden, *for cash only*, at the undernoted rates :—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin eight annas per 8 oz. tin, and twelve annas per pound addition to the foregoing rates.

Notice.

THE public are hereby informed that a Fair will be held at Falakata in the sub-division of Alipur, Western Dooars, district Julpigoree. The Fair will commence on 23rd January 1890 (A.D.) corresponding with 11th Magh 1296 (B.S.), and will continue up to 6th February 1890. Tradesmen, dealers, and others may buy and sell there during this time. Blankets, cloth of sorts, ivory, wool, rhinoseri horns, musk, honey, wax, lac, ponies, and various other articles from Bhootan and Thibet, as also rice, paddy, jute, cotton, tobacco, mustard seed, wheat and other crops, which are grown in the Western Dooars, will be available at the Fair. Falakata is on the left or east bank of the Mujnai river, and within easy reach of Julpigoree and Cooch Behar. A good cart and driving road exists all the way.

Tradesmen and others who may attend the Fair will receive every kindness and assistance from the local officers.

DONALD SUNDER, Sub-divisional Officer, Alipur Dooars.

Alipur, the 10th December 1889.

Notification

THE Zamindari Dák Tax in the district of the 24-Pergunnahs for the year 1890-91 is fixed at the rate of eight annas per cent. per annum on the sudder jumma of estates paying a revenue amounting to Rs. 50 and above

The amount due for each estate is payable in two instalments, the first being due on the 1st June 1890, and the 2nd on the 16th December 1890.

A. FORBES, Magistrate of 24-Pergunnahs.

Notice.

WANTED an Overseer for the Dinagepore Municipality. Salary Rs. 45 and horse allowance Rs. 10 a month. Passed Overseers of the Public Works Department, with experience in municipal works, are only required to apply. Applications will be received by the undersigned up to 25th January 1890.

SITAKANT MOOKERJEE, Vice-Chairman.
Dinagepore, the 27th December 1889.. (3406-3)

Notice.

WANTED a Civil Court Ameen for the district of Manbhoom on a salary of Rs. 50 per mensem.

Candidates must possess a thorough knowledge of English, Bengali, and Surveying, besides holding a diploma of having passed the junior grade Pleadership examination as required by the High Court's Circular No. 24 of November 1858.

Applications will be received up to the 10th proximo.

E. N. BAKER, Deputy Commissioner, Manbhoom.

Manbhoom, Deputy Commr.'s Office, the 23rd December 1889.

WANTED a Native Doctor, on Rs. 30 a month, for the Colgong Municipal Dispensary. Applications with copies of testimonials and diploma will be received by the undersigned up to 20th January 1890

(3411—3) A. A. WACE, Magistrate.

Wanted

A DRAUGHTSMAN with a knowledge of surveying, who can plot from field books kept in English. Salary Rs. 40 to Rs. 60 according to qualifications. Applications in candidates' own handwriting, and copies of testimonials, to be submitted to—

Municipal Engineer, Patna.
(3419—2)

WANTED a Surveyor who understands chain and compass survey well for the District Works, Maldah, on Rs. 30 a month. A draftsman is also required for the above works on the same pay. All applications with copies of testimonials must reach the undersigned on or before the 25th January 1890.

JOGENDRO NATH GHOSE, District Engineer, Maldah.
Maldah, District Engineer's Office, the 8th January 1890.

(3443-1).

WANTED an Assessor of Income-tax for Chumparun district from 1st April 1890. Salary Rs 70 per mensem. Only those need apply who know English and have had some experience of office work.

Applications with copies of testimonials (which will not be returned) will be received by undersigned up to the 25th instant.

A. W. B. POWER, Collector of Chumparun.

Wanted

AN Assistant Khas Superintendent on a salary of Rs. 75 per mensem for Noakhally Collectorate, to be stationed at the Island of Sundeep.

Applications will be received up to 20th January 1890 A preference should be given to an English-knowing candidate who has passed any of the University examinations and possesses an experience in office routine business, and practical knowledge of survey.

MOHINEE MOHUN CHUCKERBUTTY, for Offg. Collector.
Dated the 3rd January 1890.

Wanted.

A SUB-OVERSEER for the District Board of Noakholly on a salary of Rs. 35 and horse allowance of Rs. 10 per month, to be ordinarily stationed at Sundeep. Passed Sub-Overseers of Public Works Department, with experience of road work, shall have preference Knowledge of surveying and levelling indispensable. Applications will be received by the undersigned up to the 30th January 1890.

BINODE BIHAREE PAL, District Engineer, Noakholly.
Noakholly, the 11th January 1890. (3446—2)

JOGENDRA NATH SEN, M. A., B. L., intends to apply for enrolment as a Vakil of the High Court.
(3444-4.)

In the Court of the Subordinate Judge of Dinagepore.

EXECUTION CASE No. 10 OF 1889.

Nanda Dulall Dhar and Kishori Lall Dhar, minors, by their mother Krishna Kamini Choudharani, decree-holders, *versus* Tripurah Sundari Debya, judgment-debtor.

TO be sold pursuant to a decree and order, dated the 13th March 1889, in a suit No. 1 of 1889 of this Court, by the Nazir of the Dinagepore Judge's Court at the Court-house, on Monday, the 3rd February 1890, the undermentioned property belonging to the above judgment-debtor:—

Lot No 1.—Two annas seventeen gundas two cowries share of the above judgment-debtor in mehal Joydebpore, pergunnah Bazitpore borne in the revenue roll of the Collectorate of Dinagepore, in towji No. 879, the sudder jumma of which is Rs. 725-13-2, and that of the entire mehal Rs. 4,039-7-6.

HOROGOBIND MOOKERJEE, Offg. Sub-Judge.
Sub-Judge's Office, Dinagepore, the 8th January 1890.
(3442—1)

In the Court of the District Judge at Noakholly.

EXECUTION CASE No. 62 OF 1889.

Kailas Chandra Sen, decree-holder, *versus* Naba Kumar Sen, judgment-debtor.

THE undermentioned property of the above judgment-debtor will be put up to sale to the highest bidder on the 19th February 1890, at 12 A. M., by the Nazir of this Court for the realization of Rs. 1,607-6:—

Mortgage property.

Four gundas share of pergunnah Jugidia, bearing the rent roll No. 11 in the Noakholly Collectorate, the annual Government revenue of the sixteen annas share being Rs. 24,782-1-8, and the revenue of defendant's share Rs. 309-12-5 & 1 kr. The villages Sripaddy and others appertain to station Begumgunge; villages Shivpur, Berahimpur, Koralia, Talikhila, Shirajpur, Char Hazaree, Char Parbatty, Char Kakra to station Bamni; and the villages Sharailkandi, Sujapur, Sulakhali, Tulatali, Shatbaria, Char Chandia, Char Darbesh, Char Ganesh, &c., to station Feni, in the same district, in the above zemindari, pergunnah Jugidia.

C. P. CASPERSZ, Offg. District Judge.
Dated, the 6th January 1890.
(3441—1)

In the Court of the Subordinate Judge of Midnapur.

EXECUTION CASE No. 154 OF 1889.

Kartik Chandra Mitra, decree-holder, *versus* Sridhar Charan Nandi, judgment-debtor.

THE undermentioned property will be sold by public auction at the Court-house of the District Judge of Midnapur on Wednesday, the 15th January 1890, at 12 o'clock, in execution of the decree passed by the Subordinate Judge of Midnapur for the realization of Rs. 11,529-2-9 obtained by a mortgage-decree due from the debtor to the decree-holder :—

Schedule of Property to be sold.

Lot I.—Six annas share of mehal Khirai, with its mouzas, within the police-station of Shobong and sub-registry-office of Pingla, pergunnah Moyno, bearing towji No 957, present towji No. 889; Government revenue payable is Rs. 5,952-15-4, and the Government revenue of which six annas is Rs. 2,233-15.

This property will be sold under the encumbrance of Rs. 10,300 due to Baboo Bhuban Chandra Banerjea due on a prior mortgage.

DWARKANATH BHUTTACHARJEA, Subordinate Judge.

(3447—1)

Uncovenanted Service Family Pension Fund.

NOTICE.

THE Fifty-second Annual General Meeting of Subscribers of the above Institution will be held in the DALHOUSIE INSTITUTE, on Wednesday, the 29th January 1890, at 4 P.M., to receive the report of the Directors and to consider such matters as may then be submitted.

By order of the Directors,
W. H. RYLAND, Secretary.

Calcutta, the 31st December 1889. (3415—3)

Dinagepore District Board.

SIX PER CENT. LOAN.

THE Dinagepore District Board have resolved, with the permission of the Lieutenant-Governor of Bengal, to borrow Rs. 10,000 (out of two lakhs of rupees) during the current financial year (1889-90) for construction of permanent bridges in their district roads on security of the District Fund formed under Act III (B.C.) of 1885, detailed accounts of which for last two years were published in the *Calcutta Gazette*, Part IB, page 164, dated 7th August 1889.

2. Tenders for the whole or any part of the said amount of Rs. 10,000 will be received by the Vice-Chairman of the Board from this date to Friday, the 31st January 1890. Tenders must be in sums of Rs. 500) or multiples of Rs 500.

3. Each tender must be addressed in the form annexed herewith to the Vice-Chairman, and enclosed in a closed and sealed cover superscribed "Tender for Loan." If the tenderer is not resident in India, he must name an agent resident in India, to whom a letter of allotment may be issued if any part of the loan is allotted to such tenderer.

4. Each tender must be accompanied by deposit money, at a rate of 5 per cent. on the amount tendered, to be sent by postal money-order, and the money-order receipt must be filed with the tender. Deposits will, in the case of accepted tenders, be credited proportionally in part payment of the allotment certificates issued in respect of the tender. If any allotment certificate is not fully taken up, the deposit will be forfeited.

5. The rate at which a tender is made must not contain a fraction of an anna: if a rate containing a fraction of an anna is inserted in any tender, such fraction will be struck out, and the tender treated as if the rate did not contain such fraction of an anna.

6. The rate at which each tender is made must be specified in rupees, or rupees and annas. A tender in which no rate is thus specified, but a subscription is offered in some other terms, *e.g.*, at the recorded minimum, or at some specified percentage in addition to the recorded minimum, or at the average of the accepted tenders, will be rejected as null and void.

7. Tenders will be opened publicly by the Vice-Chairman at the Dinagepore Magistracy on Saturday, the 1st February next, at noon (Calcutta time).

8. Tenders at the minimum rate will be accepted in the order of the rates tendered, beginning with the highest rate. The amount allotted at the lowest rate at which tenders are accepted will be divided amongst those who have tendered at this rate in proportion, as nearly as may be found convenient, to the amounts of their tenders, provided that no allotment will be issued if the amount distributable on any tender is less than Rs. 500.

9. To each tenderer (or to his agent) whose tender is accepted in whole or in part, such number of allotment certificates as may be necessary to make up the aggregate amount allotted to him will be issued by the Vice-Chairman as soon as possible after the tenders have been accepted, and a list of the names of those to whom such allotment certificates are issued will be posted for general information at the District Board's Office.

10. Payment of any allotment certificate is to be made in credit of the District Fund at the Dinagepore Treasury.

Form of Tender

I, A B., hereby tender for Rs. (Rs. ,) of the six per cent. loan advertised in the *Calcutta Gazette*, dated , and agree to pay for the same subject to the condition mentioned in the advertisement, at the rate of Rs. As. for every hundred rupees allotted to me.

I enclose a money-order receipt for deposit money for Rs. sent to the address of the Vice-Chairman of the Dinagepore District Board.

Any allotment made to me may be communicated to at

NOTE.—A separate tender must be made at each rate tendered The rate tendered should be the whole amount per centum, not the premium or discount: thus "one hundred and two" or "one hundred," or "ninety-nine," not "two per cent. premium" or "par" or "one per cent. discount."

(3413—3) C. R. MARINDIN, Chairman.

Notice.

IT is hereby notified for general information that the District Board of Tipperah, in compliance with the wishes of Government, have established two scholarships at Rs. 15 each, tenable for one year at present, at the Sibpore Engineering College. Those willing to take up any particular branch of study, and attend the workshops attached to the College, are requested to send in their applications on or before the 20th March 1890, to enable the undersigned to award the scholarships on the 1st April 1890. Successful candidates will have to contract for service under the District Board.

H. M. WEATHERALL, District Board, Tipperah.

Notice.

MONGHYR DISTRICT BOARD.

IT is hereby notified for general information that, under section 46 of the Local Self-Government Act III (B.C.) of 1885, the District Board of Monghyr, at a Special Meeting held on the 4th January 1890, have determined to levy the road cess for the year 1890-91 at the maximum rate, viz., six pies per rupee on the annual value of the land.

C. MURRAY, Major-General,
Vice-Chairman, District Board.

Monghyr, the 6th January 1890.

Notice.

THE District Board of Bankoora, at their meeting held on the 31st December 1889, resolved that the road cess be levied at the maximum rate in this district during the ensuing financial year 1890-91.

KULODA PRASAD MUKHERJYI, Vice-Chairman in charge, for Chairman on tour.

The 7th January 1890.

Notification.

A MONUMENT in the Faridpur cemetery, to a child of the name of Burt, needs repair. The friends of the deceased are therefore requested to inform the undersigned if they are willing to repair it.

PURNO CHANDRA RAI, Dy. Magistrate in charge, for Magistrate.

FARIDPUR MAGISTRATE'S OFFICE, the 3rd January 1890.

Notification

TO be sold by the Registrar of the High Court, Original Side, in his sale-room in the Court-house on the fifteenth day of February next, at 12 o'clock noon, pursuant to a decree and an order of Court made in suit No. 359 of 1881, wherein Nathmull Golleccha is plaintiff, and Meer Syed Jan and others are defendants, dated respectively the 22nd August 1883 and 30th November 1889, the following properties :—

Lot I.—All that two undivided ninth share of the infant defendants Meer Syed Jan, Shurreefoonessa Begum, and Kamecroonessa Begum, of and in the house and premises situated in Ruttoo Sircar's Lane in the Town of Calcutta, and numbered 2, 3, and 4, together with the like share in the land on which the same is standing, now or lately butted and bounded as follows: - On the north by the tenanted land of Prankissen Sen; on the east by the tenanted land of Brojonath Kansaree; on the south by the house No. 1, now or lately belonging to Brojonath Kansaree; and on the west Ruttoo Sircar's Lane.

Lot II.—All that two undivided ninth share of the abovenamed infant defendants, of and in all the putnee right and interest in talook Choorley Dhakpara, talook Dalagow, talook Khana Abad, talook Suktee Moorareepore, asli and dakhil', zillah Rungapanee, pergunnah Futtehpore Shinghea, thana Purneah, towzi No. 8, Collectorate of zillah Purneah, sub-registry Purneah, including the like share of and in all Talaos, asli and dakhili.

The conditions of sale and particulars of title may be seen in the office of the Registrar of the High Court, Original Jurisdiction, or at the office of Mr. H. C. Chick, Attorney for the Plaintiffs, on any day before the sale and will be produced at the sale.

R. BELCHAMBERS, Registrar.
H. C. CHICK, Attorney for the Plaintiffs
(3439—2)

Notification.

UNDER Rule 8 of the Revised Rules under the Chota Nagpore Encumbered Estates Act VI of 1876, as amended by Act V of 1884, published at pages 138 and 139, Part I of the *Calcutta Gazette* of the 25th February 1885, it is hereby notified that the undermentioned immoveable property which was brought under the operation of Act VI of 1876, under vesting order published at page 1420, Part II of the *Calcutta Gazette* of the 20th November 1878, has been restored to the possession and enjoyment of its owner, with effect from the 10th November 1889, under the provisions of section 12 of Act VI of 1876, as amended by section 6 of Act V of 1884—

Name of property.	Name of holder.
Mahta Estate in Manbhoom.	Baboo Bramha Narain Singh.

RAI CHURN GHOSH, Personal Assistant to Commr., for Commr.
Chota Nagpore Commr.'s Office, the 7th January 1890.

MR. S. S. COOPERS is authorized to sign our firm per procuration from this date.

CROFT, WELLS & Co.
1, Clive Row, 1st January 1890. (3418—3)

WE have this day admitted Mr. David Hynd as a partner in our firms.

KOCH & PERMAN.
SIMON KOCH & Co.
Calcutta, the 1st January 1890. (3417—2)

Lost.

INTEREST Warrant No. 225465, dated 6th November 1889, for Rs. 200, issued in satisfaction of 49¼ years' interest on Government Promissory Notes Nos. 187095, 188231, B. 140933, 251834, 223046, 228904, 232405, 238124 and 194586, aggregating Rs. 10,000 of the 4 per cent. loan of 1865 in the name of H. Hastings.

GILLANDERS, ARBUTHNOT & Co., Calcutta.
January 14th, 1890. (3450—3)

Lost.

INTEREST Warrants Nos. 229507 and 229508, dated 4th January 1890, for Rs 20, issued in satisfaction of 49½ years' interest on Government Promissory Notes, Nos. 238858 and 188252, aggregating Rs. 1,000 of the 4 per cent. loan of 1865 in the names of Russick Lal Dutt and Kheero Monee Dassee respectively.
(3419—3)

Notice.

MIRZAPORE STONE AND TRADING COMPANY.

WE have this day made over the Agency of the above Company to Messrs. Atkinson Brothers, and have ceased to be Partners in the Company by mutual consent; our liability in connexion with the Company ceases from this date. All debts due to the Company should be paid to the Managers Baboo Baneepershad and Mr. E. J. Lacey, Mirzapore, who will also meet all the Company's liabilities.

LYALL, MARSHALL AND COMPANY.
Calcutta, 15th January 1890.

Notice.

MIRZAPORE STONE AND TRADING COMPANY.

MESSRS. Atkinson Brothers, Calcutta, have been appointed Agents of the Company from this date, and are hereby authorized to collect its outstandings, and Messrs. Lyall, Marshall and Company have ceased to be Partners in the Company by mutual consent.

Messrs. Lyall, Marshall and Company's liability in connexion with the Company ceases from this date, and all its liabilities will be met by the undersigned.

BANERPERSHAD,
E. J. LACEY,
Proprietors, Mirzapore Stone and Trading Company.
Mirzapore, 15th January 1890.

Notice.

MIRZAPORE STONE AND TRADING COMPANY.

WE the undersigned have this day taken over the Managing Agency of the above Company from Messrs. Lyall, Marshall and Company.

All communications should in future be addressed to us or to Manager, M. S. and Trading Company, Mirzapore.

ATKINSON BROTHERS.
Calcutta, 15th January 1890. (3448—1)

APPLICATIONS are invited for the post of Serishtadar of this Office, which will probably be vacant on 1st February.

The pay is Rs. 120 to Rs. 200, rising by biennial increments. A knowledge of the Kaithi and Urdu character and of English is essential, and no one need apply who has not had at least 15 years' experience of work in a district office

BEPIN BEHARY MOOKERJI, for Collector.
Bhagulpore Collectorate, the 11th January 1890.

Commissioners for making Improvements in the Port of Calcutta.

AS required by section 53, Act V (B.C.) of 1870, notice is hereby given that the accounts of the Commissioners for making Improvements in the Port of Calcutta, for the half-year ending 30th September 1889, will be audited at the Office of the said Commissioners on Monday, the 27th January 1890.

G. H. SIMMONS, Vice-Chairman.
Port Commissioners' Office, the 14th January 1890.
(3451—1)

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

IN the matter of HURRY CHURN PAUL and others, insolvents.

On Monday, the 16th day of December last, it was ordered that the matters of the petition of the said insolvents be heard on Saturday, the first day of February next, and that the said insolvents do then attend to be examined before the said Court.

Insolvents in person. (3435—2)

IN the matter of ARTHUR MILSON HOUGHTON, an insolvent.

On Saturday, the 21st day of December last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the first day of February next, and that the said insolvent do then attend to be examined before the said Court.

Insolvent in person. (3436—2)

Chief Clerk's Office, the 7th January 1890.

In the matter of GOPEEKISTO SEN, an insolvent.

Notice that an application for an *ad interim* protection order has been this day made by the said insolvent, and that such application will be heard and disposed of by the Acting Commissioner of the Insolvent Court on Monday, the 27th day of January instant, at the hour of half-past ten o'clock in the forenoon.

☞ "Any creditor of the said insolvent desirous of opposing such application must appear before the said Court at the time and place aforesaid."

M. M. Chatterjee. (3452—1)

Chief Clerk's Office, the 13th January 1890.

POSTAL NOTICES.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	21st Jan.	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets).	20th ,, ...	Ditto.
Mauritius, Mahé (Seychelles), Mayotte, Nossi Be and Réunion.	21st ,, ...	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	27th ,, ...	Ditto.
Australia, New Zealand, and Tasmania.	27th ,, ..	Ditto.
Madras, Pondicherry, Ceylon, Batavia, Singapore and China.	23rd ,, ...	Per French steamer *Niemen*.
Straits, China and Japan ...	23rd ,, ...	Per str. *Japan*
Rangoon and Moulmein ...	15th ,, ..	Ditto *Commilla*.
Ditto ditto ...	17th ,, ...	Ditto *Putiala*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	15th ,, ..	Ditto *Euphrates*.
Port Blair	16th ,, ...	Ditto *Peshwa*.
Madras, Colombo, Straits and Hongkong.	17th ,, ...	Ditto *Niobe*.
Colombo	22nd ,, ...	Per P. & O. steamer *Khedive*.

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

On the day of despatch of the Mail for Europe, the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 8-30 P.M., and late letters and papers will be received up to 9 P.M. On other days the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 7 P.M., and foreign letters and papers fully prepaid, bearing an extra stamp of four annas, will be received up to 7-30 P.M. for despatch by any Foreign Mails despatched the same night.

E. HUTTON, Presidency Postmaster.

General Post Office, the 14th January 1890.

Unclaimed Letters held in the Calcutta General Post Office on 14th January 1890.

Aitken, D.
Frank, G.
Hanna & Co.
Harding, C.
Procton, T E.
Pulitzer, J.
Self, F.
Temple, F.

Letters marked Care of "Post Office."

Atkinson, F. S.
Barker, F. W.
Bates, Miss E. K.
Bather, H. R.
Baxter, Mrs.
Behan, J. L.
Bedford, James.
Belitski, R
Berkeley, C. M.
Boland, J.
Bolton, J. M. L.
Brownlow, Miss.
Brown, W.
Burrows, C. J.
Carrapaett, Mr.
Charles, R.
Chatterton, J.
Comar, Mrs. A.
Cooper, H. J.
Cooper, W.
Courage, R.
Courtney, F. S.
Davis, Mrs. G.
Dickson, Mrs. E.
DeMeuron, Pierre.
Drakeford, A.
Donatella, Antonio.
Dunlo, Viscount.
Duclere, G. P.
Dymond, G. F.
Elliott, K.
Fisk, F M.
Filleid, Rev. S. E. V.
Franzini, Madame A.
Forshaw, H.
Fletcher, Neil.
Fraiser, H. C.
Francis, A. M.
Freedman, I. J.
Gellett, Cecil S.
Glover, W. E.
Godwin, George.
Greve, E. C.
Green, W. W.
Gresham, H.
Hamilton, J. R.
Hardy, Mrs. M.
Hawksworth, Mrs.
Harris, Miss M. L.
Henderson, W. H.
Heseltine, H. H.
Hewett, A. B.
Higgins, C C.
Hilton, R. W.
Jackson, T.
Johannesson, O. C.
Keane, J. J.
Keith, Surgeon-Major J. F.
Kidston, Miss M. L.
Kirk, J.
Kleine, Henri.
Lach, R.
Lamb, E. G.
Landie, Miss E.
Livermore, H. A.
Levinge, Sir William.
Livesay, T.
Lindeman, L. K.
Livewright, R.
Lloyd, Willis.
Long, W.
Lyons, G. B. C.
Major, A
Mathewson, F.
Mackenzie, J.
Matthews, J. R.
MacBrayne, L.
Manual, A. M.
Maxwell, Sir J. S
McAdoo, Mr.
McKenzie, Mrs D.
McNair, Miss.
McSmith, D.
Menzies, C.
Meyer, A. T.
Miller, G.
Morshead, L.
Murphy, John.
Newby, C. R. A.
Ogden, J.
Pattman, H. A.
Percival, Percy.
Platts, Mrs. S. K.
Powell, F.
Prentor, Miss.
Rennard, J. R.
Ricket, Mrs
Rogerson, Miss A.
Robart, P.
Rubie, Phil C.
Salomon, C.
Sano, T.
Shwartz, L.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sisam, Rev. W. B.
Skinner, R. H.
Smith, D. M
Smith, M. O.
Soares, F. H.
Steinhart, Mr.
Sutton, H C.
Sweet, L.
Taylor, C.
Thomas, G. T.
Thompson and Co.
Thompson, G
Tomkyns, Geo.
Uphill, T.
Valentyne, W. K. H.
Ventura, A.
Waddell, Alex.
Walter, F.
Walter, Amherst.
Westmacott, H. H.
Webster, Mrs.
Weil, Cesari.
Williamson, C.
Woodhouse, G.

Registered Letters.

Aitkin, D.
Clarke, Mrs. A.
Edwards, C.
Guiseppe, Celestini.
Hogens, Charles.
Keith, Mrs. C.
MacLeod, D. J.
Marsland, W.
Menzies, C.
Westmacott, F. H.
Zucker, Moses.

Unclaimed Letters held in the Barrackpore Post Office on the 13th January 1890.

Adie, Miss M. J.
Brown, Miss.
Cowie, J.
Cook, F. L.
Cotton, Mrs.
Duffy, J. N. D.
Duff, J. U.
Feddy, Miss C. S.
Fergusson, H. F.
Ferguson, W.
Harrison, Rev. H. J.
Hughes, Geo.
Hitch, E. H.
Howatson, Mrs. F.
Hudson, Mrs. M. E.
Marvey, Mrs. H.
Parker, C. F.
Peter, H.
Sells, J. H.
Shakespear, Captain J.
Simpson, Dr. R. J.
Sullivan, Lieutenant.
Thomson, T. E.
Trusham, Miss.
Wardell ,Miss.
Wheeler, Sergeant.

E. HUTTON,
Presidency Postmaster, Calcutta.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 10th January 1890.

Name of river.	Reach of river.	Least depth of water soundings.	Remarks.
		Ft. In.	
Bhagirati.	Entrance from Ganges ...	1 6	At mouth entrance practically closed.
	Thence to Nurpur	1 3	Serpore.
	From Nurpur to Jungipur ...	2 3	Bangabari.
	" Jungipur to Berhampur	1 3	Patanpara.
	" Berhampur to Cutwa ...	2 3	Harinathpore.
	" Cutwa to Nuddea ...	2 6	Dadpore.
Bhyrub-Jelinghi.	Entrance from Ganges ...	8 0	
	Thence to Akriganj	6 6	
	Akriganj to junction of the Bhyrub and Jelinghi ...	4 0	Junction.
	Thence to Patkabari	6 0	Patkabari.
	Patkabari to Nuddea	4 0	Punditpore.
Matabanga.	Entrance from Ganges ...	2 6	
	Thence to Chnypara	1 0	Sircarpara.
	From Chnypara to Shikarpur	1 0	Pragpore.
	" Shikarpur to Boalia ...	1 3	Shampore.
	" Boalia to Chuadanga ...	2 9	Sialmari.
	" Chuadanga to Kissenganj and Hanskhali ...	2 9	Bastupore.

Gauge Readings.

	Locality.	Date	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A.M.	Feet.	Feet.	
Ganges ...	Sahebganj ...	11-1-90	6	0·16	67·84	Below zero.
	Rampur Boalia	11-1-90	12	2·31	44·31	
	Entrance of Bhagirati ..	11-1-90	7	3·20	48·51	
	Entrance of Bhyrub-Jelinghi ..	11-1-90	...	7·84	46·20	
	Entrance of Matabanga ...	11-1-90	...	3·04	.....	
Bhagirati	Berhampur ...	12-1-90	12	3·10	36·95	
Jelinghi ...	Kishnaghur ...	10-1-90	...	4·75	13·64	
	Nurupganj ...	11-1-90	6	3·88	8·18	
Matabanga	Hanskhali ...	10-1-90	...	3·50	14·35	

C. E. LIVESAY, C.E.,
Exe. Engr., Nuddea Rivers Division.

Berhampore, the 13th January 1890.

AT the Meteorological Office, No. 5, Russell Street, the following official publications:—

Meteorological Report of	1867 ...	Rs. 0	12	per copy.
Ditto ditto	1868 ...	„ 1	8	„
Ditto ditto	1869 ...	„ 2	4	„
Ditto ditto	1870 ...	„ 2	6	„
Ditto ditto	1871 ...	„ 2	8	„
Ditto ditto	1872 ...	„ 3	0	„
Ditto ditto	1873 ...	„ 3	0	„
Ditto ditto	1874 ...	„ 3	0	„
Administration Report of	1870-71 ...	„ 0	4	„
Ditto ditto	1871-72 ...	„ 0	4	„
Ditto ditto	1872-73 ...	„ 0	4	„
Ditto ditto	1873-74 ...	„ 0	4	„
Ditto ditto	1874-75 ...	„ 0	4	„
A table of the average monthly and annual rainfall at 98 Stations in Northern India		„ 0	4	„
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R. H. WILSON,
Offg. Secy. to the Govt. of Bengal.
The 24th February 1886.

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SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, JANUARY 15, 1890.

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ROUTE TO BE TAKEN BY EMIGRANTS DESPATCHED DIRECT FROM THE RECRUITING DISTRICTS TO DHUBRI.

GENERAL DEPARTMENT—INLAND EMIGRATION.

Calcutta, the 11th January, 1890.

RESOLUTION.

READ—

A letter No. 1641, dated the 19th December 1889, from the Superintendent of Emigration, Calcutta, and previous correspondence regarding the medical inspection of coolie emigrants to Assam at Naihati.

BY the notification, dated the 16th September, 1889, which was published at page 782 of Part I of the *Calcutta Gazette* of the 18th idem, the Lieutenant-Governor, in exercise of the power vested in him by section 3 of Act I of 1889, declared by an amendment of Rule 6 of the rules under that Act that the Hooghly-Naihati route should be adopted for emigrants to Assam. This order was intended to apply only to the emigrants taken from the recruiting districts to Dhubri and crossing the Hooghly above Calcutta, who, in fact, constitute the majority, the object being to exclude the alternative crossings *vid* Mugra and Kanchrapara. It was not intended to interfere in any way with emigration *vid* Calcutta and Goalundo. As the rule has been differently interpreted, this explanation is published for general information.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Govt. of Bengal.

WORKS OF PUBLIC UTILITY CONSTRUCTED IN 1888.

GOVERNMENT OF BENGAL—PUBLIC WORKS DEPARTMENT.

Miscellaneous Public Improvements.

No. 2739—1*M.P.I.*, *dated Calcutta, the* 30*th December* 1889.

READ—

Statement of works of public utility constructed by private individuals in the several districts of Bengal during the year 1888.

Read again—

Statement of similar works constructed during 1887, and the Resolution thereon.

REMARKS.—The following works of public utility were constructed by private individuals during 1888 :—

	Number of works.	Cost. Rs.	A.	P.		Number of works	Cost. Rs.	A.	P.
Public buildings ...	9	58,050	0	0	Ghâts ...	4	4,550	0	0
Roads ...	4	1,450	0	0	Tanks ...	282	2,09,193	14	6
Bridges ...	11	12,653	10	6	Wells ...	106	30,386	0	0
Embankments or bunds ...	8	2,578	0	0	Miscellaneous ...	39	1,681	0	0
					Petty works		74,749	8	0

2. The following statement shows the number of works costing more than Rs. 200 each, which were constructed during the past year, and the amounts contributed, including donations for petty works, as compared with the figures for the two previous years :—

Year.	Number of works costing between Rs. 200 and Rs. 500 each.	Number of works costing more than Rs. 500 each.	Total number of works costing Rs. 200 and upwards each.	Total expenditure on works costing Rs. 200 and upwards each. Rs. A. P.	Add cost of petty works under Rs. 200. Rs. A. P.	Total contribution. Rs. A. P.
1886	381	122	503	2,05,823 10 0	60,499 9 6	3,26,923 3 9
1887	312	88	400	2,05,698 2 3	50,802 1 0	2,56,530 3 3
1888	331	132	463	3,20,492 9 0	74,749 8 0	3,95,242 1 0

3. The subjoined table exhibits the number of works costing Rs. 200 and over each, constructed in the several districts, and the amounts contributed for their construction :—

Name of district.	Number of works.	Total cost. Rs.	A.	P.	Name of district.	Number of works.	Total cost. Rs.	A.	P.
Burdwan	6	7,700	0	0	Noakhally ...	1	1,000	0	0
Bankoora	4	3,600	0	0	Chittagong ...	3	2,206	0	0
Beerbhoom	...	.....			Chittagong Hill Tracts ...	...	.....		
Midnapore	9	3,525	0	0	Patna ...	3	25,200	0	0
Hooghly	3	4,400	0	0	Gya .	14	4,038	0	0
Howrah	3	3,200	0	0	Shahabad ...	16	4,045	0	0
24-Pergunnahs	9	49,513	10	6	Durbhunga ...	38	34,135	0	0
Khoolna	20	7,175	0	0	Muzufferpore ..	18	12,551	0	0
Nuddea	13	3,830	0	0	Sarun ...	13	4,900	0	0
Jessore	24	11,675	0	0	Chumparun ..	25	6,775	0	0
Moorshedabad	3	8,824	14	6	Monghyr ...	35	9,400	0	0
Dinagepore	13	5,400	0	0	Bhagulpore ...	21	13,925	0	0
Rajshahye	18	14,291	0	0	Purneah ...	5	2,275	0	0
Rungpore	10	5,525	0	0	Maldah ...	3	7,200	0	0
Bogra	8	7,225	0	0	Sonthal Pergunnahs	40	2,760	0	0
Pubna	6	13,950	0	0	Cuttack ...	1	600	0	0
Darjeeling .	...	.....			Balasore ...	11	5,145	0	0
Julpigoree .	7	2,275	0	0	Pooree ...	3	1,420	0	0
Dacca .	2	850	0	0	Hazaribagh ...	1	200	0	0
Furreedpore .	13	9,700	0	0	Lohardugga ...	...	.....		
Backergunge .	5	2,100	0	0	Manbhoom ...	3	1,200	0	0
Mymensingh .	21	13,818	0	0	Singbhoom ...	4	940	0	0
Tipperah .	8	2,050	0	0					

4. Taking them according to the classification adopted in paragraph 1, the following works are specially noted :—

Public buildings.—Of the sum of Rs. 58,050 contributed under this head, the Marwari community of Ranigunj contributed Rs. 4,500 for the construction of a serai for travellers in Mahalla Hatipore, in the town of Ranigunj;

Dr. Kalipodo Gupta, F.R.C.S., contributed Rs. 2,750 for a charitable dispensary, and Baboo Ram Gopal Rakhit Rs. 40,000 for a similar work at Khutura; Rai Bahadoor Boodhoosingh Dodhooria and Rai Bahadoor Bishen Chand Dodhooria gave Rs. 6,000 for an alms-house at Azimgunge; and Baboo Sarat Chandra Rai Chowdhury contributed Rs. 2,500 for a school building at Singhya.

Roads.—The contributions for roads were very meagre, the total amounting only to Rs. 1,450.

Bridges.—The sum of Rs. 12,653-10-6 contributed for bridges includes Rs. 1,803-10-6 paid by Baboo Kali Nath Banerjee for a masonry bridge over the Dhulchitra khall; Rs. 2,500 contributed by Alladi Bibi for a bridge on the river Harihar; Rs. 1,000 given by Baboo Bhichhuk Nath Pande for a masonry bridge at Baigaun; and Rs. 4,000 by Baboo Sarat Chandra Rai Chowdhury for a masonry bridge at Mobarakpore.

Embankments or Bunds—Rs. 2,578 were paid under this head: there were no contributions of large amount.

Ghâts.—Of the sum of Rs. 4,550 contributed, Baboo Kristo Chunder Banerjee gave Rs. 1,300, and Dr. Kalipodo Gupta, F.R.C.S., Rs. 2,250.

Tanks.—Rs. 2,09,193-14-6 were spent in constructing and re-excavating 282 tanks. Baboo Ram Chand Shai of Khudkuri, thana Khandghose, contributed Rs. 1,250; Giridhari Das Mohanta Rs. 1,600; Baboo Dino Nath Ray Rs. 1,200; Baboo Kenaram Pall of Dhitpore Rs. 1,000; Madhab Chandra Giri Mohanta of Tarakessur Rs. 3,000; Baboo Rajchander Kolay of Barbamoongar, zemindar of the village in Ampta, Rs. 2,000; Baboo Premchand Singh of Mooraribar in Bagnan Rs. 1,000; the Nawab Bahadoor of Moorshedabad Rs. 2,624-14-6; Kumar Jogendro Nath Roy Rs. 3,000; Baboo Rokha Kar Moitra Rs. 1,000; Baboo Madhub Mondal Rs. 1,000; Mr. Lang for Robert Watson & Co. Rs. 2,000; Baboo Pamos Pramanick Rs 1,000; Baboo Niwamut Patwari Rs. 1,200; Baboo Govinda Chandra Shaha Rs. 1,200; Baboo Boraulla Pramanik Rs. 1,000; Baboo Radha Mohun Chowdhuree Rs. 1,000; Baboo Raj Mohun Shaha Rs. 2,500; Baboo Lakhi Kanta Pramanik Rs. 10,000; Baboo Mohur Molla Rs. 1,000; Maharajah Sir Jotendra Mohan Tagore, K.C.S.I., Rs. 2,000; Syjuddin Ahmed Rs. 2,000; Baboo Rajoni Kantha Ghatak Rs. 1,000; Bisvasvari Devi Chowdhrani Rs. 4,500; Baboo Petamber Shaha Rs. 1,000; Baboo Susti Charan Mazumdar Rs. 1,200; Moulvie Ali Ahmad for Bibi Sogra, widow of Moulvie Abdul Aziz, Rs. 25,000; Mohunt Narsing Doss Rs. 2,000; Chandi Baboo Rs. 2,000; Shaik Isuf Rs. 1,000; Baboo Digamber Sing Rs. 1,000; Baboo Jalim Monder Rs. 1,000; Baboo Panup Lal Sahu Rs. 1,000; Baboo Deonath Jha Rs. 1,000; Baboo Dooga Chowdhory Rs. 1,000; Baboo Mongal Gowala Rs. 1,500; Baboo Bacha Thakur Rs. 1,800; Baboo Gunga Pershad Rs. 1,000; Baboo Ranga Jha Rs. 1,035; Dodhrain Ojhain Rs. 1,000; Baboo Jungli Jha Rs. 1,500; Baboo Kanaia Pandey Rs. 2,500; Baboo Sohar Barar 1,001; Baboo Ram Charan Raut Rs. 1,000; Baboo Mahadeb Raut Rs. 1,000; Baboo Nathu Sahu Teli Rs. 1,000; Baboo Imrit Shah Rs. 2,000; Baboo Fajdar Sing Rs. 1,000; Baboo Krishna Dhan Das Rs. 1,000; Mussamat Kapurbati Kussari Rs. 1,300; and Baboo Apatti Dibba of Kapasirta, pergunnah Mongla in Kanthi, Rs. 1,070.

Wells.—Under this head Rs. 30,336 were contributed, of which Baboo Gobinda Chandra Roy gave Rs. 1,000; Shaikh Faiz Ally Rs. 1,000; and Baboo Nandu Lal Rs. 2,000.

Miscellaneous.—The sum of Rs. 1,681 shown against this head is composed of small amounts.

RESOLUTION.—The Lieutenant-Governor notices with pleasure that the contributions for works of public utility during the year under review compare favourably with those of the previous two years. His Honour hopes to see further progress in the same direction, and he trusts that those who are willing to contribute money for this purpose will exercise a careful judgment in selecting such works as are calculated to enhance the material prosperity of the community. The Lieutenant-Governor desires to thank those who have contributed in the past year for their public spirit and liberality.

Letters of acknowledgment will be forwarded by the Government to those who have constructed important works. Those who have constructed works

costing Rs. 500 and under will, as usual, receive an acknowledgment from the Commissioner or the Magistrate of the Division.

ORDER.—Ordered that a copy of this Resolution, and of the statement, be forwarded to the Board of Revenue, Lower Provinces, and to all Commissioners of Divisions; to the Commissioner of Chota Nagpore, and to all Superintending Engineers of Public Works Circles in Bengal, for information.

Ordered also, that a copy of this Resolution, and of the statement, be forwarded to the Revenue and Judicial Departments of this Government for information.

Ordered also, that this Resolution and the statement be published in the Supplement to the *Calcutta Gazette* for general information.

By order of the Lieutenant-Governor of Bengal,

E. J. MARTIN,

Secretary to the Government of Bengal,

P. W. Dept.

Statement of works of public utility constructed by private individuals during the year 1888.

Division.	District.	Name of individual by whom constructed.	Description of work.	Place where constructed.	Cost.	Total of districts.	Grand Total of Division.
					Rs. A. P.	Rs. A. P.	Rs. A. P.
		Baboo Siva Das, Muhuri of Kona, thana Cutwa.	Repairs to a road ...	Kona, thana Cutwa ...	400 0 0		
		Baboo Ram Chand Shai of Khudkuri, thana Khandghose.	Re-excavation of a tank.	Khudkuri, thana Khandghose.	1,250 0 0		
		Jahiruddhi Sheikh, of Chukdighi, thana Jamalpore.	Excavation of a tank	Chukdighi, thana Jamalpore...	900 0 0		
	Burdwan ...	Baboo Nobokrishore Mandal, of Palashan, thana Satgachia.	Ditto	Palashan, thana Satgachia ...	250 0 0		
		Baboo Gopal Chandra Ghose, of Beerpoor, thana Burdwan.	Ditto	Beerpoor, thana Burdwan ...	400 0 0		
		Marwari community of Ranigunj, thana Ranigunj.	Construction of a serai for travellers.	Mahalla Hatipore, in the town of Ranigunj, thana Ranigunj.	4,500 0 0		
		Works costing less than Rs. 200 each	.....	.....	140 0 0	7,840 0 0	
		Giridhari Das Mohanta	A tank	On the road between Indus and Katulpore police-stations.	1,000 0 0		
	Bankoorah ...	Baboo Gora Chand Banerjee	Do.	Sonamukhi	500 0 0		
		„ Dino Nath Ray	Do.	Telesher	1,200 0 0		
		„ Gunga Narain Duari	Do.	Kusadip	300 0 0		
						3,000 0 0	
	Beerbhoom ...	Nil	.....	.....	... ..	.....	
		Sreemati Syama Sundary Debya, of Shamchandpore.	A well	Shamchandpore, outpost Sirsa	200 0 0		
		Baboo Kemaram Pall, of Dhitpore ...	Re-excavation of a tank.	Benapura, outpost Benapura	1,000 0 0		
		Baboo Dwarka Nath Chowdhury, of Arasini.	Ditto ...	Arasini, outpost Benapura ...	400 0 0		
BURDWAN ...		Baboo Bodya Nath Jana, of Katanala bazar.	Ditto ...	Dhondighi, police-station Contai.	200 0 0		
		Baboo Lakhan Pandah, of Bhiribaranga.	A tank	Aklamaspore, police-station Raghunathpore.	200 0 0		
	Midnapore ...	Baboo Umesh Chandra Roy, Doctor of Pekalia.	Re-excavation of a tank.	Basdaha, in the municipality of Chandrakona.	800 0 0		
		Sheik Meher, of Misiara	A tank	Misiara, police-station Panskura.	200 0 0		
		Baboo Madhu Sudan Panigrahi, of Panskura.	Do.	Panskura, police-station Panskura.	300 0 0		
		Baboo Judhishter Saw of Bheturia ...	Do.	Bheturiah, police-station Nandigram.	225 0 0		
		Works costing less than Rs. 200 each	.....	.....	600 0 0	4,125 0 0	
		Baboo Peary Lall Chatterjee, of Talbona, in Dhaniakhally thana.	A tank	Talbona	700 0 0		
	Hooghly ...	Madhub Chandra Giri, Mohanta of Tarakessur.	Do.	Tarakessur	3,000 0 0		
		Baboo Gopal Chandra Bema, of Bansberia.	Constructing a masonry ghát on the river Hooghly.	Bansberia	700 0 0		
						4,400 0 0	
		Ranee Durga Sundari of Andool ...	A thatched school-house (*a*).	Near Rajbati in Andool, Sankrail.	200 0 0		
	Howrah ...	Baboo Rajchander Kolay, of Barbamoonar, zumindar of the village in Ampta.	A tank	Barbamoongar in Ampta ...	2,000 0 0		
		Baboo Premchand Singh, of Mooraribar in Bagnan.	Do.	On the side of the public road in village Mooraribar.	1,000 0 0		
						3,200 0 0	
				TOTAL OF BURDWAN DIVISION	.....	.....	23,165 0 0
		Kangali Mundal	Tank	Mullukapore	350 0 0		
		Ditto	Masonry musjid ...	Ditto	400 0 0		
		Kristo Chunder Banerjee	Masonry ghát on the river side.	Halishahar, Kalikatalla bazar	1,300 0 0		
		Dr. Kalipodo Gupta, F.R.C.S.	Ditto ditto ...	Halishahar, Boonaghát ..	2,220 0 0		
		Ditto ditto	Charitable dispensary.		2,750 0 0		
	24-Perganahs		Ditto ditto .	Khutura	40,000 0 0		
		Ram Gopal Rakhit	Masonry bridge over the Dhulchita khal.	Mundirghata, Dhulchita ...	1,803 10 6		
		Kali Nath Banerjee	New tank and re-excavation of an old tank.	Sangore méllah ground ...	660 0 0		
		Mohendra Nath Patra of Belpukar, police-station Kulpi.	.....	.....	125 0 0	49,638 10 6	
		Works costing less than Rs. 200 each					
		Kassem Mundal	Tank	Judpur	200 0 0		
		Baruda Kanta Sircar	Do.	Kumra	200 0 0		
		Mathura Nath Chatterjee	Do.	Raipara	250 0 0		
		Digambar Dutta	Do.	Gopalpore	300 0 0		
		Ananda Chandra Ghosh	Do.	Sheraipore	500 0 0		
		Ram Taran Ghosh	Do.	Haridhaly...	700 0 0		
		Shamapati Charan Dass	Do.	Gopalpore	250 0 0		
		Amar Chand Ghosh	Do.	Shollua	500 0 0		
		Poresmulla Sheikh	Road	Kathuly	200 0 0		
		Nibaran Chandra Basu	Tank	Monbhog	500 0 0		
SIDENCY.	Khoolna ...	Poresh Nath Chatterjee	Do.	Baromonbhog	550 0 0		
		Mohim Chandra Banerjee	Do.	Bahudia	470 0 0		
		Bhola Nath Ghosh	Do.	Sadenchia	300 0 0		
		Shodanally Shaha	Do.	Satinigram	205 0 0		
		Sobhanu Karigar	Do.	Ditto	350 0 0		
		Gobordhan Mundal	Do.	Gopinathpur	500 0 0		
		Kala Chand Karigar	Do.	Tudra	200 0 0		
		Kurmatullah Sheikh	Do.	Lapsa	350 0 0		
		Bidhu Bhusan Bhanio	Do.	Nalta	700 0 0		
		Rai Churn Karmakar	Do.	Do.	500 0 0		
		Works costing less than Rs. 200 each	.....	.....	275 0 0	7,450 0 0	
		Bhadu Mundal	Tank	Narapalipara	325 0 0		
		Durga Churn Sen	Do.	Krishtapore	300 0 0		
		Shya Ram Biswas	Do.	Bijpara	200 0 0		
		Srimanto Ghosh	Do.	Ghetwgatchi	200 0 0		
		Narayan Mundel	Re-excavation of a tank.	Sutra	250 0 0		
		Nilmony Mundal	Ditto	Kumarpoor	300 0 0		
	Nuddea ...	Kanye Mundal	Ditto	Kassimpoor	200 0 0		
		Umesh Mundal	Ditto	Gushtea	400 0 0		
		Hem Chand Mondal	Ditto	Sarunastpoor	500 0 0		
		Rashik Lall Pal and Huri Dass Pal ...	Ditto	Ghoshpara	400 0 0		
		Villagers of Nabla	Ditto	Nabla	300 0 0		
		Rameswar Karmakar	Tank	Sholataka	280 0 0		
		Madhub Chandra Karmakar	Do.	Do.	225 0 0		
		Works costing less than Rs. 200 each..	.....	.....	197 0 0	4,027 0 0	

(*a*). This is a free school. The sum of Rs. 325, including the pay of teachers, &c., is the monthly expenditure which is also paid by the Ranee.

Division.	District.	Name of individual by whom constructed.	Description of work.	Place where constructed.	Cost.	Total of districts.	Grand Total of Division
					Rs. A. P.	Rs. A. P.	Rs. A.
		Gopal Chandra Pal	Tank	Gaidgachi	300 0 0		
		Khetra Mohun Mitra	Do.	Ditto	400 0 0		
		Moti Lall Kundu	Do.	Rupdia	400 0 0		
		Khoda Baksa Bazadar	Do.	Moorari	400 0 0		
		Wahed Coachman	Do.	Harbilla	500 0 0		
		Monai Sirdar	Do.	Chanlia	300 0 0		
		Kushai Mulla	Do.	Narendrapore	300 0 0		
		Bhalai Das	Do.	Manoharpore	350 0 0		
		Manollah Biswas	Do.	Mitra Singa	400 0 0		
		Kartik Dass	Do.	Baladanga	400 0 0		
		Mirn Biswas	Do.	Sing Jalli	500 0 0		
		Sukul Mundal	Do.	Barials	300 0 0		
	Jessore	Gagan Mistri	Do.	Garibpur	200 0 0		
		Cherakali Sheikh	Do.	Bhoikara	600 0 0		
		Badal Mundal	Do.	Shomaspur	700 0 0		
		Thakamoni Dasya	Do.	Mohakul	600 0 0		
		Alladi Bibi	Bridge	On the river Harihar	2,500 0 0		
		Jogendra Nath Dass	Tank	Dighal kandi	500 0 0		
		Chundra Nath Sirkar	Do.	Kurigram	500 0 0		
		Kodai Mina	Do.	Dumartollah	400 0 0		
Presidency —concld.		Kodai Sheikh	Do.	Ditto	300 0 0		
		Jharu Sirdar	Do.	Malidanga	300 0 0		
		Madhu Sheikh	Do.	Singa	250 0 0		
		Peary Mohun Mozumdar	Do.	Lohagara	275 0 0		
		Works costing less than Rs. 200 each	.....	.....	165 0 0		
					.....	11,840 0 0	
		Nawab Bahadoor of Moorshedabad	Tank	Jahazmali Gurha	2,624 14 6		
			Do.	Powli	200 0 0		
	Moorshedabad	Roy Bahadoor Boodhoosingh Dodhooria	Dharmasallah	Azimgunge	6,000 0 0		
		Roy Bahadoor Bishen Chand Dodhooria.					
					.....	8,824 14 6	
				Total of Presidency Division	.....	.....	81,780
		Mohadeo Das	Tank	Hashanpore	700 0 0		
		Ashkar Mondal	Do.	Chuk	600 0 0		
		Peari Mohun Nandi	Do.	Marnai	600 0 0		
		Raja Mondal	Do.	Gool	500 0 0		
		Ram Chandra Shaha	Do.	Shapahar	500 0 0		
		Shookaru Bania	Do.	Binnakuri	400 0 0		
		Gangadhar Kosya	Do.	Shahka	425 0 0		
		Ranka Hazi	Do.	Ditto	375 0 0		
	Dinagepore	Chartan Shaha	Do.	Bashudebpore	300 0 0		
		Forash Molla	Do.	Mohtpore	300 0 0		
		Koodi Panchayet	Do.	Katta	200 0 0		
		Choti Fakir	Do.	Bashudebpore	275 0 0		
		Naloo Noshya	Do.	Bhangapara	225 0 0		
		Works costing less than Rs. 200 each	.....	.....	1,085 0 0		
					.....	6,485 0 0	
		Khudi Mondal	Tank	Jhinarpara	400 0 0		
		Mohajan Molla	Do.	Jumarpara	400 0 0		
		Modhu Mondal	Do.	Motihar	200 0 0		
		Shital Molla	Do.	Dani	400 0 0		
		Shonai Pramanick	Do.	Abya Gotopore	700 0 0		
		Kumar Jogendro Nath Roy	Do.	Bonarypara	3,000 0 0		
		Rokha Kar Mourra	Do.	Nepaldighi	1,000 0 0		
		Durga Nath Karmakar	Do.	Abdulpore	800 0 0		
		Khuon Shelan	Do.	Kushumba	492 0 0		
	Rajshahye	Bholu Mondal	Do.	Ditto	720 0 0		
		Kina Peak	Do.	Bhabra	220 0 0		
		Araj Fakir	Do.	Shemba	500 0 0		
		Mokim Shaha	Do.	Par Jungy	700 0 0		
		Madhub Mondal	Do.	Shadypore	1,000 0 0		
		Mr. Lang, for Robert Watson & Co.	Do.	Bilmaria	2,000 0 0		
		Panos Pramanick	Do.	Teen Shan	1,000 0 0		
		Kater Mondal	Do.	Jamira	375 0 0		
		Ashak Moulavi	Do.	Ditto	375 0 0		
		Works costing less than Rs. 200 each	.....	.....	350 0 0		
					.....	14,041 0 0	
		Newaj Mohamed Gobdar	A masonry bridge	Shercobhanga village, police-station Mithapukur.	850 0 0		
		Niwamut Patwari	Tank	Borobeel village, police-station Nesbitgunge.	1,200 0 0		
		Tatta Ram Das Patwari	Do.	Khalisamadati village, police-station Kaliagunge.	505 0 0		
Rajshahye.		Jarip Mohamed	Do.	Dharambaree village, police-station Ulipore.	600 0 0		
		Dhana Dawai	Do.	Shibbaree village, police-station Ulipore.	570 0 0		
	Rungpore	Hisabdi Nashyo	Do.	Falgacha village, police-station Sundargunge.	300 0 0		
		Ruhmanissa Bibi	Road	From Pazla village to Lalchanear Bunder.	450 0 0		
		Ram Ratan Sirkar	A masonry well	Dhappa-anga village	400 0 0		
		Janaki Ballava Sen	Ditto	Boro Bhita village, police-station Jaldhaka.	300 0 0		
		Newaj Mahamed	Tank	Jhema village, police-station Sundergunge.	330 0 0		
					.....	5,525 0 0	
		Jaucolla Shonar	Tank	Atapara, police-station Bogra	375 0 0		
		Meherulla	Do.	Kamargari, police-station Bogra.	600 0 0		
		Govinda Chandra Shaha	Do.	Matiduli, police-station Bogra	1,200 0 0		
		Bornulia Pramanik	Do.	Dharia, police-station Shibgunge.	1,000 0 0		
	Bogra	Taj Pramanik	Do.	Lukhipore, police-station Shibgunge.	350 0 0		
		Dhabaree Pramanik	Do.	Banatighar, police-station Shibgunge.	200 0 0		
		Radha Mohun Chowdhuree	Do.	Tilakpore, police station Adamdighi.	1,000 0 0		
		Raj Mohun Shaha	Do.	Govindpore, police-station Adamdighi.	2,500 0 0		
					.....	7,225 0 0	
		Lashi Kanta Pramanik	Tank	Pubna town	10,000 0 0		
		Asukul Chandra Kundu	Do.	Govindpore, thana Dulai	950 0 0		
		Dhanandar Shaha	Do.	Ullapara, thana Shazadpore	900 0 0		
	Pubna	Rahim Chandra Pramanik	Do.	Choroimure, thana Ullapara	500 0 0		
		Banamali Roy, zemindar	Do.	Banshbaree, thana Roygunge	600 0 0		
		Mohur Molla	Do.	Talam, thana Roygunge	1,000 0 0		
					.....	13,950 0 0	
	Darjeeling	Nil	.....	.....	.....	.....	

Division.	District.	Name of individual by whom constructed.	Description of work.	Place where constructed.	Cost.	Total of district.	Grand Total of Division.
					Rs. A. P.	Rs. A. P.	Rs. A. P.
Rajshahye—*concld.*	Julpigoree ...	His Highness the Maharajah of Cooch Behar.	Three pipe wells ...	Ranigunge	816 0 0		
		Ditto ditto	Improvements to dispensary buildings.	Boda and Debigunge	221 0 0		
		Ditto ditto	Tank	Boda	438 0 0		
		Ditto ditto	Temple	Boda	800 0 0		
		Works costing less than Rs. 200 each...	.....	.....	567 0 0		
				Total of Rajshahye Division	.....	2,843 0 0	
						.....	50,668 0 0
	Dacca ...	Musammut Rasoni, wife of Rasan Bepari, of Rasan Bag.	A masonry ghât ...	Narainganga on the east side of the municipal tank.	300 0 0		
		Baboo Okhoy Chandra Shome ..	Tank	Krishnapura, in thana Narainganga.	500 0 0		
		Works costing less than Rs. 200 each	.....	.....	152 0 0		
						952 0 0	
	Furreedpore ...	Giris Chandra Sarkar	Tank	Godardhardangi, thana Furreedpore.	400 0 0		
		Maharajah Sir Jotendra Mohan Tagore, K.C.S.I.	Do.	Muraridaha, thana Furreedpore.	2,000 0 0		
		Gobinda Biswas	Do.	Eranda, outpost Hamdampore.	(a)600 0 0		
		Jadav Chandra Ghose	Do.	Dhupri, thana Pangsa ...	500 0 0		
		Naba Krishna Kachara	Do.	Dudkhali, outpost Habiganga.	350 0 0		
		Syjuddin Ahmed	Do.	Bahadurpur, thana Shibchur	2,000 0 0		
		Rajoni Kantha Ghatak	Do.	Balichar, thana Palong ...	1,000 0 0		
		Chandra Kumar sen	Do.	Ditto ditto	250 0 0		
		Mohesh Chandra Mukerji	Do.	Palong, thana Palong	200 0 0		
		Baikanta Chandra Saha	Do.	Tulshar, thana Palong ...	700 0 0		
		Baboo Kali Krishna Tagore	Do.	Haturia, outpost Burirhat ...	700 0 0		
		Dena Bandhu Sikdar	Do.	Jhikarhati, ditto ...	800 0 0		
		Rama Charan Roy Chondhuri . .	Do.	Surgram, thana Gopalganga...	200 0 0		
		Works costing less than Rs. 200 each	.....	.....	(b)450 0 0		
						10,150 0 0	
Dacca ...		Baboo Behari Lal Roy	Higher class English school.	Barisal	900 0 0		
		Tukani Peshakar	Tank with masonry ghât.	Jhalakati	300 0 0		
	Backergunge...	Achghar Sepahi	Tank	Barapata	500 0 0		
		Hira Gazi	Do.	Chotpata	200 0 0		
		Jumatali Taluqdar	Do.	Chhotapata	200 0 0		
		Works costing less than Rs. 200 each	.....	.....	360 0 0		
						2,460 0 0	
	Mymensingh ...	Bhola Nath Bhaduri	Tank	Bhakbhakia, police-station Durgapore.	500 0 0		
		Jorip Sheikh	Do.	Kulpa, police-station Kutwali.	375 0 0		
		Kubir Sheikh	Do.	Kushar, police-station Kutwali.	400 0 0		
		Munshi Mandal	Do.	Balushar, police-station Phulbaria.	600 0 0		
		Lesee Munshi	Do.	Nyarbari, police-station Phulbaria.	400 0 0		
		Nobin Kishori Choudhurani	Do.	Lachhipore, police-station Phulbaria.	500 0 0		
		Har Dass	Do.	Angariapara, police-station Phulbaria.	500 0 0		
		Nur Dass	Do. ...	Chowdar, police-station Phulbaria.	350 0 0		
		Jabir Bepari	Do.	Anbaripara Joydee, police-station Phulbaria.	375 0 0		
		Tenkar Dass	Do. .	Ditto ditto ..	350 0 0		
		Sharoop Bepari	Do. . ..	Anbari, police-station Phulbaria.	475 0 0		
		Anmar Singh	Do. . ..	Koyabarchalla, police-station Phulbaria.	475 0 0		
		Karim Rahim Sheikh	Do. .. .	Rahimpore, police-station Phulbaria.	400 0 0		
		Kali Nath Nogi, Taluqdar ...	Do.	Deor, outpost Pengna ...	700 0 0		
		Thakur Das Shaha	Do	Sarishabari, ditto ...	518 0 0		
		Biswasvari Devi Choudhrani ...	Do.	Isserganga, outpost Isserganga.	4,500 0 0		
		Mahajan Sheikh . .	Do.	Nandail, outpost Nandail ...	400 0 0		
		Mahari Doi	Do.	Jangerpore, ditto ...	300 0 0		
		Khabil Mir Sarkar	Do.	Ditto ditto ...	400 0 0		
		Soleman Sheikh	Do.	Kalikapore ditto ...	300 0 0		
		Baboo Gobinda Chandra Roy	Well	Boshaberhut, police-station Tangail.	1,000 0 0		
						13,818 0 0	
				Total of Dacca Division...	.....	.....	27,380 0 0
	Tipperah ...	Rasul Ali	New tank	Karnikandy, Daudkandy ...	200 0 0		
		Shafarudy	Ditto	Baksitarampur ditto ...	250 0 0		
		Esaf	Ditto	Ditto ditto ...	200 0 0		
		Narain Kaibarta	Ditto	Ditto ditto ..	300 0 0		
		Allimuddy	Ditto	Shuwakandee ditto ...	300 0 0		
		Ektar	Ditto	Kumarkandy ditto ..	400 0 0		
		Shakir Mahomed	Ditto	Haripur ditto .	200 0 0		
		Hushamuddi	Ditto	Biramkandy ditto ...	2 0 0 0		
		Works costing less than Rs. 200 each	.....	.....	230 0 0		
						2,280 0 0	
Chittagong	Noakholly ...	Petamber Shaha	Tank	Dashpara, Chagalnya	1,000 0 0		
		Works costing less than Rs. 200 each...	...	.....	230 0 0		
						1,230 0 0	
	Chittagong ...	Susti Charan Mazumdar	Tank	Suchakradandi Patea	1,200 0 0		
		Chand Meah	Do.	Hinguli, Murkonarai	500 0 0		
		Somed Ali	Do.	Paschim, Isakhali, ditto ...	500 0 0		
						2,206 0 0	
	Chittagong Hill Tracts.	Nil.					
				Total of Chittagong Division.	.....	.....	5,716 0 0
Bihar ...	Patna ...	Tulsi Dass Mahanth	2 masonry wells ...	Ichhose	200 0 0		
		Moulvie Ali Ahmad, for Bibi Sogra, widow of Moulvie Abdul Azia.	Tank	Koila	25,000 0 0		
		Works costing less than Rs. 200 each	.....	... ..	667 0 0		
						25,867 0 0	

(a) District Board paid half the amount.

(b) Of this amount, District Board paid Rs. 150.

Division.	District.	Name of individual by whom constructed.	Description of work.	Place where constructed.	Cost.	Total of districts.	Grand Total of Division.
					Rs. A. P.	Rs. A. P.	Rs. A. P.
	Gya	E. Solono, Esq.	Embankment	Belsour	483 0 0		
		Ditto	Ditto	Roopaich	355 0 0		
		Ditto	Ditto	Gouspore Jounah	200 0 0		
		Hurbuns Gir Gosain	Tank	Bodh Gya	200 0 0		
		Baboo Bulakı Lal Dewan of Baboo Ran Bahadur Singh.	Well	Beldari Hamlet	300 0 0		
		Ali Raza Khan	Do.	Nojouli	200 0 0		
		Heera Singh	Do.	Karmathoo	500 0 0		
		Mewa Lal	Do.	Asni	300 0 0		
		Sahai Singh	Do.	Goodroo	200 0 0		
		Kunj Behari Sahu	Do.	Basorah	200 0 0		
		Gosain Bimuldeo Gir	Do.	Gosain Peshra	200 0 0		
		Ginora	Do.	Daudnagar	800 0 0		
		Phulmanhs	Do.	Ajan	200 0 0		
		Paramhans Bahaji	Do.	Kishunpur Khurd	400 0 0		
		Works costing less than Rs. 200 each	.....	.....	6,704 0 0	10,208 0 0	
	Shahabad	Ram Jiwan Roy	Masonry well	Lowhur Khurd	225 0 0		
		Mukhram Dass	Ditto	Sinha	300 0 0		
		Bhrago Lall	Ditto	Kalianpore	200 0 0		
		Ramsaran Missir	Ditto	Sonborsa	250 0 0		
		Sheo Dutt Lall	Ditto	Hurdia	200 0 0		
		Lugeshwar Lall	Ditto	Ditto	200 0 0		
		Mussamut Myle	Ditto	Barnon	300 0 0		
		Baboo Lall Nooniar	Ditto	Arnaon	270 0 0		
		Golab Shah	Ditto	Sopahi	300 0 0		
		Amir Singh	Ditto	Chandwat	400 0 0		
		Baboo Chaturi Singh	Ditto	Barigaon	300 0 0		
		Akhoj Teli	Ditto	Kirpa	200 0 0		
		Kaloo Singh	Ditto	Natukpur	200 0 0		
		Imrit Lall	Ditto	Tiwai	300 0 0		
		Mussamut Radha Kuar	Tank	Mohoniab	200 0 0		
		Rameshwar Pandey	Do.	Kabirajpur	200 0 0		
		Works costing less than Rs. 200 each	.....	.....	2,498 0 0	6,543 0 0	
Patna—contd.	Durbhanga	Gobind Sahu	Tank	Bhour	500 0 0		
		Mohunt Narsing Doss	Do.	Rampatti	2,000 0 0		
		Kalar Thakoor	Do.	Malmal	500 0 0		
		Bidya Nath Jha	Do.	Shubhankarpore	500 0 0		
		Jadu Nandun Pathak	Do.	Somrat	700 0 0		
		Chon Monde	Do.	Barhi	500 0 0		
		Jhomak Gowala	Do.	Sondra	600 0 0		
		Hita Gowala	Do.	Do.	500 0 0		
		Mohunt Narsingh Dass	Do.	Madhwapore	600 0 0		
		Ram Dass Gowala	Do.	Deotha	700 0 0		
		Chandi Baboo	Do.	Parsowni	2,000 0 0		
		Thithur Jha	Do.	Kakrowl	500 0 0		
		Bidya Nath Rai	Do.	Karhi	400 0 0		
		Shaik Isaf	Do.	Murdh	1,000 0 0		
		Digambar Singh	Do.	Andhera Moth	1,000 0 0		
		Rangi Sahu	Do.	Pahuo	600 0 0		
		Bhawani Monder	Do.	Do.	800 0 0		
		Jalim Monder	Do.	Darshra	1,000 0 0		
		Sopan Rawot	Do.	Kusmar	900 0 0		
		Poran Gowala	Do.	Bhepare	900 0 0		
		Jhomak Gowala	Do.	Jhonghpatti	900 0 0		
		Rampat Monder	Do.	Gotparsahi	700 0 0		
		Cheddi Sahu	Do.	Madhwapore	500 0 0		
		Pamp Lal Sahu	Do.	Lachmipore	1,000 0 0		
		Deonath Jha	Do.	Berema	1,000 0 0		
		Donga Chowdhory	Do.	Tara Sahi	1,000 0 0		
		Mongal Gowala	Do.	Sandsan	1,500 0 0		
		Bacha Thakur	Do.	Ladari	1,800 0 0		
		Gunga Pershad	Do.	Harbarpore	1,000 0 0		
		Ranga Jha	Do.	Mohuna	1,035 0 0		
		Bhajee Chowdhory	Do.	Kotubpore	600 0 0		
		Kari Jha	Do.	Bytha	900 0 0		
		Dodhrain Ojhain	Do.	Russari	1,000 0 0		
		Jungli Jha	Do.	Nawanagar	1,500 0 0		
		Mohi Sori	Do.	Kusmar	900 0 0		
		Shaikh Faiz Ally	Masonry well	Magurahi	1,000 0 0		
		Jhoti Teli	Do. bridge	Mahomedpore	700 0 0		
		Lalla Baboo *alias* Baboo Brij Behari Lall	Tank	Sari	900 0 0		
		Works costing less than Rs. 200 each.	.....	.....	4,308 0 0	38,443 0 0	
	Mozufferpore	Shewdhary Thakur	Tank	Patahirup	300 0 0		
		Jewan Teli	Well	Baria	200 0 0		
		Damri Lall	Tank	Deorna	500 0 0		
		Luchmi Pramdh	Bridge	Mohna	500 0 0		
		Kanaia Pandey	Tank	Bahdwara Rasulabad	2,500 0 0		
		Kunjbehari Doobey	Well	Saidpore Gonesh	250 0 0		
		Sohar Barar	Tank	Mait	1,001 0 0		
		Gowri Singh	Do.	Saidpore	200 0 0		
		Ram Sahai Koeree	Bridge	Mothua Malik	300 0 0		
		Nathu Mahton	Tank	Sunbarsa	700 0 0		
		Rathu Sahu	Do.	Rajwara	300 0 0		
		Ram Charan Raut	Do.	Dalokwa	1,000 0 0		
		Mahadeb Raut	Do.	Do.	1,000 0 0		
		Ajudhya Nath Misser	Do.	Pata	700 0 0		
		Makund Jha	Do.	Samer	800 0 0		
		Nathu Sahu Teli	Do.	Vitha Kulan	1,000 0 0		
		Tiluck Khawas	Do.	Simlahn	600 0 0		
		Maniar Koomhar	Do.	Disputti	700 0 0		
		Works costing less than Rs. 200 each	.....	.....	14,001 0 0	27,455 0 0	
	Sarun	Gokul Pandey	Well	Dharaha	200 0 0		
		Gopi Ballam Lal	Do.	Sahooly	200 0 0		
		Gunga Dyal Sah	Do.	Sadpore Dighwara	200 0 0		
		Rajhan Singh	Do.	Chokanar	200 0 0		
		Indercjeet Pershad	Do.	Doomry	200 0 0		
		Sordha Singh	Do.	Pendhari	200 0 0		
		Ram Rakha Sah	Do.	Jahanpore	200 0 0		
		Shew Dewan Lall	Do.	Bishoonpura	200 0 0		
		Gokhool Lal	Do.	Uphar	400 0 0		
		Meetarjeet Baruwar	Do.	Durowli	280 0 0		
		Baboo Ram Singh	Do.	Shahpore	250 0 0		
		Thakur Pershad	Do.	Mirzapore	400 0 0		
		Imrit Shah	Tank	Pusnowli	2,000 0 0		
		Works costing less than Rs. 200 each.	.....	.....	19,414 0 0	24,314 0 0	

Division.	District.	Name of individual by whom constructed.	Description of work.	Place where constructed.	Cost.	Total of districts.	Grand Total of Division.
					Rs. A. P.	Rs. A. P.	Rs. A. P.
		Hurihar Misir	2 Wells	Sugano	500 0 0		
		Bhoirab Sahu	Bridge	Monza Chupra	500 0 0		
		Presg Turha	Do.	Ditto	200 0 0		
		Jagoo Bhagat	Do.	Bishoonpura	300 0 0		
		Tappi Thakur	Tank	Meodla	300 0 0		
		Ghun Syam Lairi	Well	Khantiarwa	400 0 0		
		Fajdar Sing	Tank	Khajooria	1,000 0 0		
		Kadai Rai	Do.	Ditto	200 0 0		
		Purmeswar Rai	Road	Jhunara Jamani	400 0 0		
		Doolhin Saheba Bethia	Well	Bhuralia	200 0 0		
		Ditto	Do.	Purundra	200 0 0		
	Chumparun	Ram Durshun Pande	Do.	Jagoolia	225 0 0		
		Hurbangi Misir	Do.	Joginore	250 0 0		
		Lall Chand Chamar	2 Wells	Beldari	200 0 0		
		Priyag Rai	Well	Bukhria	206 0 0		
		Dulhin Saheb Bethiah	2 Wells	Nawapore	300 0 0		
		Chhathoo Teli	Well	Muthpoli	350 0 0		
		Kunkar Teli	Do.	Do	300 0 0		
		Nuraingh Sahoy	2 Wells	Matiaria	500 0 0		
		Bagha Jagtu Mullah	Well	Parsawni	250 0 0		
		Khaki Baba Sadhu	Do	Lagunha	300 0 0		
		Works costing less than Rs. 200 each.	.....	.....	12,744 0 0	19,719 0 0	
				Total of Patna Division	.....	.....	1,52,343 0 0
		Bhathu Modi	Tank	Sewah	400 0 0		
		Jahuri Wunder Kaire	Masonry well	Dharona	400 0 0		
		Mannu Rai Babhan	Ditto	Hahari	400 0 0		
		Maharaja Lacnmissur Singh	2 Masonry wells	Kharagpore	400 0 0		
		Thakuri Modi	Masonry well	Ditto	300 0 0		
		Dukhi Choudhury	Ditto	Lanchi	250 0 0		
		Raja Pudmanand Singh	Ditto	Gogree	300 0 0		
		Bundi Rai	Ditto	Kajraita	200 0 0		
		Syan Gossain	Ditto	Bhatakhar	200 0 0		
		Rachu Choudhry	Ditto	Dariarpur	300 0 0		
		Baboo Sewa-Dhin Singh	Ditto	Sakarpara	250 0 0		
		Radhey Singh	2 Masonry wells	Maleypur	300 0 0		
		Ram Manee Bhagat	Masonry well	Baihara	400 0 0		
		Jeet Bahadoor Singh	Ditto	Kheri Rampur	200 0 0		
		Nawab Ali Khan	Ditto	Hussenabad	500 0 0		
		Khub Lall Beldar	Ditto	Lahanah	200 0 0		
	Monghyr	Deoki Kasar Benia	Ditto	Dardih	200 0 0		
		Budhan Mahton	Ditto	Karandih	200 0 0		
		Kanhaia Modi	Ditto	Nagri	300 0 0		
		Mago Kurmi	Ditto	Hamirpur	200 0 0		
		Hawan Baboo	Ditto	Ulao	200 0 0		
		Wife of Chaman Singh	Ditto	Indiar	200 0 0		
		Dhannu Gowala	Ditto	Hiratalah	300 0 0		
		Chatri Hazari	Ditto	Tetri	300 0 0		
		Ram Kankir Dass Gossain	Ditto	Meha	300 0 0		
		Bhuban Sahu	Ditto	Hosseina	300 0 0		
		Mir Nazir	Ditto	Kushba	300 0 0		
		Ranga Singh	Ditto	Sako	200 0 0		
		Golab Singh	Ditto	Babhungaon	200 0 0		
		Parsee Lall	Ditto	Danialpur	300 0 0		
		Jhanh Dhanuk	Ditto	Bajotpore	200 0 0		
		Mohun Halwai	Ditto	Behat	500 0 0		
		Parso Babhin, wife of Durga Singh	Ditto	Sabona	200 0 0		
		Works costing less than Rs. 200 each	.....	.....	4,955 0 0	14,355 0 0	
		Bhichhuk Nath Pande	A masonry bridge	Bagam	1,000 0 0		
		Lachman Mundar	Tank	Narown	200 0 0		
		Naimmut Thakur	Do.	Khusunputti	500 0 0		
		Dukha Munder	Do.	Kanoonlyatuari	500 0 0		
		Tulsi Mundar	Do.	Jemashpore	700 0 0		
		Krishna Dhan Pas	Do.	Bhirkhee	1,000 0 0		
		Khunder Gowala	Do.	Permanandpore	700 0 0		
		Nubu Lall Patwari	Do.	Singassurthan	500 0 0		
		Futter Jha	Do.	Abhuar	600 0 0		
		Gokul Chowdhury	Do.	Dinaputti	600 0 0		
	Bhagulpore	Leela Mundor	Do.	Seraighurtolacheku	500 0 0		
		Bhugwani Gowala	Do.	Nawabakhur	400 0 0		
		Beni Dutt Brahmin	Do.	Majhpore	400 0 0		
		Anak Maharaj Bhat	Do.	Thukraha	450 0 0		
		Jai Narain Singh	Do.	Sukhanaggur	400 0 0		
		Mussamat Kapuriati Kussari	Do.	Amarpore	1,300 0 0		
		Mussamat Ghar Sharin Kumri	Do.	Rahua	500 0 0		
		Chooraman Jha	Do.	Kahera	775 0 0		
		Nandu Lal	A masonry well	Satchera	2,000 0 0		
		Manik Chand Sahu	Ditto	Barhana	500 0 0		
		Khokun Sahu	Ditto	Ekdara	400 0 0		
		Works costing less than Rs. 200 each	.....	.....	150 0 0	14,075 0 0	
		Hasari Mandal	A tank	Kukronee	700 0 0		
		Murad Sao	Do.	Patoah	700 0 0		
		Nand Kishore Bha	Do.	Do.	325 0 0		
	Purneah	Mitor Nath Jha	A well	Bissenpore	300 0 0		
		Radha Kant Ojha	Do.	Do.	250 0 0		
		Works costing less than Rs. 200 each	.....	.....	650 0 0	2,925 0 0	
		Baboo Sarat Chandra Rai Chowdhury	Masonry bridge	Mobarakpore	4,000 0 0		
	Maldah	Kafat Ulla Mundal	Tank	Nayadah	700 0 0		
		Baboo Sarat Chandra Rai Chowdhury	School building	Simkhya	2,500 0 0	7,200 0 0	
		Dukhi Mian	Tank	Kanoo	400 0 0		
		Nandoo Rus	Bandh, 740 feet	Pajodaha	400 0 0		
		Ghatwals, mustagirs and ryots of tup-peh Saruth Deoghur.	37 Dams and bandhs	Throughout Deoghur sub-division.	1,440 0 0		
	Sonthal Pergunnahs.	Mr. W. M. Grant	Cleaning and deepening of Phuta Dahi	Dumka	500 0 0		
		Works costing less than Rs. 200 each	.....	.....	62 0 0	2,822 0 0	
				Total of Bhagulpore Division	.....	.....	41,377 0 0
		Apuri Bewa of Moogbadi, pergunnah Derabisi.	Tank	Moogbadi	600 0 0		
	Cuttack	Works costing less than Rs. 200 each	.....	.....	456 8 0	1,056 8 0	

Division.	District.	Name of individual by whom constructed.	Description of work.	Place where constructed.	Cost.	Total of districts.	Grand Total of Division
					Rs. A. P.	Rs. A. P.	Rs. A. P.
Orissa—concluded.	Balasore ...	Apatti Dibba of Kapasirta, pergunnah Mongla in Kanthi.	Tank	Napo, police-station Jellasore	1,070 0 0		
		Dhooruli Charan Jenah of Nepo ...	Do.	Khoorda, police-station do.	500 0 0		
		Baboo Akhoy Narayan Das of Balishahi in Midnapur district.	Do.	Bichitrapur, police-station Baliapal.	200 0 0		
		Baboo Sunder Das of Kokhra, pergunnah Mohespur.	Do.	Mohespur, police-station Baliapal.	500 0 0		
		Baboo Akhoy Kumar Das of Dehurda, pergunnah Birkul.	Do.	Puntye, police-station Baliapal.	300 0 0		
		Hurry Panigrahi of Diya, pergunnah Nanglesser.	Do.	Koseda, police-station Busta	350 0 0		
		Balbhadra Das of Baghua, pergunnah Banchar.	Do.	Hansgori, police-station do.	600 0 0		
		Arun Das Nawashahi, pergunnah Arso.	Do.	Nochipiri, police-station Busta.	900 0 0		
		Ramprasad Mallik of Nalanga, pergunnah Rundhia Argurah.	Do.	Nalanga, police-station Bhuddruck.	300 0 0		
		Kali Panda of Patooli, pergunnah Soso.	Do.	Patooli, police-station Bhuddruck.	325 0 0		
		Fakir Sahoo and Kelay Bank of Karandimal, pergunnah Kyma.	Do.	Karandimal, police-station Chandballi.	200 0 0		
		Works costing less than Rs. 200 each	.....	.....	1,545 0 0	6,690 0 0	
	Pooree ...	Bharat Sahu	Tank	Panchpalli, Khoorda	400 0 0		
		Dinabandhu Misra	Do.	Sardaipur, ditto	600 0 0		
		Bhagirathi Mahanti	Do.	Antarkian, Banpur	420 0 0		
		Works costing less than Rs. 200 each	.....	.....	486 0 0	1,906 0 0	
				Total of Orissa Division...	.....	.....	9,652 8
Chota Nagpore.	Hazaribagh ...	F. F. Christien, Esq., of Gawan ...	A bandh...	Tisree	200 0 0		
		Works costing less than Rs. 200 each	.....	.....	100 0 0	300 0 0	
	Lohardugga ...	Works costing less than Rs. 200 each	.....	... ..	155 0 0	155 0 0	
	Manbhoom ...	Kanoo Mundle of village Burra, pergunnah Gola in Hazaribagh district.	Excavating a tank ...	Digardi, police-station Jhalda	800 0 0		
		Boloram Ghosal of village Kharkhari, pergunnah Topechansi.	Ditto ...	Kharkhari, pergunnah Topechansi.	200 0 0		
		Gopi Nath Bhagat of village Toondi, pergunnah Toondi.	Well	Toondi, pergunnah Toondi ...	200 0 0		
		Works costing less than Rs. 200 each	.....	.....	150 0 0	1,350 0 0	
	Singbhoom ...	Sridhar Mandal of Seraikolla	Bandh	Jumai in Seraikella	240 0 0		
		Baboo Gokool Chunder Singh Deo of Seraikella.	Do.	Bhurkuli in ditto	200 0 0		
		Modan Patter of Dhulbhoom	Tank	Parabhalki in Dhulbhoom ...	200 0 0		
		Judhistir Mondal of do.	Do.	Jamundihi in ditto ...	300 0 0		
		Works costing less than Rs. 200 each	.....	.....	415 0 0	1,355 0 0	
				Total of Chota Nagpore Division	... .	.....	3,160 0

Summary.

			Rs.	A.	P.
Total of	Burdwan	Division	23,165	0	0
Ditto	Presidency	do.	81,780	9	0
Ditto	Rajshahye	do.	50,668	0	0
Ditto	Dacca	do.	27,380	0	0
Ditto	Chittagong	do.	5,716	0	0
Ditto	Patna	do.	1,52,343	0	0
Ditto	Bhagulpore	do.	41,377	0	0
Ditto	Orissa	do.	9,652	8	0
Ditto	Chota Nagpore	do.	3,160	0	0
		Grand Total of Divisions ...	3,95,242	1	0

PUBLIC WORKS DEPARTMENT,—BENGAL.

IRRIGATION.

THE following Note on irrigation operations from the Sone Canals during the kharif season 1889-90 is published for general information.

By order of the Lieutenant-Governor of Bengal,

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

Note by C. W ODLING, Esq., *Superintending Engineer, Sone Circle, on irrigation operations from the Sone Canals during the kharif season* 18 89-90,—*dated* 12*th January* 1890.

1. The season, though the rainfall was at times in defect, was on the whole not an unfavourable one so far as the rice crop was concerned, rain continuing to fall to a later date in September than was the case in the previous year. The main features of the rainfall during the two years are shown in the table below :—

Comparative statement of rainfall during the years 1888 *and* 1889.

MONTHS.	RECORDING STATIONS.				
	Arrah.	Buxar.	Bankipore.	Dehree.	
	Inches.	Inches.	Inches.	Inches.	
July 1889	13·58	16·89	8·84	7·22	
August ,, ...	13·68	11·09	9·49	19·21	
September ,, ...	5·15	6·00	15·70	7·00	
October ,, ...	0 92	1·02	0 05	2·34	
Total ...	33 33	35·00	34·08	35·77	34·55 average.
July 1888	17·90	12·11	15·14	15·90	
August ,, ...	17·74	13·39	17·11	15·36	
September ,, ...	5·58	11·25	3·17	7·93	
October ,, ...	0·43	0·60	Nil	1·36	
Total ...	41·65	37·35	35·42	40·55	38·74

The rainfall during 1889 was little, if at all, below the normal rainfall, which is 41·25 inches for the *year*, for the area commanded by the Sone Canals. There was, however, except at Bankipore no rain until the last day of the *Hutia* (25th September to 8th October), and the fall during the whole month of October was scanty and made up of insignificant showers.

There was a fall of ¼ of an inch at Arrah on the 7th October, none elsewhere.

2. The area irrigated during the season, and during the corresponding periods of 1888, 1887 and 1886, are shown in the statement following :—

	Five-year leases.	Annual kharif.	Sugarcane.	Kharif rainfall, July to October, inclusive average of head-quarters stations.
	Acres.	Acres.	Acres.	
1889-90	216,000	38,500	5,626	34·55
1888-89	200,102	69,628	4,600	39·12
1887-88	210,164	57,595	6,265	26·65
1886-87	194,556	30,082	11,626	49·40

The figures for 1889-90 are approximate, as the complete areas have not yet been reported, but on the information at present available the total area irrigated was 260,000 acres against 274,330 acres in 1888-89.

The deficiency is wholly in annual kharif leases, the five-year leases having increased by 16,000 acres, notwithstanding the lapse of leases for 45,445 acres on the 1st April 1889. Applications for 5-year leases for 29,788 acres were refused for want of proper channels or other good reasons. The falling off in the area under irrigation, compared with the previous year, shows how much more patent a factor is the time at which rain occurs than the total rainfall of the season or year.

3. The discharge of the canals during the thirty days of greatest demand for the last two years is shown in the subjoined abstract: —

Period.	Discharge in cubic feet per second.			
	Eastern Main Canal.	Western Main Canal.	Arrah Canal system.	Buxar Canal system.
1889.				
September, 21st to 30th ...	1,021	1,805	1,006	770
October, 1st to 10th ...	1,482	3,357	2,008	1,247
Do., 10th to 20th ...	1,457	3,474	2,155	1,296
1888.				
September, 21st to 30th ...	1,057	2,138	1,700	551
October, 1st to 10th ...	1,439	3,427	2,076	1,225
Do., 10th to 20th ..	1,450	3,858	2,360	1,492

It will be noticed that the demand for water during the first twenty days of October was not materially less than in 1888.

4. The same precautions as were reported last year have been taken to confine the supply of water to leased areas.

5. The report is submitted by me, as I was in charge of the circle during the *kharif* season.

C. W. Odling,

Superintending Engineer on Special duty.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 11th January, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	BENGAL.		
	Western Districts.		
BURDWAN DIVN. 1	Burdwan Jan. 11, '90	Nil	Weather—rather a little warm than what should be, considering the season. Harvesting of *amun* is going on. Prospect of *rubbi* reported to be good everywhere except at the head-quarters subdivision, where it is below average. Prospects of potato and sugarcane good. Price of common rice at— Srs. Burdwan ... . 16¼ Culna ... ... 15 Cutwa ... ... 15 11/16 Ranegunge ... ... 16 } per rupee.
2	Bankoora „ 11, '90	Nil	Weather—cold and clear. Outturn of *amun* crop is 10 annas on the average in the Sudder. *Rubbi* crops growing tolerably well. Sugarcane being pressed in some parts of the Bishenpore subdivision. Coarse rice is selling at 21 seers per rupee at Sudder and 18¾ seers at the Bishenpore subdivision.
3	Birbhum „ 11, '90	Nil	Weather—cloudy and warm for time of year. Very good prospects for winter crops of all kinds. Price of rice 16½ seers at Soory and 18 seers at Rampore Hât, per rupee.
4	Midnapur „ 11, '90	Nil	Weather—fair. *Amun* harvest nearly completed. The cutting of *rubbi* has commenced in some places. This crop is not a good one. Prices— Srs. Sudder ... ... 16 Contai ... ... 25 Tumluk .. .. 18 Ghatal ... ... 20 } per rupee.
5	Hooghly „ 11, '90	Nil	Weather—very close. Harvesting of *amun* is nearly completed. Prospects of *rubbi* crop, specially sugarcane, is very hopeful. Price of common rice— Srs. Ch. Sudder ... ... 12 0 Serampore ... . 11 8 Jehanabad ... ... 18 7 } per rupee.
	Howrah „ 11, '90	Nil	Weather—warm for the season. Rain brewing up apparently. Prospects of crops good. *Amun* harvest going on. Price of common rice— Srs. Sudder ... ... 12½ Uluberya ... . 15½ } per rupee.
	Central Districts.		
PRESIDENCY DIVN. 6	24-Perghs. Jan. 11, '90	Nil	Weather—seasonable. Harvesting of *amun* going on. Winter crops doing well.
7	Nuddea „ 11, '90	Nil	Weather—seasonable. All the winter crops are doing well. *Kalai* is being cut and harvested.
8	Khoolna „ 11, '90	Nil	Weather—seasonable. *Amun* harvest still progressing; outturn good. Prospects of winter crop good.
9	Jessore „ 11, '90	Nil	Weather—cloudy in the latter part of the week. *Amun* harvesting nearly over. Cold-weather crops doing fairly well. Prices of rice stationary.
10	Moorshedabad „ 11, '90	Nil	Weather—clear and cold. *Amun* is still being cut. Prospects of *rubbi* continues favourable.
RAJSHAHYE DIVN. 11	Dinagepur „ 11, '90	Nil	Weather—seasonable. The harvesting of winter rice nearly over. Pressing of sugarcane begun. Prospect of spring crops good.
12	Rajshahye „ 11, '90	Nil	Weather—seasonable and partially cloudy. The prospect of the winter crop is generally good all over and sowing has come to a close. Prospect of ganja good at Nowgong. Rice sells at 16 seers 9 chittacks for the rupee.
13	Rungpur „ 11, '90	Nil	Weather—overcast, warmer than last week. Sugarcane is being cut and crushed. Results good. Mustard is coming into seed. Tobacco is flourishing. Prospects of *rubbi* favourable. Prices have a downward tendency.
14	Bogra „ 11, '90	Nil	Weather—days hot and nights somewhat cooler. One-eighth part of *amun* crop is remaining to be reaped. The expected outturn is about 18 annas. Other crops are also being reaped. Common rice at head-quarters is 21 seers per rupee.
15	Pubna „ 11, '90	Nil	Weather—seasonable. *Amun* crop on low lands still being harvested. Outturn of *amun* below average in Sudder subdivision. Sugarcane deficient. Cold-weather crops satisfactory. Prices somewhat lower.
16	Darjeeling „ 11, '90	·16	Weather—cloudy and cold. Prospects generally good.
17	Julpigoree „ 11, '90	·05	Weather—cloudy and cold, but fair in the latter part of the week. Cutting of *haimanti* paddy nearly finished, and 14 annas outturn is expected. Tobacco plants doing well. No change in prices.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded.*			
	Eastern Districts.		
Dacca Divn. 18	Dacca Jan. 11, '90	Nil	Weather—cool and fine, *Boro* paddy being sown. Winter crops doing well. Harvesting of *mung* and *maskalai* commenced in the Manickgunge subdivision. Fodder is available. Prices of common rice stationray.
19	Furreedpur „ 11, '90	Nil	Weather—warmer than usual at this time of the year. *Amun* paddy harvested. *Kalai* and *mung* being gathered. State of *rubbi* crops fair. Coarse rice selling at 17 seers per rupee in Madaripur and at 16 seers per rupee in Goalundo.
20	Backergunge „ 11, '90	Nil	Weather—seasonable. Prospects of crops good. Harvesting of *amun* nearly completed. Common rice is selling at 16 seers per rupee.
21	Mymensingh „ 11, '90	Nil	Weather—cool and bright. Prospects of *rubbi* crops good. Harvesting of *amun* paddy is still going on. Current price of the cheapest kind of rice is 12 seers 13 chittacks per rupee.
Chittagong Divn. 22	Chittagong „ 11, '90	Nil	Weather—seasonable. Outturn of *amun* is 14 annas. State of winter crop is good.
23	Noakholly „ 11, '90	Nil	Weather—seasonable; cloudy at times Reaping of *amun* almost completed. *Rubbi* crops doing well.
24	Tipperah „ 11, '90	Nil	Weather—seasonable. Winter crops progressing well. Mustard is being collected.
25	Chittagong Hill Tracts ...	...	Report not received.
	Hill Tipperah Jan. 11, '90	Nil	Weather—gloomy and at times cloudy. *Amun* paddy and cotton continue to be gathered. Sugarcane and mustard do not look well. Prospects of tobacco and chillies fair.
BEHAR.			
Patna Divn. 26	Patna „ 11, '90	Nil	Weather—cold. *Rubbi* crops are doing well. A shower of rain will still do some good to the standing crops. Mustard and pea are in pod. Prospects of poppy favourable. Prices of food-grains are almost stationary.
27	Gya „ 11, '90	Nil	Weather—cold. Harvesting of paddy still going on Prospect of *rubbi* is good. Poppy plants are thriving. No person on relief work; none gratuituously relieved. Food-stock sufficient.
28	Shahabad „ 11, '90	Nil	Weather—seasonable, but rather milder. The prospects of *rubbi* and poppy continue to be good. Sugarcane being pressed. Prices stationary.
29	Durbhunga „ 11, '90	Nil	Weather—mornings foggy, hot during the day. Harvesting of rice completed. *Rubbi* prospects continue favourable. A shower of rain is, however, wanted. Poppy is good. Lands being prepared for indigo. Prices almost stationary.
30	Muzufferpur „ 11, '90	Nil	Weather—rather cloudy during the week. Prospects of *rubbi* crop continue good. Poppy crop in Hajipur backward, and a good outturn not expected.
31	Sarun „ 11, '90	Nil	Weather—seasonable. Prospects of *rubbi* and poppy crops continue good. Sugarcane is being pressed. Outturn estimated at 16 annas.
32	Chumparun „ 11, '90	Nil	Weather—cold and clear; occasionally cloudy. *Rubbi* and poppy in good condition. A good shower of rain within the next fortnight will ensure an excellent crop. New rice selling at 19 seers a rupee. Sugarcane pressing continues.
Bhagulpore Divn. 33	Monghyr „ 11, '90	Nil	Weather—seasonable. *Aghani* paddy all harvested; outturn on the whole 14 annas. Standing *rubbi* crops doing well.
34	Bhagulpur „ 11, '90	Nil	Weather—rather too warm; again mornings foggy. Rice harvest is almost over. Rain wanted for wheat and other *rubbi* crops.
35	Purneah „ 11, '90	Nil	Weather—not so cold as is usual this time of the year. *Aghani* rice is nearly harvested. Outturn about average. Mustard and *kurthi* being reaped. *Rubbi* crops doing well. Prospects of tobacco good.
36	Maldah „ 11, '90	Nil	Weather—rather hot for the season. Harvesting of winter rice crops still going on in some places. *Rubbi* crops are doing well everywhere except in thana English Bazar, where some damage has been done by insects. Common rice is selling at an average of 17 seers a rupee.
37	Sonthal Perghs. „ 11, '90	Nil	Weather—cold and clear. Harvesting of *dhan* nearly over; the outturn is almost an average one. *Rubbi* crops doing well and promise a good outturn.

	No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	ORISSA.			
Orissa Divn.	38	Cuttack ...	...	Report not received.
Orissa Divn.	39	Pooree Jan. 11, '90	Nil	Weather—seasonable. Harvesting of the winter (late *sarad*) crop still continues. *Laghu sarad* was harvested with a good outturn. Prices of rice stationary.
Orissa Divn.	40	Balasore „ 11, '90	Nil	Weather—seasonable. Scarcely any paddy remains uncut. *Rubbi* crops fair.
	CHOTA NAGPORE.			
		South-West Frontier Agency.		
Chota Nagpore Divn.	41	Hazaribagh Jan. 11, '90	Nil	Weather seasonable. Crops in excellent condition generally. Poppy doing well. Sugarcane being squeezed.
Chota Nagpore Divn.	42	Lohardugga „ 11, '90	Nil	Weather—seasonable; rather warmer. *Rubbi* crop is doing well, but some rain is wanted. Harvesting of paddy finished. Outturn appears to be fair.
Chota Nagpore Divn.	43	Singbhoom „ 11, '90	Nil	Weather—seasonable. Crop prospects good. Sugarcane is expected to yield a full outturn everywhere. *Sarso* and *sorgooja* outturn full in pergunnah Dhalbhum and on an average 12 annas elsewhere. Prices stationary.
Chota Nagpore Divn.	44	Manbhoom „ 11, '90	Nil	Weather—seasonable. Winter paddy still being threshed; probable outturn 14 annas. The crops on the grounds are mustard, sugarcane, and *arhar*. The prospects of these crops are promising.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 14th January, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

NAMES OF MARTS.	STOCK IN HAND AS COMPILED ON—												
	1st week of Jan. 1889.	1st week of Feb. 1889.	1st week of Mar. 1889	1st week of April 1889.	1st week of May 1889.	1st week of June 1889.	1st week of July 1889.	1st week of August 1889.	1st week of Sept. 1889	2nd week of Oct. 1889.	1st week of Nov. 1889.	1st week of Dec. 1889.	1st week of Jan. 1890.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Baliaghatta	3,98,000	7,77,000	12,77,000	12,67,000	12,42,000	7,67,500	8,73,000	7,32,700	6,62,000	5,66,000	4,54,000	2,96,500	3,00,000
Ooltadanga	76,300	71,400	80,200	87,100	82,200	88,000	86,500	78,700	74,400	71,900	67,400	55,400	63,400
Chitpore, Golabaree, Coomertooly, Hatkhola, and Culpy Ghat.	6,49,200	6,96,600	7,08,200	7,64,000	7,54,200	6,96,500	6,85,400	6,97,700	5,76,300	6,74,100	6,33,300	5,86,000	6,00,400
Pataouriaghatta, Posta, and Jorabagan.	4,000	3,500	2,000	3,200	3,000	2,500	2,000	3,000	4,000	5,000	8,000	3,000	4,000
Tallygunge, Chitlah, Kidderpore, and Moonshigunge.	1,06,600	1,26,600	1,37,400	1,48,100	1,59,000	1,19,700	1,03,700	1,10,700	72,500	64,550	65 200	68,100	82,750
21 Minor Bazars (estimated) ..	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000
Other retail shops, 3,129 in number (estimated).	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000
Boidyabatty, Nowabgunge, Bhuddressur, and Chandernagore.	22,530	14,924	20,493	19,792	20,066	19,923	19,906	18,117	14,265	14,382	13,410	14,080	28,425
Total ...	17,46,630	21,90,024	27,15,293	27,79,192	27,50,466	21,84,123	22,60,506	21,30,917	18,93,465	18,25,932	17,31,310	15,13,080	15,68,975
On Railway premises on both sides of the river.	11,491 (on 4th Jan. 1889.)	15,074 (on 4th Feb. 1889.)	6,852 (on 5th Mar. 1889.)	23,414 (on 4th April 1889.)	12,496 (on 4th May 1889.)	6,578 (on 3rd June 1889.)	7,730 (on 3rd July 1889.)	4,179 (on 3rd Aug. 1889.)	9,606 (on 3rd Sept. 1889.)	8,208 (on 3rd Oct. 1889.)	14,011 (on 3rd Nov. 1889.)	6,677 (on 3rd Dec. 1889.)	28,007 (on 3rd Jan. 1890.)
On boats unloaded ... By Port Commissioners' returns.	49,005 (2nd to 4th Jan. 1889.)	44,923 (1st to 3rd Feb. 1889.)	31,937 (1st to 3rd Mar. 1889.)	23,449 (1st to 3rd April 1889.)	17,463 (1st to 3rd May 1889.)	16,066 (1st to 3rd June 1889.)	25,010 (1st to 3rd July 1889.)	1,32,232 (1st to 3rd Aug. 1889.)	25,331 (1st to 3rd Sept. 1889.)	17,852 (5th to 7th Oct. 1889.)	21,324 (1st to 3rd Nov. 1889.)	20,650 (1st to 3rd Dec. 1889.)	61,641 (2nd to 4th Jan. 1890.)
By Canal returns	1,24,374 (2nd to 4th Jan. 1889.)	1,43,475 (1st to 3rd Feb. 1889.)	80,850 (1st to 3rd Mar. 1889.)	36,713 (1st to 3rd April 1889.)	8,972 (1st to 3rd May 1889.)	15,297 (1st to 3rd June 1889.)	27,106 (1st to 3rd July 1889.)	29,345 (1st to 3rd Aug. 1889.)	19,181 (1st to 3rd Sept. 1889.)	45,922 (5th to 7th Oct. 1889.)	14,718 (1st to 3rd Nov. 1889.)	8,835 (1st to 3rd Dec. 1889.)	1,31,815 (2nd to 4th Jan. 1890.)
Grand Total of Stocks .	19,31,500	23,83,496	28,34,932	28,62,768	27,89,897	22,22,064	23,20,352	22,96,673	19,48,282	18,97,914	17,81,363	15,49,242	17,90,438
Probable stock available for exportation by sea.	8½ lakhs	13½ lakhs	17½ lakhs	18 lakhs	17½ lakhs	11½ lakhs	12½ lakhs	12½ lakhs	9 lakhs	8½ lakhs	7½ lakhs	5 lakhs	7½ lakhs

STATISTICAL DEPARTMENT,
The 6th January, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from 5th to 11th January 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature.				Hygrometry.				Wind.		Rain.	Weather.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1890.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Jan.	5th	131·3	8·8	29·938	67·6	77·7	19·5	58·2	62·7	0·507	59·3	77	WSW and SW ...	66*	Nil	Partially cloudy, ≏, ═.
,,	6th	129·1	9·6	30·003	67·5	77·9	19·9	58·0	62·7	·509	59·4	77	SW and WNW ...	38	,,	Chiefly clear, ≏, ═.
,,	7th	133·8	8·4	·022	67·9	77·7	19·8	57·9	62·6	·511	59·6	78	WNW and SW by W	61	,,	Chiefly clear, ≏, ═.
,,	8th	135·5	9·1	29·981	67·4	78·5	20·2	58·3	62·8	·514	59·8	78	SW by W and WSW	70	,,	Clear, ≏, ═.
,,	9th	127·8	8·9	30·006	65·3	76·0	20·7	55·3	59·8	·443	55·6	73	NNW, N and WNW	44	,,	Clear, ≏, .
,,	10th	126·5	7·3	29·961	66·3	76·5	20·6	55·9	61·9	·503	59·1	78	WNW and W by N	35	,,	Partially cloudy. ≏, ═.
,,	11th	134·0	9·0	·949	66·9	77·0	18·7	58·3	62·2	·499	58·9	75	W by N and WNW	52	,,	Chiefly clear, ≏.

	Inches.
The mean pressure of the seven days	29·980
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...	30·020
	Hours.
The total number of hours of bright sunshine	60·5
The maximum possible number of hours of sunshine	75·5
	°
The mean temperature of the seven days	66·9
The average temperature of the corresponding period for 24 years, S.-G.'s Office	67·2
The extreme variation of temperature	23·2
The maximum temperature	78·5
	Miles.
The highest velocity of the wind in one hour from 8 A.M. of the 5th to midnight of the 11th January 1890	9
	lbs.
The highest pressure of wind on one square foot	Not measurable.
	%
The mean relative humidity	77
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office	71
	Inches.
The total fall of rain from 5th to 11th January 1890	Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	0·11
The total fall from 1st to 11th January 1890	Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	0·11

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the New Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

≏ dew; ═ fog.

* Movement of wind from 8 A.M. to midnight of 5th January 1890.

C. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;

Meteorological Report of the Province

STATION OBSERVATIONS.

Meteorological Division.	District.	Representative stations.	Air Pressure. Highest, 8 A.M., barometer reading of month.	Air Pressure. Lowest, 8 A.M., barometer reading of month.	Air Pressure. Mean, 8 A.M., for month.	Air Pressure. Mean reduced to sea-level.	Air Pressure. Variation from normal mean.	Temperature. Highest of month.	Temperature. Lowest of month.	Temperature. Mean daily maximum temperature.	Temperature. Mean daily minimum temperature.	Temperature. Mean daily temperature.	Temperature. Variation from normal mean.	Humidity. Mean, 8 A.M., humidity.	Humidity. Variation from normal mean.	Cloud. Mean cloud amount, 8 A.M.	Cloud. Variation from normal mean, 8 A.M.	
Orissa.	Pooree	Pooree ...	30·121	29·946	30·030	30·043	—	85·2	53·0	81·5*	59·7‡	67·7*	—	83	—	1·3	—	0
		Gopalpore ...	30·108	29·943	30·023	30·073	—·023	83·7	57·5	79·6	62·9	71·3	+1·7	77	—	1·4	—	0
		False Point ...	30·107	29·932	30·024	30·046	—·059	80·9	52·0	77·5	57·5	67·5	+0·4	86	+5	2·5	0	1
	Cuttack	Cuttack ...	30·070	29·901	29·984	30·070	—·015	84·8	53·9	81·7	59·2	70·5	+0·5	74	+2	2·9	+1·1	N
	Balasore	Balasore ...	30·096	29·899	30·016	30·078	—·015	84·9	50·5	78·6	55·1	66·8	+1·1	81	—	0·5	—	0
South-West Bengal.	South-West Midnapore and South 24-Pergunnahs.	Saugor Island ...	30·109	29·937	30·031	30·058	—·024	81·7	54·8	75·8	60·4	68·1	0·8	87	+3	2·6	0	0
	Midnapore	Midnapore ...	29·986	29·814	29·907	30·007	—·032	81·3	49·2	78·8	55·3	67·1	+0·5	74	—	1·4	—	N
	24-Pergunnahs, Howrah, and Hooghly.	Calcutta ...	30·120	29·938	30·038	30·061	—·026	80·0	51·3	76·4	57·0	66·7	+0·6	81	+2	1·4	—0·6	0
	Burdwan	Burdwan ...	30·030	29·851	29·953	30·060	—·039	82·1	52·3	78·0	57·0	67·5	+0·9	74	+3	1·6	—0·4	N
	Bankoora	Bankoora ...	29·811	29·606	29·730	30·050	—·038	80·6	50·0	77·4	55·2	66·3	+0·2	76	—	1·4	—	N
	West Burdwan and Beerbhoom.	Ranigunge ...	29·806	29·625	29·730†	30·084†	—·024	80·9	50·2	78·5	55·0	66·7	+0·8	78	—	1·2	—	N
	Moorshedabad	Berhampore ...	30·070	29·864	29·985	30·056	—·036	80·1	52·2	77·0	57·1	67·1	+1·3	88	+9	1·8	+0·2	N
	Nuddea	Krishnagore ...	30·092	29·912	30·014	30·084	—·074	81·3	48·4	77·4	55·3	66·3	+0·4	85	—	1·6	—	N
	Jessore and Khoolna ...	Jessore ...	30·089	29·909	30·012	30·047	—·029	81·2	54·5	77·4	59·1	68·2	+1·7	93	+17	1·7	—0·3	N
East Bengal.	Chittagong	Chittagong ...	30·010	29·827	29·920‡	30·023‡	—·040	84·1	56·1	79·5	60·3	69·9	+1·9	88	+1	5·0	+2·7	0
	Chittagong Hill Tracts	Demagri ...	Observations not received.															
	Backergunge	Barrisal ...	30·094	29·907	30·020	30·033	—·018	81·8	54·1	77·1	58·4	67·8	+1·2	88	—	0·7	—	0
	Noakholly	Noakholly ...	30·078	29·882	29·994	30·040	—	83·0	54·0	78·7	57·6	68·1	—	88	—	0·1	—	0
	Furreedpore	Furreedpore ...	30·092	29·906	30·008	30·050	—·016	81·5	54·8	71·3‡	59·3	66·7	+1·4	88	—	0·7	—	N
	Dacca	Dacca ...	30·083	29·910	30·007	30·051	—·034	84·6	55·3	78·9	58·9	68·9	+1·1	84	+5	2·1	+0·8	N
	Tipperah	Commillah ...	30·097	29·899	30·004	30·041	—·021	83·4	55·0	79·1	57·6	68·4	+2·0	86	—	0·7	—	N
	Mymensingh	Mymensingh ...	30·067	29·877	29·980	30·040	—·023	81·8	53·4	78·1†	57·6	67·9†	+2·8	93	—	2·1	—	N
North Bengal.	Bogra	Bogra ...	30·042	29·852	29·958	30·025	—·017	81·3	52·4	78·1	56·1	67·1	+0·6	85	—	0·3	—	N
	Pubna	Serajgunge ...	30·070	29·880	29·986	30·035	—·035	81·5	51·9	78·0	56·9	67·5	+2·4	89	—	1·5	—	0
	Rajshahye	Rampore Beauleah.	30·060	29·869	29·963	30·036	—·030	79·9	51·7	76·8	56·2	66·5	+2·7	80	—	0·6	—	N
	Maldah	Maldah ...	30·067	29·899	29·985	30·071	—	80·5	48·8	77·7	53·6‡	65·5‡	—	82	—	0·3	—	N
	Dinagepore	Dinagepore ...	30·026	29·823	29·928	30·057	—·006	81·1	49·3	78·5	54·0	66·2	+1·1	86	—	0·5	—	N
	Rungpore	Rungpore ...	30·049	29·849	29·954	30·067	—·030	81·4	48·7	78·1	54·1	66·1	+2·3	92	—	0	—	N
	Julpigoree and Cooch Behar.	Julpigoree ...	29·859	29·650	29·763†	30·065†	—·028	?	49·4	?	55·8	?	?	92	—	0·2	—	N
	Darjeeling Hill Tracts...	Darjeeling ...	23·063	22·901	23·004	—	—·023	55·2	35·0	53·8	38·4	46·1	+3·2	76	+2	2·6	—0·5	N
North Behar.	Purneah and North Bhagulpore.	Purneah ...	30·032	29·818	29·930	30·065	—·027	78·2	47·2	75·5	51·2	63·4	+0·4	80	+5	0·4	—0·6	N
	Mozufferpore	Mozufferpore ..	Observations suspended.															
	Durbhunga	Durbhunga ...	29·991	29·780	29·898	30·075	—·013	79·9	51·6	76·8	55·3	66·1	+2·0	83	—2	0·2	—0·7	N
	Chumparun	Motihari ...	29·952	29·702	29·856	30·078	—·012	78·6	44·9	75·5	49·7	62·6	+1·3	86	—	0·1	—.	N
	Sarun	Chupra ...	29·961	29·755	29·879	30·085	—·031	79·3	50·0	75·2	52·8	64·0	+2·4	72	—	0·1	—	N
South Behar.	Shahabad	Dehree ...	29·792	29·610	29·729	30·109	—·015	81·8	49·0	76·0‡	52·5	64·7‡	+2·2	74	—	0·4	—	N
		Buxar ...	29·927	29·748	29·851	30·061	—·026	79·4	46·9	75·3	50·4	62·8	+1·0	72	—	0·6	—	N
		Arrah ...	29·970	29·752	29·871	30·081	—·010	79·9	44·6	76·0	49·7‡	62·9‡	+1·6	77	—	0·6	—	N
	Gya	Gya ...	29·771	29·585	29·691	30·096	—·021	80·9	48·5	76·9	52·2	64·6	+1·3	65	+1	1·2	—0·5	N
	Patna	Bankipore ...	29·930	29·766	29·891	30·087	—·028	79·8	47·8	75·7	51·9	63·8	+1·4	73	—3	0·7	—1·0	N
	South Bhagulpore and Monghyr.	Bhagulpore ...	29·966	29·775	29·882	30·055	—·043	80·3	48·0	77·0	51·2	64·1	+1·7	83	—	0·4	—	N
	Sonthal Pergunnahs ...	Naya Doomka.	29·627	29·453	29·547	30·070	—	78·9	47·1	76·0	52·2	64·1	—	79	—	0·9	—	N
Chutia Nagpur.	Hazaribagh	Hazaribagh ...	28·074	27·904	27·997	30·100	—·027	76·1	46·8	73·1	50·9	62·0	+1·2	64	—2	1·6	—0·3	N
	Lohardugga ... ... Manbhoom	Ranchee ...	27·950	27·775	27·862	30·085	—·026	77·0	43·7	73·1	49·1	61·1	+0·9	67	—	2·1	—	N
	Singbhoom	Chyebassa ..	29·369	29·198	29·293	30·099	—	81·0	46·9	78·0	53·2	65·1	—	75	—	1·2	—	N
Assam	Assam	Sibsagar ..	29·864	29·624	29·769	30·123	—·037	78·5	45·6	73·5	54·2	63·9	+2·7	99	+2	6·9	+2·6	0
		Dhubri ..	30·057	29·829	29·935	30·060	—·018	79·5	52·2	76·2	58·1	67·1	+1·7	89	+1	1·0	—0·3	N
		Silchar ..	30·020	29·820	29·933	30·014	—·020	84·6	52·9	81·4	57·7	69·6	+2·3	90	+5	4·5	+0·9	N

* Means of 23 days.

...al for the month of December 1889.

DISTRICT OBSERVATIONS.												
RAINFALL.												
Of month.					Since 15th May 1889.					Representative stations.	DISTRICT.	METEOROLOGICAL DIVISION.
...trict.	Normal mean.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district.	Normal mean.	Variation.	Mean number of rainy days.	Normal mean number of rainy days.			
0·35	0·86	−0·51	1·5	1·5	74·88	55·32	+19·56	96·0	82·3	Pooree ... Gopalpore ... False Point ...	Pooree	ORISSA
0·05	0·60	−0·55	0·2	1·3	66·24	51·62	+14·62	92·9	78·7	Cuttack ...	Cuttack	
0·02	0·31	−0·29		7	49·89	52·87	−2·98	83·1	76·2	Balasore ...	Balasore	
0·04	0·34	−0·30		8	58·43	61·94	−3·51	99·5	81·6	Sangor Island ...	South-West Midnapore and South 24-Pergunnahs.	SOUTH-WEST BENGAL.
Nil	0·31	−0·31		3	46·29	51·07	−4·78	85·4	71·1	Midnapore ...	Midnapore	
Nil	0·30	−0·30	0·0	0·8	53·38	51·16	+2·22	91·0	89·0	Calcutta ...	24-Pergunnahs, Howrah, and Hooghly.	
Nil	0·19	−0·19	0·0	0·5	43·83	46·32	−2·49	83·5	74·8	Burdwan ...	Burdwan	
Nil	0·31	−0·31	0·0	0·6	55·88	51·87	+4·01	82·4	81·2	Bankoora ...	Bankoora	
Nil	0·15	−0·15	0·0	0·8	52·44	51·17	+1·27	84·5	82·4	Ranigunge ...	West Burdwan and Beerbhoom.	
Nil	0·17	−0·17	0·0	0·6	51·15	50·10	+1·05	81·9	78·0	Berhampore ...	Moorshedabad	
Nil	0·18	−0·18	0·0	0·4	51·49	48·79	+2·70	87·2	77·1	Krishnagore ...	Nuddea	
0·06	0·26	−0·20	0·8	0·6	53·39	52·72	+0·67	96·5	83·6	Jessore ...	Jessore and Khoolna ...	
0·42	0·54	−0·12	1·5	0·9	100·02	113·08	−13·06	111·0	100·6	Chittagong ...	Chittagong	EAST BENGAL.
0·68	0·58	+0·10	1·5	1·4	65·13	80·93	−15·80	98·0	113·0	Demagri ...	Chittagong Hill Tracts	
0·24	0·40	−0·16	1·0	0·9	77·82	76·30	+1·52	101·9	104·5	Barrisal ...	Backergunge	
0·26	0·75	−0·49	1·5	1·0	90·29	106·41	−16·12	110·5	106·5	Noakholly ...	Noakholly	
0·02	0·14	−0·12	0·3	0·5	60·32	55·27	+5·05	85·2	85·5	Furreedpore ...	Furreedpore	
Nil	0·26	−0·26	0·0	0·8	71·59	59·18	+12·41	105·0	89·8	Dacca ...	Dacca	
0·02	0·38	−0·36	0·3	0·8	65·15	68·66	−13·21	93·1	93·2	Commillah ...	Tipperah	
Nil	0·22	−0·22	0·0	0·6	87·63	66·93	+20·70	105·2	87·8	Mymensingh ...	Mymensingh	
0·01	0·17	−0·16	0·1	0·6	64·81	56·86	+7·95	101·7	76·7	Bogra ...	Bogra	NORTH BENGAL.
0·08	0·14	−0·06	1·0	0·7	55·07	52·95	+2·12	102·0	79·9	Serajgunge ...	Pubna	
Nil	0·11	−0·11	0·0	0·5	54·30	53·38	+0·92	89·6	76·1	Rampore Boaulea.	Rajshahye	
Nil	0·13	−0·13	0·0	0·6	39·76	53·75	−13·99	78·5	82·2	Maldah ...	Maldah	
Nil	0·19	−0·19	0·0	0·6	57·37	57·02	+0·35	82·9	76·9	Dinagepore ...	Dinagepore	
Nil	0·16	−0·16	0·0	0·5	85·16	73·35	+11·81	85·4	75·6	Rungpore ...	Rungpore	
Nil	0·18	−0·18	0·0	0·7	117·13	110·79	+6·34	105·0	95·8	Julpigoree ...	Julpigoree and Cooch Behar.	
Nil	0·33	−0·33	0·0	1·2	132·75	120·49	+12·26	122·8	111·0	Darjeeling ...	Darjeeling Hill Tracts.	
Nil	0·12	−0·12	0·0	0·5	74·71	58·18	+16·53	75·0	68·9	Purneah ...	Purneah and North Bhagulpore.	SOUTH BEHAR.
Nil	0·12	−0·12	0·0	0·5	48·66	42·88	+5·78	65·8	56·2	Mozufferpore ...	Mozufferpore	NORTH BEHAR.
Nil	0·11	−0·11	0·0	0·5	51·84	44·08	+7·76	65·7	56·5	Durbhunga ...	Durbhunga	
Nil	0·21	−0·21	0·0	0·7	65·55	49·43	+16·12	64·5	52·8	Motihari ...	Chumparun	
Nil	0·17	−0·17	0·0	0·6	40·13	42·31	−2·18	58·4	56·1	Chupra ...	Sarun	
Nil	0·38	−0·38	0·0	0·7	40·07	39·39	+0·68	68·4	59·1	Dehree ... Buxar ... Arrah ...	Shahabad	
Nil	0·26	−0·26	0·0	0·6	37·07	40·97	−3·90	63·8	55·8	Gya ...	Gya	
Nil	0·16	−0·16	0·0	0·5	43·49	40·75	+2·74	62·9	60·5	Bankipore ...	Patna	
Nil	0·10	−0·10	0·0	0·4	42·43	42·61	−0·18	69·4	64·6	Bhagulpore ...	South Bhagulpore and Monghyr.	
Nil	0·14	−0·14	0·0	0·5	54·15	50·42	+3·73	85·1	74·8	Naya Doomka...	Southal Pergunnahs ...	
Nil	0·31	−0·31	0·0	0·8	44·03	49·86	−5·83	83·8	79·6	Hazaribagh ...	Hazaribagh	CHUTIA NAGPUR.
Nil	0·45	−0·45	0·0	0·9	44·31	48·29	−3·98	82·1	85·8	Ranchee ...	Lohardugga	
Nil	0·22	−0·22	0·0	0·7	38·33	46·44	−8·11	96·5	82·4		Manbhoom	
Nil	0·37	−0·37	0·0	1·3	48·76	50·85	−2·09	100·0	90·5	Chyebassa ...	Singhbhoom	
.....	.....	...	.....	...	.....	...	.....	.....	.....	Silsagar ... Cachar ... Sylhet ...	Assam ...	ASSAM.

Table of Rainfall recorded at Stati

Meteorological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ORISSA ...	Pooree ...	Pooree ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
		Khurdah ...	...	...	...	...	...	...	.	..	...	..	...	...	...	...	...	...	...	...	...
		Bangur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		False Point ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gop ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Pipli ...																			
	Cuttack ...	Jagatsinggpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Banki ...	...	...	...	...	...	...	...	...	...	..	...	...	...	..	...	...	...	...	...
		Cuttack ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	.
		Kendrapara ...	...	...	..	.	...	...	...	...	...	...	...	...	...	...		...	...	...	...
		Jajpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
		Dharmsalla ...	...	...	...	...	...	...	..	..	...	...	...	...		..		...	...	...	...
		Salipore ...	...	...	...	...	...	...	...	...	...	...	...	..		...	...	...	...	...	...
	Balasore ...	Chandbali ...	...	...	...	...	...	...	...	...	...	...	...	.		...	...	...	...	...	...
		Bhuddruck ...	...	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...
		Soroh ...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...
		Balasore ...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
		Jellasore ...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
		Baripodah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
SOUTH-WEST BENGAL.	Midnapore ...	Contai ..	..	...	...	...	...	.	..	...	...	...	...	...	..	...	...	...	...	...	...
		Saugor Island	...	...	...	...	...	...	...	.	...	...	...	..	...	...	...	...	...	...	...
		Tumlook ...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
		Midnapore ...	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...
		Ghatal ...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Kukrahaty ...	...	...	.	...	...		...	...	.	...	...	...	...	...	...	...	.	...	...
		Heria ...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	...	...
		Bhagwanpore ...	...	..	...	...	...	...		...	..	...	..	...	...	...	...	...	...	...	...
		Garbeta ...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
	24-Pergunnahs	Diamond Harbour.	...	...	...	..	...	...	...	...	...	...	...	...	...	...		...	...	...	...
		Canning Town	...	...	...	...	...	...	..	...	...	...	..	..	...	...	..	..	...	...	...
		Alipore Jail ...	...	...	...	...	...	.	..	...	...	...	..	...	...	...	...	...	...	...	...
		Barrackpore...	...	...	...	.	...	...	...	...	...	...	.	...	..	..	...	.	...	...	...
		Dum-Dum ...	...	...	...	.	..	...	..	...	..	.	..	..	...	...	..	...	...	...	.
		Barasat ...	..	...	...	...	...	...	..	..	...	...	...	..	..	..	...	...	...	...	...
		Buseerhat ..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	..	...	...	...	..
	Howrah ...	Howrah ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Mohesraka ... (*Ooloobaria*).	...	..	...	...	...	.	..	...	...	...	...	...	.	..	...	...	...	...	..
	Hooghly ...	Serampore ...	...	...	...	...	...	...	...	...	...	..	..	..	..	...	..	...	...	..	..
		Hooghly ...	...	...	...	.		...	...	...	..	.	...	...	...	...	...	...	...	...	...
		Jehanabad ...	..	...	...	...	...	...	...	.	...	.	...	...	..	...	...	...	...	...	..
	Burdwan ...	Culna ...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Burdwan ...	...	...	...	...	...	...	...	...	.	.	...	...	...	...	...	...	...	...	..
		Cutwa ...	...	...	...	.	...	...	...	...	...	...	...	..	..	...	...	...	...	.	...
		Ranegunge...	..	.	...	...	.	...	...	...	...	..	..	.	..	..	...	...	...	...	...
		Mankur ...	...	.	..	...	...	...	..	..	...	..	..	..	...	...	...	...	...	...	...
	Bankoora ...	Bankoora ...	...	.	..	..	...	...	...	...	..	..	..	..	..	...	...	...	...	...	.
		Bishenpore ...	..	..	.	...	...	...	...	...	...	...	..	..	..	..	...	...	...	...	..
		Malara ...	.	...	..	...	...	...	...	..	..	..	...	...	...	..	..	..	..	...	...
		Khatra ...	...	..	...	..	...	...	...	...	...	..	..	.	...	...	...	...	...	...	...
		Indas ...	...	...	...	..	...	...	...	...	..	..	...	.	...	...	...	...	...	...	...
		Kotalpore ...	...	...	...	...	...	...	...	...	..	...	.	...	...	...	...	..	...	...	...
		Anda ...	...	..	..	...	..	...	...	...	..	..	...	.	...	.	...	...	...	...	..
		Gangajalghati ..	..	...	...	...	...	...	...	...	...	.	...	.	..	...	...	...	...	...	...
		Raipore ...	..	..	...		...	..	...	...	...	...	...	..	..	...	...	...	...	...	..
		Sonamukhi ...	..	...	...	.	...	...	...	...	..	..	...	..	.	...	...	.	...	...	..
	Beerbhoom ...	Bh. Soory ...	...	...	...	...	...	...	...	...	...	...	...	...	.	.	...	..	..	...	...
		Hetampore ..	..	...	...	...	.	...	...	...	...	..	...	...	..	..	...	...	...	...	...
		Rampore Haut	...	..	...	...	..	...	.	...	...	...	...	...	.	.	...	...	...	..	...
		Bolpur ...	...	.	.	...	...	...	.	...	..	...	...	...	.	.	...	...	...	...	..
		Murarai ...	..	..	.	...	...	...	...	..	..	...	.	...	...	...	...	...	...	...	...
	Nuddea ...	Ranaghat ..	.	...	...	...	...	...	...	...	...	.	..	...	..	...	...	...	...	...	.
		Kishnaghur ...	...	..	.	..	...	..	...	...	...	..	..		...	...	...	...	...	...	...
		Chooadanga ..	...	...	...	...	...	..	..	...	...	...	...	...	..	...	...	...	..	..	.
		Meherpore ..	.	..	..	...	..	..	...	...	...	...	...	..	...	..	...	...	...	...	...
		Kooshtea ..		...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Khoolna ..	Satkhira ...	..	...	.	..	..	...	...	...	...	..	..	..	...	...	...	...	...	...	...
		Bagirhat ..	...	..		...	...	...	...	...	...	..	..	.	...	...	.	...	...	...	...
		Khoolna ...	...	..	.		...	..	...	.	...	..	..	..	...	...	..	...	...	...	...
		Nakipur ...	..	...	.	.	...	..	..	...	...	...	..	...		...	...	...	...	...	...
	Jessore ...	Narail ...	...	..	...	.	.	...		..	...	..	.	...	...	...	...	...	...	...	...
		Jessore ...	..	.	.	...	..	...	...	...	...	...	...	...	...	.	...	...	...	...	...
		Jheudah ..	...	.	...	...	...	...	..	...	...	...	.	..	...	.	...	...	...	...	...
		Magoorah ..	..	...	...	..	.	.	...	.	...	...	...	...	...	.	...	...	...	...	...
		Bongong ..	...	..	...	...	...	...	..	.	...	...	...	...	...	...	..	...	...	...	...
	Moorshedabad	Kandi ...	...	..	...	..	...	.	...	.	...	..	..	...	..	.	...	...	..	...	.
		Berhampore...	.	..	.	...	..	..	...	...	...	...	...	...	...	...	..	.	..	.	...
		Lalbagh ..	...	..	..	...	.	...	.	...	...	..	...	..	..	...	...	...	...	...	...
		Azimgunge ...	...																		
		Jungipore ...	..	...	...		..	...	...	..	...	..	..	..	..	...	...	...	.	...	...
		Sooti ..	..	...	..		.	...	...	...	..	...	.	...	.	..	.	...	..	...	...
		Jugunge ..	...	...	.	..	.	...	...	...		...	.	...	...	...	...	...	...	...	...
		Akhrigunj ..	...	.	..	..	...	...	...	..	..	...	.	..	...	...	...	...	...	...	...
		Patkabari .	.	...	...		.	...	...	...	...	...	.	..	...	...	...	...	..	...	...
BENGAL	Chittagong ...	Cox's Bazar .	..	...	...	..		...	..	..	...	..		...	...	...	...	...	..	...	.
		Chittagong .	...	...	...	...	.	..	.	.	...	.	..	...	.		...	...	.	...	...
		Kutubdia ..	...		.		.	...	...	...	.	...	.		...	.	...	...	..	...	...
		Sabanya ...	...	..	.	...	...	.	...	...	.	...	..	.	...		...	...	...	.	...
	Chittagong Hill Tracts.	Rangamati ...	...	...			.	...	..	..	...	...	...	...	...		...	...	...	...	...
		Ruma ...	..	...	...		.	...	...		...	...	...	...		..		...	...	...	...

Bengal in December 1889.

1	22	23	24	25	26	27	28	29	30	31	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January up to 31st Dec. 1889.	Average rainfall from 1st January up to 31st December.	Station.	District.	Meteorological division.
	...	...	0·08	0·04	0·09	...	...	...	...	...	3	1·4	0·21	0·73	0·00	80·80	54·68	Pooree ...	Pooree ..	ORISSA.
	...	...	...	...	...	...	...	...	...	...	Nil	1·5	Nil	0·50	Nil	70·80	59·31	Khurdah.		
	...	...	...	0·14	...	...	...	...	...	...	1	1·7	0·14	1·20	0·14	66·02	52·85	Banpur.		
	...	...	...	0·05	0·39	...	...	...	...	...	2	1·2	1·04	0 64	0·05	80·32	60·44	False Point.		
	...	...	...	...	...	...	...	...	...	..	Nil	?	Nil	?	Nil		?	*Gop.*		
												?		?			?	*Pipli.*		
	...	...	...	...	...	...	...	...	...	...	Nil	1·0	Nil	0·39	Nil	56·40	51·05	Jagatsingpore.	Cuttack,	
	...	...	...	...	...	...	...	...	...	...	Nil	1·2	Nil	0·81	Nil	54·03	52·31	Banki.		
	...	...	...	...					..	...	Nil	1·4	Nil	0·48	Nil	76·37	58·08	Cuttack.		
	...	...	...	...	0·				...	...	1	1·0	0·26	0·48	0·26	74·18	57·10	Kendrapara.		
	...	...	...	...	..				...	...	Nil	1·0	Nil	0·71	Nil	59·83	6·00	Jajpore.		
	...	...	...	...	.					...	Nil	?	Nil	?	Nil	61·25	?	*Dharmsala.*		
	...	...	...	...	..				...	...	Nil	?	Nil	?	Nil	74·07	?	*Salipore.*		
	...	...	...	...	0·				..	..	1	0·9	0·12	0·58	0·12	57·54	58·80	Chandbali ..	Balasore,	
	...	...	...	...	..				...	..	Nil	0·7	Nil	0·37	Nil	60·43	58·53	Bhuddruck.		
	...	...	...	...	..				...	..	Nil	0·5	Nil	0·13	Nil	49·64	56·88	Soroh.		
	...	...	...	...	...	...	...	..	.	..	Nil	0·9	Nil	0·24	Nil	50·07	66·74	Balasore.		
	...	...	...	...	...	...	...	...	.	..	Nil	0·3	Nil	0·11	Nil	40 73	57·29	Jellasore.		
	...	...	...	...	...	...	...	...	.	..	Nil	0·8	Nil	0·22	Nil	60·51	60·17	Baripodah.		
	...	...	...	...	0·05	...	...	..	..	..	1	0·7	0·05	0·31	0·05	57·07	68·93	Contai ...	Midnapore ...	SOUTH-WEST BENGAL.
	...	...	...	...	0·03	...	...	..	.	..	1	1·1	0·03	0·29	0·03	58·25	74·21	Sangor Island		
	...	...	...	...	...	...	...	..	..	...	Nil	0·5	Nil	0·26	Nil	52·50	59·85	Tumlook.		
	...	...	...	...	...	...	...	..		...	Nil	0·8	Nil	0·28	Nil	55·08	59·58	Midnapore.		
	...	...	..	...	...	...	...	...	...	..	Nil	0·6	Nil	0·27	Nil	46·39	62·15	Ghatal.		
	...	...	..	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	62·97	?	*Kukrahaty.*		
	...	...	...	...	...	...	...	..	..	..	Nil	?	Nil	?	Nil	67·05	?	*Uerta.*		
	...	...	...	...	...	...	...	.	.	..	Nil	?	Nil	?	Nil	57·99	?	*Bhagwanpore.*		
	...	...	...	...	...	...	...	.	..	..	Nil	?	Nil	0·21	Nil	47·77	57·46	*Garbeta.*		
	...	...	...	...	0·04	...	...		.	...	1	0·7	0·04	0 27	0·04	60·59	66·66	Diamond Harbour.	24-Pergunnahs	
	...	...	...	...	0·17	...	..	...	..	...	1	?	0·17	?	0·17	60 88	?	*Canning Town.*		
	...	...	..	...	...	...	...	.		...	Nil	0 9	Nil	0·33	Nil	58 28	63·30	Alipore Jail.		
	...	...	...	...	...	...	...	.		...	Nil	0·6	Nil	0·30	Nil	54·55	56·03	Barrackpore.		
	...	...	...	...	...	...	...	.	..	..	Nil	0·8	Nil	0·30	Nil	59·12	59·99	Dum-Dum.		
	...	...	...	...	...	...	...	...	..	..	Nil	0·8	Nil	0·29	Nil	61·40	58 80	Baraset.		
	...	...	...	...	...	..	...	..	..	...	Nil	0·6	Nil	0·22	Nil	63·56	62·44	Buseerhat.		
	...	...	...	...	...	..	...	..	...	...	Nil	1·1	Nil	0·27	Nil	64·11	61·36	Howrah ...	Howrah.	
	...	...	...	..	...	...	...	.		...	Nil	1·0	Nil	0·30	Nil	60·27	60·06	Mohesreka (*Oolooberiah*)		
	...	...	...	...	...	..		.	...	...	Nil	0·8	Nil	0·27	Nil	58·42	58·29	Serampore ...	Hooghly.	
	...	...	...	...	...	.	.	..	...	...	Nil	0·7	Nil	0·26	Nil	40 40	59 80	Hooghly.		
	...	...	..	...	...	0·03	...	.	...	...	1	0·7	0·03	0·19	0·03	45·03	62·54	Jehanabad.		
	...	...	...	..	...	..	..	.	..	...	Nil	0·3	Nil	0·21	Nil	43·77	52·85	Culna ...	Burdwan.	
	...	...	...	...	...	...	...	.	..	..	Nil	0·9	Nil	0 17	Nil	49·31	57·19	Burdwan.		
	...	...	...	...	...	...	...	..	..	...	Nil	0·3	Nil	0·10	Nil	45 08	55·30	Cutwa.		
	...	...	...	...	...	...	...	...	..	..	Nil	0·7	Nil	0 12	Nil	58·26	58·06	Raneegunge.		
	...	...	..	..	...	...	..		...	...	Nil	?	Nil	?	Nil	56·74	?	*Mankur.*		
	...	...	...	..	...	..	...		...		Nil	0·8	Nil	0·17	Nil	53·74	56·41	Bankoora	Bankoora.	
	...	...	...	...	...	..	...	..	..	...	Nil	0·6	Nil	0·26	Nil	62·54	58·23	Bishenpore		
	...	...	..	...	...	...	...	..	..	...	Nil	0·5	Nil	0·25	Nil	?	53·51	Mahara.		
	...	...	..	..	...	...	...			...	Nil	0·5	Nil	0 46	Nil	68·36	61·18	Khatra.		
	...	...	...	...	...	...	...	.	.	...	Nil	?	Nil	?	Nil	48·75	?	Indas.		
	...	...	...	.	.	.	...	.	..	...	Nil	?	Nil	?	Nil	52·94	?	Konalpore.		
	...	...	...	...	...			..	..	...	Nil	?	Nil	?	Nil	42·47	?	Anda.		
	...	...	...	...	...	..	.	.	...	.	Nil	?	Nil	?	Nil	61·51	?	Gangajalghati.		
	...	...	...	...	...	...	...	..	..	...	Nil	?	Nil	0·22	Nil	60·30	57·49	*Raipore.*		
	...	...	...	...	...	..	..	...		..	Nil	?	Nil	?	Nil	58 02	?	*Sonamukhi.*		
	...	...	..	..	...	.	...	..	..	...	Nil	0·8	Nil	0·16	Nil	61·85	55·88	Bh. Soory ..	Beerbhoom.	
	...	...	..	...	...	...	...	..	..	...	Nil	0 6	Nil	0 12	Nil	49·86	58·08	Hetampore.		
	...	...	..	...	...	...	...	...	..	...	Nil	0·9	Nil	0·18	Nil	52·92	56 45	Rampore Haut		
	...	...	..	..	..	...	...	...	...	...	Nil	?	Nil	?	Nil	57·82	?	*Bolpur.*		
	...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	53·30	?	*Murarai.*		
	...	...	...	...	...	...	...	.		..	Nil	0·3	Nil	0·22	Nil	50·55	55·47	Ranaghat ..	Nuddea.	
	...	...	...	...	...	..	...	...	...	...	Nil	0·4	Nil	0·16	Nil	45 48	55·65	Kishnaghur.		
	...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·15	Nil	53·00	60 37	Chooadanga.		
	...	...	...	...	...	...	..	...	...	..	Nil	0·3	Nil	0·18	Nil	67·59	56 28	Meherpore.		
	...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0 19	Nil	59·44	62·11	Kooshtea.		
	...	...	...	...	0·01	...	...	...	..	...	1	0·6	0·01	0·34	0·01	57·00	64·49	Satkhira ..	Khoolna	
	...	...	...	...	0·31	...	...	...	...	...	1	0 7	0·31	0·27	0·31	59·10	60·86	Bagirhat.		
	...	...	...	...	0 18	...	...	...	...	...	1	1·7	0·18	0 32	0·18	59·80	64 79	Khoolna.		
	...	...	...	...	0·30	...	...	...	..	...	1	?	0·30	?	0·30		?	*Nakipur.*		
	...	...	...	...	...	...	...	...	..	...	Nil	0·7	Nil	0·23	Nil	54·75	54 95	Narail ...	Jessore,	
	...	...	...	...	...	...	...	...	..	...	Nil	0·6	Nil	0 19	Nil	66·75	67 61	Jessore.		
	...	...	...	...	...	...	...	...	...	...	Nil	0 5	Nil	0·1.	Nil	56 71	62·09	Jhenidah.		
	...	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0 16	Nil	61 80	59·72	Magoorah.		
	...	...	...	...	...	...	...	...	...	..	Nil	0·3	Nil	0·34	Nil	48 75	59·47	Bongong.		
	...	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0 25	Nil	57·97	55·27	Kandi ...	Moorshedabad.	
	...	...	...	...	...	...	...	...	.	...	Nil	0·6	Nil	0 1·	Nil	48·97	55·39	Berhampore.		
	...	...	...	...	...	...	...	...	...	..	Nil	0·4	Nil	0·10	Nil	50·49	55·22	Lalbagh.		
	...	...	...	...	...	...	...	...	..	.	Nil	0·4	Nil	0 1·	Nil	?	55·55	Azimgunge.		
	...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·14	Nil	60·90	58·49	Jungipore.		
	...	...	...	...	...	...	...	...	...	..	Nil	0·5	Nil	0·14	Nil	63· 6	54·84	Lalgola.		
	...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	47 49	?	Jaigunge.		
	...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	46·68	?	*Akhriguni.*		
	...	...	...	...	...	...	...	...	.	...	Nil	?	Nil	?	Nil	?	?	*Patkabari.*		
	...	...	...	...	...	0·13	...	...	...	...	1	0·9	0·13	0·36	0·13	129·65	143·01	Cox's Bazar ..	Chittagong ...	EAST BENGAL.
	...	...	...	...	0·34	0·37	...	...	...	...	2	0·9	0·71	0·37	0·37	84·40	105·37	Chittakong.		
	...	..	...	0·02	.	0·03	...	...	...	..	2	?	0 05	?	0·03	115·44	?	*Kutubdia.*		
	...	...	...	...	0·10	...	...	..	...	...	1	?	0·10	?	0·10	64·52	?	*Satkanya.*		
	...	...	...	...	0·40	...	...	...	...	..	1	1·0	0·40	0·53	0·40	71·58	95·97	Rangamati ...	Chittagong Hill Tracts.	
	...	...	...	0·79	0·16	..	..	.	..	...	2	1·8	0·95	0·55	0·79	71 74	89·02	Rama.		

Table of Rainfall recorded at Station

Meteorological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
EAST BENGAL —*concld.*	Backergunge...	Patuakhally ...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Perozepore ...	...	..	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Burrisal ...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bhola ...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gournaddi ...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bauphal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Noakholly ...	Noakholly ...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	...
		Fenny ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...
		Harishpore ...	...	...	...	...	...	...	...	...	...	...	...	..	...		...	...	...	...	...
		Ramganj ...	...	...	.	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...
	Furreedpore...	Madaripore ...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...
		Furreedpore...		...	...	...	...	...	..	...	...	...			...	...	...	...	...	...	...
		Goalundo ...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
	Dacca ..	Munshigunge	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
		Dacca ..	...	..	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...
		Narainguuge	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Manickgunge	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Joydebpore ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill Tipperah	Agartola ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tipperah ...	Comilla ...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chandpore ...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Brahmunberia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ramchandrapore.	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nasirnagar ..	...	...	..	...	...	...	...	...	..	...	...	..	...	...	...	...	...	...	...
		Daudkandi ...	...	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	...	...
		Kasba ..	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Laksham ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mymensingh..	Kishoregunge	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
		Atia (*Tangail*)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...
		Mymensingh	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..	...
		Jamalpore ..	...	...	...	..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Netrokona ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Suhornakhally	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Durgapore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Sherpore Town	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Dewanganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
NORTH BENGAL	Pubna ...	Pubna ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Serajgunge ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bogra ..	Sherpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nowkhilla ..	...	. .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bogra ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Panchbibi ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rajshahye ...	Beauleah ..	...	...	...	...	...	...	...	...	..	...	...	...	...	..	...	.	...	...	...
		Nattore ...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...
		Naogaon ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Lalpore ...	...	...	..	..	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...
		Manda ...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Maldah ...	Maldah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...
		Chanchal ..	.	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gajol ...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nobganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dinagepore ...	Mohadebpore	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...
		Churamon ...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Raigunge ..	. .	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Dinagepore ...	..	..		...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
		Baloorghat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Thakurgaon..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rungpore ...	Bhawanigunge (*Gyabanda*).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Rungpore ...	...	...	...	...	...	...	...	. .	...	...	...	...	...	...	...	...	...	...	...
		Kurigram .	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ragdogra . (*Nilphamari*).	..	. .	...	...	...	. .	...	...	...	...	...	.	..	...	...	...	...	...	...
		Ulipore ...	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	..	...	...
	Julpigoree ...	Julpigoree ..	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	..	...	...
		Alipore Doar	..	...	...	...	. .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Falacotta ...	...	...	...	.	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...
		Debiganj ..	...	...	.	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Bhogolpore (*Naprakutta*).	...	..	...	.	...	...	...		...	...	...	...	...	...	...	...	...	...	...
		Dimhatta ..	..	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar..	Cooch Behar..	..	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...
		Mickliguner .	..	...	...	...	..	.	...	...	...	...	...	...	...	..	...	...	...	...	...
		Matabhanga.	.	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Darjeeling Hill	Buxa ..	..	..	...	...	...	...	0·01	...	...	...	..	...	...	.	...	...	...	...	...
		Siliguri ..	.	...	..	...	...	.	...	...	...	..	...	...	...	...	...	...	..	...	...
		Darjeeling ...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kalimpong ..	..	...	...	...	..	...	...	..	...	..	...	...	...	...	...	...	...	...	...
		Kurseong ...	...	.	...	.	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...
NORTH BEHAR	Purneah .	Kissengunge	...	...	...	..	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...
		Arrareah ...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...
		Purneah ...	.	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gondwara ...		.	..	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Balarampore	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Matiari ...	...	...	.	...	...	...	...	...	...	...	...	...	...		...	..	...	...	...
		Kaliaganj ..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...
	North Bhagulpore.	Maddapore ...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Soopool	...	..	...	...	..	...	..	...	...	..	...	...	...	...	...	...	..	...	...
		Protabganj ...	..		...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...

Bengal in December 1889—*continued.*

23	23	24	25	26	27	28	29	30	31	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January 1889 up to 31st December 1889.	Average rainfall from 1st January up to 31st December.	Station.	District.	Meteorologic division.
...	...	...	...	0·05	...	...	...	...	...	1	0·9	0·05	0·45	0·05	91·44	97·21	Patuakhally	Backergunge.	EAST BENGAL *concld.*
...	...	...	...	0·20	...	...	...	...	...	1	0·7	0·20	0·27	0·20	76·52	78·66	Perozepore.		
...	...	...	...	0·44	...	...	...	...	...	1	1·0	0·44	0·25	0·44	77·25	79·30	Burrisal.		
...	...	...	...	0·27	...	...	...	...	...	1	1·1	0·27	0·47	0·27	83·54	91·00	Bhola.		
...	...	...	...	..	...	...	...	...	...	Nil	?	Nil	?	Nil	68·68	?	*Gournaddi.*		
...	...	...	...	0·35	...	...	...	...	...	1	?	0·35	?	0·35	97·09	?	*Bauphal.*		
...	...	...	...	0·12	...	...	...	...	...	1	0·9	0·12	0·37	0·12	109·08	112·38	Noakholly ...	Noakholly.	
...	...	...	...	0·35	0·05	...	...	...	...	2	1·0	0·40	0·84	0·35	89·80	121·07	Fenny.		
...	...	...	...	0·39	...	...	...	...	...	1	?	0·39	?	0·39	84·00	?	*Harishpore.*		
...	...	...	...	...	..	...	...	...	...	Nil	?	Nil	?	Nil	92·25	?	*Ramganj.*		
...	...	...	...			...	...	...	...	1	0·3	0·06	0·13	0·06	64·31	67·69	Madaripore ...	Furreedpore.	
...	...	...	...				...	...	...	Nil	0·7	Nil	0·12	Nil	69·89	68·95	Furreedpore.		
...	...	...	...	...	...			...	...	Nil	0·5	Nil	0·13	Nil	65·19	62·96	Goalundo.		
...	...	...	...	...	...	...		..	...	Nil	0·6	Nil	0·31	Nil	83·90	85·44	Munshigunge.	Dacca.	
...	...	...	...	..	..	...	...	...	...	Nil	0·8	Nil	0·21	Nil	80·28	72·97	Dacca.		
...	...	...	...	...	..	...	...	...	...	Nil	1·0	Nil	0·34	Nil	88·49	73·40	Naraingunge.		
...	...	...	...	..	...	...	...	...	..	Nil	0·7	Nil	0·12	Nil	73·11	61·82	Manickgunge.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	78·48	?	*Joydebpore.*		
...	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·30	Nil	56·46	78·61	Agartola ...	Hill Tipperah.	
...	...	...	...	0·08	...	..	...	...	...	1	0·9	0·08	0·25	0·08	73·15	92·05	Comilla ...	Tipperah.	
...	...	...	...	...	...	...	...	..	...	Nil	0·9	Nil	0·40	Nil	70·91	90·33	Chandpore.		
...	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·26	Nil	61·67	70·60	Brahmunberia.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	65·72	?	*Ramchandrapore.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	39·78	?	*Nasirnagar.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	57·19	?	*Daudkandi.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	71·46	?	*Kasba.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	75·48	?	*Lakshem.*		
...	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil,	0·30	Nil	81·88	83·34	Kishoregunge.	Mymensingh.	
...	...	...	0·02	...	...	...	...	...	...	1	0·4	0·02	0·19	0·02	70·20	64·01	Atia (*Tangail*).		
...	...	...	...	..	...	...	...	...	...	Nil	0·9	Nil	0·12	Nil	105·55	92·60	Mymensingh.		
...	...	...	...	..	...	...	...	..	...	Nil	0·6	Nil	0·26	Nil	89·50	75·87	Jamalpore.		
...	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·17	Nil	137·71	86·69	Netrokona.		
...	...	...	...	...	...	...	...	...	.	Nil	?	Nil	?	Nil	63·03	?	*Subornakhally.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	102·93	?	*Durgapore.*		
...	...	...	...	...	...	...	..	...	...	Nil	?	Nil	?	Nil	94·53	?	*Sherepore Town*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Dewanganj.*		
...	...	...	0·04	...	...	...	...	...	...	1	0·7	0·04	0·11	0·04	56·71	64·20	Pubna ...	Pubna ...	NORTH BENG.
...	...	...	...	0·13	...	...	...	...	...	1	0·6	0·13	0·14	0·13	64·46	60·95	Serajgunge.		
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·22	Nil	66·47	64·17	Sherpore ...	Bogra.	
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·16	Nil	66·31	61·99	Nowkhilla.		
...	...	...	.0·03	...	...	...	...	...	...	1	0·5	0·03	0·12	0·03	73·25	74·69	Bogra.		
...	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·18	Nil	68·74	60·49	Panchbibi.		
...	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·08	Nil	50·28	58·44	Beauleah ...	Rajshahye.	
...	...	...	...	...	...	...	...	...	...	Nil	0·3	Nil	0·11	Nil	63·41	62·24	Nattore.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil		Nil	62·29		*Naogaon.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	40·07	?	*Lalpore.*		
...	...	...	...	...	..	...	..	...	...	Nil	?	Nil	?	Nil	46·47	?	*Manda.*		
...	...	...	...	..	...	...	...	...	...	Nil	0·6	Nil	0·33	Nil	54·80	53·83	Maldah ...	Maldah.	
...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·07	Nil	31·42	58·73	Chanchal.		
...	...	...	.	...	...	...	...	...	...	Nil	?	Nil	?	Nil	43·33	?	*Gajol.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	55·21	?	*Sibganj.*		
...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·17	Nil	57·43	60·48	Mohadebpore...	Dinagepore.	
...	...	...	...	...	.	...	...	...	...	Nil	0·6	Nil	0·15	Nil	56·64	56·64	Churamon.		
...	...	...	...	...	...	...	...	..	...	Nil	0·7	Nil	0·14	Nil	56·64	62·33	Raigunge.		
...	...	...	...	...	...	...	...	..	...	Nil	0·6	Nil	0·10	Nil	70·83	74·54	Dinagepore.		
...	...	...	...	..	...	...	...	...	...	Nil	0·4	Nil	0·25	Nil	64·74	53·13	Balooghat.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	91·69	?	*Thakurgaon.*		
...	...	...	...	...	...	...	...	...	...	Nil	0·3	Nil	0·16	Nil	92·98	68 83	Bhawanikunge (*Gyabanda*).	Rungpore.	
...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·12	Nil	81·45	83·76	Rungpore.		
...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·23	Nil	98·50	8·70	Kurigram.		
...	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·19	Nil	94·86	90 07	Bandogra. (*Nilphamari.*)		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	84·56	?	*Ulipore.*		
...	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·08	Nil	128·89	128·28	Julpigoree ...	Julpigoree.	
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	133·98	?	*Alipore Duar.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	138·83	?	*Falacolta.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	96·41	?	*Debiganj.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	149·62	?	*Bhogotpore* (*Nayrakatta.*)		
...	...	...	...	...	...	...	...	...	...	Nil	0·9	Nil	0·19	Nil	106·41	110·84	Dimatta		
...	...	...	...	...	.	...	...	...	...	Nil	0·7	Nil	0·10	Nil	130·35	129·56	Cooch Behar...	Cooch Behar.	
...	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·16	Nil	128·07	147·82	Mickligunge.		
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·12	Nil	120·70	124·33	Mataobhanga.		
...	...	...	...	...	...	...	...	...	...	Nil	2·0	Nil	0·57	Nil	211·45	213·27	Buxa ...	Darjeeling.	
...	...	...	...	...	...	...	...	...	...	1	1·0	0·01	0·11	0·01	128·45	106·68	Siliguri. ...		
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·21	Nil	138·84	120·61	Darjeeling.		
...	...	...	...	...	...	...	...	...	...	Nil	1·0	Nil	0·30	Nil	102 31	88 90	Kalimpong.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	Kursseong.		
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·14	Nil	105·02	74·73	Kissengunge ...	Purneah ...	NORTH BENGAL
...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·09	Nil	82·16	68·36	Arrareah.		
...	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·15	Nil	66·41	64·16	Purneah.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Gondwara.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Balarampore*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Matiari.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Kahaganj.*		
...	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil		Nil	66·30	53·71	Maddapore ..	North Bhakul-pore	
...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·08	Nil	71·64	50·60	Soopool.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	0·12	Nil	91·21	?	*Protabganj.*		

Table of Rainfall recorded at Stations i

Meteorological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ORTH BEHAR —*concld.*	Durbhunga ...	Tajpore ...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Durbhunga ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Madhubani ...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bahera ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Roshera ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzufferpore	Sitamarhi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Muzufferpore	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Hajipore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Paru ...	...	...	...	..	...	...	...	...	...	...	...	...	...		..	...	...	...	...	...
		Mahua ...	...	...	...	...	...	...	...	...	...	...	...	...	...			...	...	...	...	...
		Sinhar ...	...	...	...	...	...	...	...	...	...	...	...	...	...		..	..	...	...	...	...
		Pupri ...	...	...	...	...	...	...	...	...	...	...	...	...	...		..	...	...	...	...	...
	Chumparun ...	Motihari ...	...	...	...	...	...	...	...	...	...	...	...		..		..	...	...	...	...	...
		Bettiah ...	...	...	...	...	...	...	...	...	...	...	...		..	...	...	...	...	...	...	...
		Baguha ...	...	...	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...
		Burhurwa ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
	Sarun ...	Gopalgunge ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Sewan ...	...	...	...	..	...	...	..	...	...	...	...	..	...	...	...	...	...	...	...	...
		Chupra ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SOUTH BEHAR	Shahabad ...	Buxar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Dehree ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bhuboosh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Sassoram ...	...	...	...	..	...	...	..	...	...	...	...	...	...	...	...	..	...	...	...	...
		Arrah ...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...
		Mohaniah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Gya ...	Aurungabad...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gya ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nowadah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jehanabad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Arwal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Daudnagar ...	...	...	. .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Sheerghati ..	...	...	...	...	...	...	...	..	...	...	...	..	...	...	...	...	...	...	...	...
		Rajauli ...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Pakri Barawan.		...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	..	...	...
	Patna ...	Patna ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Dinapore ...	...	...	...	...	...	...	...	...	...	...	.	..	...	...	..	...	...	...	...	...
		Behar ...	.	...	...	...	...	...	..	...	.	..	...	...	...	...	...	...	...	...	...	...
		Barrh ...	..	...	...	...	.	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
		Bickram ...	..	...	..	..	.	...	.	...	...	...	...	...	..	..	...	...	...	...	...	...
		Hilsa ...	...	...	...		...	...	.	...	...	...	...	...	..	...	...	..	.	...	...	...
	Monghyr ...	Bogoaserai ...	...	...	...	...	..	...	...	...	..	...	...	..	..	...	...	...	...	...	...	..
		Monghyr ...	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	...	...	...	..
		Jamui ...	...	...	...	...	...	..	...	..	...	...	..	...	...	...	..	...	...	...	...	..
		Gogri ...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	...	...	..	...	...	..
		Sheikpura ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	South Bhagulpore.	Bhagulpore ...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	..
		Banka ...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..	...	...	..
		Kolgong ...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	...	..	..	...	..
		Bangaon ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	..
	Sonthal Pergunnahs.	Rajmehal ...	...	...	...	...	...	...	...	...	..	...	...	...	..	...	...	...	...	...	...	..
		Godda ...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..
		Pakour ...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	..
		Nya Doomka	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	..
		Deoghur ...	...	...	...	...	...	..	.	...	...	...	...	..	...	...	...	...	...	...	...	..
		Jamtara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Mohagama ...	...	...	...	...	...	...	...	...	...	...	...	.	..	.	...	...	...	...	...	..
		Nanihat ...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	..
CHUTIA NAGPUR.	Hazaribagh ...	Pachamba (*Giridi*).	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	..
		Hazaribagh ...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Semtagurah ...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Mahudi Hills	.	...	...	...	..	...	...	..	..	...	...	...	...	...	...	...	...	...	...	..
		Jhoomrah Hills	...	...	...	...	...	...	...	...	. .	...	...	...	...	...	...	...	...	..	...	..
		Barhi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Chatra ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Karaglcha ...	...	...	..	...	...	..	.	..	...	...	...	...	...	...	...	...	...	..	...	..
		Ramghar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	..	...	..
	Lohardugga...	Lohardugga ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Ranchi ...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	..
		Palamow ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Silli ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Balumat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Hoseinabad...		...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	..
		Garwah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Singbhoom ...	Chyebassa ...	...	...	..	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Chakradharpore.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Ghatsila ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Baharagura...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Manbhoom ...	Purulia ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gobindpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Raghunathpore.	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Barrabhoom...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jhalda ...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chas ...	.	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

al for the month of December 1889.—*concluded.*

22	23	24	25	26	27	28	29	30	31	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January 1889 up to 31st Dec. 1889.	Average rainfall from 1st January up to 31st December.	Station.	District.	Meteorological division.
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·08	Nil	48·39	45·28	Tajpore ...	Durbhunga ...	North Behar —*concld.*
.....	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·17	Nil	54·01	47·93	Durbhunga.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·07	Nil	60·71	47·85	Madhubani.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	74·47	?	*Bahera.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	60·07	?	*Roshera.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·12	Nil	59·86	45·56	Sitamarhi ...	Muzufferpore.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·3	Nil	0·08	Nil	53·56	43·99	Muzufferpore.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·12	Nil	46·45	44·22	Hajipore.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Paru.*		
.....	...	...	...					...	...	Nil	?	Nil	?	Nil	?	?	*Mahua.*		
.....	...	...	..					...	...	Nil	?	Nil	?	Nil	?	?	*Sirahar.*		
.....	...	...	..					...	...	Nil	?	Nil	?	Nil	50·00	?	*Pupri.*		
.....	...	...	...					...	...										
.....	...	...	...					...	...	Nil	0·8	Nil	0·15	Nil	78·08	48·26	Motihari ...	Chumparun.	
.....	...	...	...					...	...	Nil	0·5	Nil	0·23	Nil	56·25	51·27	Bettiah.		
.....	...	...	...					...	...	Nil	?	Nil	?	Nil	74·09	?	*Bagaha.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	56·21	?	*Burhurwa.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·17	Nil	40·82	46·26	Gopalgungo ...	Sarun.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·14	Nil	48·06	45·65	Sewan.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·09	Nil	44·30	39·65	Chuprah.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·9	Nil	0·21	Nil	50·03	39·40	Buxar ...	Shahabad ...	South Behar.
.....	...	...	...	...	...	...	...	...	...	Nil	1·0	Nil	0·36	Nil	45·21	41·20	Dehreo.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·35	Nil	40·21	43·08	Bhuboosh.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·28	Nil	31·79	42·35	Sasseram.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·14	Nil	45·59	44·95	Arrah.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Mohaniah.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·36	Nil	37·38	44·15	Aurungabad...	Gya.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·19	Nil	44·50	41·19	Gya.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·22	Nil	42·94	42·29	Nowadah.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·18	Nil	37·23	42·81	Jehanabad.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	37·43	?	*Arwal.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	27·54	?	*Daudnagar.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	31·89	?	*Sheerghati.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	18·27	?	*Rajauli.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	33·75	?	*Pakri Barawan.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·7	Nil	0·16	Nil	55·38	41·90	Patna ...	Patna.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·18	Nil	49·07	42·59	Dinapore.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·13	Nil	45·65	44·28	Behar.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·3	Nil	0·12	Nil	41·87	42·37	Barrh.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	46·33	?	*Bickram.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	39·56	?	*Hilsa.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·3	Nil	0·08	Nil	53·28	42·45	Begoosserai ..	Monghyr.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·10	Nil	44·99	45·73	Monghyr.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·09	Nil	43·17	45·16	Jamui.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	65·36	?	*Gogri.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	45·87	?	*Sheikpura.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·09	Nil	48·79	47·70	Bhagulpore ...	South Bhagulpore.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·14	Nil	42·47	45·78	Banka.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	50·43	?	*Kolgong.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Bangaon.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·3	Nil	0·06	Nil	63·06	55·69	Rajmehal ...	Sonthal Pergunnahs.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·13	Nil	53·57	47·89	Godda.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·15	Nil	77·94	60·92	Pakour.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·23	Nil	60·69	57·59	Nya Doomka.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·16	Nil	42·61	52·19	Deoghur.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·13	Nil	47·03	51·70	Jamtara		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	61·28	?	*Mohagama.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Nunihat.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·17	Nil	42·01	50·93	Pachamba ... (*Giridi*).	Hazaribagh ...	Chutia Nagpur.
.....	...	...	...	...	...	...	...	...	...	Nil	1·0	Nil	0·22	Nil	51·86	49·79	Hazaribagh.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·32	Nil	39·30	55·22	Semtagurah.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·30	Nil	?	50·41	Mahudi Hills.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·4	Nil	0·33	Nil	45·75	64·64	Jhoomrah Hills		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	33·20	?	*Barhi.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	50·59	?	*Chatra.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	42·12	?	*Karagdeha.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil		?	*Ramghar.*		
.....	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·61	Nil	48·99	52·52	Lohardugga ...	Lohardugga.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·21	Nil	55·43	50·16	Ranchi.		
.....	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·28	Nil	36·56	45·73	Palamow.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Silli.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Balumat.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Hoseinabad.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Garwah.*		
.....	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·35	Nil	50·81	54·98	Chyebassa ..	Singbheom.	
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	42·37	?	*Chakradharpore.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	60·44	?	*Ghatsila.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	57·57	?	*Baharagura.*		
.....	...	...	...	...	...	...	...	...	...	Nil	0·9	Nil	0·26	Nil	46·40	50·83	Purulia ...	Manbhoom.	
.....	...	...	...	...	...	...	...	...	...	Nil	0·6	Nil	0·19	Nil	35·12	47·35	Gobindpore.		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	48·98	?	*Raghunathpore.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	47·33	?	*Barrabhoom.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Jhalda.*		
.....	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	?	?	*Chas.*		

SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, DURING THE MONTH OF DECEMBER 1889.

THE normal meteorology in December of Bengal and Assam is usually very simple, and the north-east monsoon conditions are almost always present in a well-marked degree. Temperature generally steadily diminishes, and is decidedly low, while pressure increases and becomes very high; humidity remains low, and there is an almost complete absence of cloud. Rainfall is also usually entirely absent from the province, except when the normal conditions become almost reversed by the occurrence of barometric disturbances which appear over Northern India, and drift in a southerly or south-easterly direction. When such depressions pass through the province, the sky becomes heavily clouded, temperature usually increases, particularly at night, while pressure falls with the advance of the depression. If the depression is at all considerable, general light rain will also usually fall. It is from such actions as these that practically the whole of the rainfall of December in Bengal is in most years received, and from the nature of the case the occurrence of any rainfall at all in this month is uncertain, while its amount is always liable to considerable variation. A second class of disturbances may occur in the form of cyclonic storms in the Bay; but usually in December such storms are generated in the extreme south of the Bay, and they are rarely sufficiently large and intense to affect the weather in Bengal to any considerable extent. If, however, such a storm should happen to advance in a north-westerly direction into the northern half of the Bay, then again the normal weather conditions in Bengal will be practically reversed and will become similar to those described as occurring during the passage of the land-formed storms. In this case, however, the rainfall as a rule will be entirely confined to the southern districts of Bengal, and will not penetrate at all into such districts as Behar.

The average rainfall in Bengal is therefore small in all districts; it is slightly over half an inch in Orissa, about equal to a third of an inch in Chutia Nagpur and East Bengal, and to about a fifth of an inch in South-West Bengal and South Behar; while in North Bengal and North Behar the average fall is even less than a fifth of an inch.

Meteorology of the month.—The chief features in the meteorology of December have been

1*st.*—The complete absence of storms of the usual cold-weather type which form in Northern India and advance in a south-easterly direction.

2*nd.*—The occurrence of two cyclonic storms in the Bay: the first more or less of the usual character, which formed in the south of the Bay and advanced in a westerly direction across the extreme south of the peninsula, while the second was a most abnormal storm. It occurred very much later in the year than cyclonic storms have usually hitherto been formed. It was also formed rather further north than usual, and finally drifted in a north-westerly direction towards the North Madras coast. It was also a very severe storm.

3*rd.*—The pressures recorded in Bengal were in all cases below the normal, the usual defect averaging about two or three-hundredths of an inch; the defects were generally greatest over an area represented by such stations as Bankipur, Bhagulpur, Burdwan, and Berhampur on the west and Dhubri on the east, where the defect equalled about four-hundredths of an inch.

4*th.*—Temperature was in excess for the greater part of the month, and the mean temperature for the province of Bengal was about one and-a-half degrees in excess of the normal, while in Assam the excess was larger than two degrees.

5*th.*—The air was decidedly more moist than usual, the excess in the percentage of humidity ranging up to seventeen per cent. at Jessore.

6*th.*—Cloud proportion was above the normal in the southern districts and below it over the northern half of the province

7*th.*—As there were no land-formed or cold-weather storms, there was no general rainfall over the province; but owing to the nature of the second cyclonic storm in the Bay referred to above, moderate showers were received in some of the southern districts of the province.

The first half of December was a period during which north-east monsoon conditions were present in Bengal and over the greater part of the Bay in fairly well pronounced degree. In Bengal itself temperature and humidity were low and pressure rather high, while a steady northerly wind current blew over the whole province, the skies were almost cloudless, and rainfall was entirely absent. In the Bay also fine weather was reported during the whole of this period, and there was an almost complete absence of rain along the Madras coast, though at this period rain generally occurs here. On the 16th of December however, conditions commenced to change in the south of the Bay, pressure began to fall along the South Coromandel coast, while elsewhere it was rising, and winds along the Burma coast showed indraught towards a disturbed area in the south of the Bay. It is probable on this day a small cyclonic storm had formed in the extreme south of the centre of the Bay. On the morning of the 17th it had advanced in a westerly direction, and the centre was then probably to the north-east of Trincomalee and east-south-east of Negapatam. On the morning of the 18th the storm had commenced to cross the south of the peninsula, and the centre was at 8 a.m. a short distance to the south-south-west of Negapatam. It afterwards apparently entirely crossed the peninsula. It was a storm in which the winds were of only moderate violence, and squally weather only obtained along the Coromandel coast, but a heavy wave of

rainfall was brought by the storm and gave to the Madras coast and the south of the peninsula general and rather heavy rain, which lasted for several days. The storm, however, was too far distant from Bengal to cause any considerable alteration in the weather, and up to about the 20th of the month the conditions in Bengal remained those of the ordinary north-east monsoon, as previously described. At this time a severe storm was formed in the Bay, the description of which, as given in the weekly report, is as follows:—

On December 21st conditions in Bengal remained unaltered, but skies clouded up heavily over the south of Burma. Drizzling rain commenced over this area, and pressure fell slightly at Diamond Island, while elsewhere it was generally rising. Winds also at the South Burma stations commenced to show distinct indraught towards the south of the Bay and at Diamond Island, instead of the light winds usual at this season, winds had increased to almost a gale. On this day, therefore, it is clear that weather had became very disturbed over the south of the Bay, and it is probable that a cyclonic storm had commenced to form. On the 22nd the area of stormy weather was still quite in the south of the Bay and probably about Longitude 88° E. The storm, therefore, appeared on this day to have drifted in a westerly direction, and probably the centre of the storm was not further north than Negapatam. At this time all the indications appeared to point to the probability that the storm would advance across the extreme south of the peninsula, or even across the north of Ceylon. On the morning of the 23rd, the storm was probably to the east-north-east of Negapatam and at some distance from land, and it was moving slowly in a north-westerly direction. On the 24th it had again advanced in a north-westerly direction, and its centre was probably to the east of Nellore or east-north-east of Madras; while on the morning of the 25th it had come much nearer the land, and its centre was to the south-east of Masulipatam. Even on the morning of the 25th it was apparent that the storm had ceased to intensify, but it was on this date a rather severe storm; but by the morning of the 26th, and particularly from midnight of the 25th, the storm had commenced to fill up rather rapidly. On this date it had become only a barometric depression, but it was accompanied by fairly strong winds, and the position of its centre was decidedly nearer the land than on the previous day, and it was perhaps even a little to the south-west of its previous position. On the morning of the 27th the depression had quite passed inland, the centre crossing the coast apparently between Masulipatam and Nellore during the afternoon or evening of the 26th. The storm in its progress was accompanied by only a moderate barometric depression as indicated by the readings at the coast stations, but it will be observed that the storm centre was at no time very near to any meteorological station while it existed as a severe storm. Decidedly low pressures, however, appear to have been experienced by the vessel *Java* which was involved in the storm. The strength of the winds in the northern half of the storm was decidedly great, and for two days a gale of wind was blowing at some of the ports on the west coast. Certain observations taken on board the S.S. *Java*, which was involved in the storm, also show that hurricane winds and very severe weather accompanied the northern half of the storm, but winds in the southern half appear to have been comparatively feeble. The rainfall in connection with the storm at the land stations was also only moderate.

As is usually the case, directly a rather severe storm is formed in the Bay, weather conditions commenced to change in Bengal. Temperature at first began to rise slowly, but from about the 23rd or 24th, when the skies had clouded over quickly, the night temperatures rose very rapidly and became very high. The storm in its north-westerly advance apparently also caused a wave of moist winds from the sea to advance over Bengal, and on about the 24th at many stations the sky was almost overcast, while humidity as well as temperature was high. In Orissa and South-East Bengal, and in parts of South and even North Bengal, so much moisture was thus brought up that light showers commenced to fall at a few stations, and dull and rather gloomy weather obtained for some days At this period, therefore, the general conditions were almost the reverse of normal north-east monsoon weather, but with the gradual breaking up of the storm on the 26th, and with its disappearance inland on the 27th, conditions had begun slowly to improve again in Bengal on the 26th and 27th of the month, and at the close of the month again fine weather with almost cloudless skies, rather rapidly reducing temperature with fairly low humidity, an increasing pressure, and complete absence of rain again obtained; or, in other words, again normal cold-weather conditions had set in over the province.

Pressure.—The variations of pressure during the month were not of any great importance. The mean pressure at the commencement of December varied from a twentieth to a tenth of an inch below the normal. During the second week of the month, when the cold-weather conditions were present rather strongly, the mean pressure became almost normal, and this continued to be the case up till the last week, when the conditions generally became influenced by the existence of the severe storm in the Bay, when pressure was again in distinct defect of the normal. For the whole month, therefore, the mean pressure has been generally below the normal by amounts varying from two to four-hundredths of an inch. The largest defects were generally registered at Bhagulpur, Bankipur, Burdwan, Bankoora, and Berhampore, in the western districts of the province, and at Dhubri in Assam, and at Chittagong in the eastern districts; but even in these cases the defects do not exceed four-hundredths of an inch.

Temperature.—The temperature variations during the month have been rather large. At the commencement the mean temperature was nearly normal; for the second week a general

defect of about a degree was registered, but in South-West Bengal there was a defect of about three degrees. In the third week the mean temperature had become almost normal, but in the fourth week, owing to the influence of the disturbed conditions brought about by the storm in the Bay, a very rapid increase in the night temperatures took place, and temperature generally became rather largely in excess of the normal; the excess in South-West and East Bengal and in South Behar averaging from five to six degrees. For the whole month, therefore, the average mean temperature has been above the normal, the excess ranging from about one degree in Orissa and South-West Bengal to nearly two degrees in East and North Bengal, while in Assam the excess is larger than two degrees. The general variation of temperature from the normal during the month is best shown by the following table, which gives the variations of the average maximum, minimum and mean temperatures at nine typical stations in different districts in the province from the normal values, week by week, throughout the month :—

Stations.	Week ending 6th December 1889.			Week ending 13th December 1889.			Week ending 20th December 1889.			Week ending 27th December 1889.		
	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.
Cuttack	−2·8	−0·6	−0·9	−0·5	−2·9	−1·7	−1·8	−2·2	−2 0	+1 2	+7·8	+4·5
Calcutta	−0·9	−1·3	−1·1	−1·5	−4·2	−2·9	−0·9	−1·7	−1·3	+3·0	+8·0	+5·5
Dacca	−1·7	+1·3	−0·3	−1·6	−2·6	−2·1	−0·2	+0·9	+0·4	+3·9	+6·3	+5·1
Burdwan	−0·9	+0·1	−0·4	−1·6	−3·4	−2·5	−0·9	−1·2	−1·1	+3·6	+8·3	+6·0
Patna	+0·9	+0·4	+0·6	+0·2	−1·9	−0·9	+0·2	−0·6	−0·3	+4·0	+5·0	+4·4
Gya	+0·8	+1·2	+1·0	+0·6	+1·2	+0·8	+0·2	−0·9	−0·4	+3·2	+3·9	+3·5
Purneah	−1·1	+1·4	+0·1	−2·5	−1·5	−2·1	−1·6	+2·5	+0·4	+2·2	+5·0	+3·6
Hazaribagh	+1·6	−0·4	+0·6	+0·4	−2·0	−0·8	+1·0	−0·6	+0·2	+3·2	+4·8	+3·9
Darjeeling	+2·7	+2·8	+2·7	+2·6	−0·3	+1·1	+5·4	+1·9	+3·6	+7·9	+1·7	+4·8

Rainfall.—As previously stated, rain occurred towards the end of the month in some of the southern districts in connection with a wave of moist winds brought up by the storm in the Bay. The only districts, however, which received any rainfall of importance were the Pooree district in Orissa and the Chittagong, Chittagong Hill Tracts, Backergunge, and Noakholly districts of East Bengal. A few showers were also received in the following districts :—Cuttack, Khoolna, and Pubna. The falls in East Bengal generally averaged 0·15 inch and in Orissa 0·12 inch, but elsewhere they were of no importance

The following table gives in a condensed form the summary of the rainfall information in Bengal for the whole year. It gives a comparison between the actual monthly and total rainfall of the year, with the normal values in each of the seven meteorological divisions of Bengal; the actual falls being expressed as percentages of the normal amounts. From these figures it will be seen that all the districts, except Chutia Nagpur, have received good falls during the year, while in Chutia Nagpur there has been a defect of 17 per cent. :—

Meteorological Divisions.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Actual rainfall of the year 1889 expressed as a percentage of the normal fall for the period.
Orissa ...	16	120	18	26	75	123	90	117	55	150	835	22	111
South-West Bengal	182	122	35	62	55	140	84	71	90	112	1,523	5	98
East Bengal ...	79	81	20	86	67	113	92	94	89	133	385	42	96
North Bengal ...	553	170	10	46	40	126	120	85	117	44	713	6	101
North Behar ...	480	2 0	23	40	43	162	130	87	147	8	400	Nil	118
South Behar ...	339	291	73	14	57	143	94	94	114	40	365	Nil	104
Chutia Nagpur ...	121	122	47	130	45	122	77	76	72	71	439	Nil	83

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the month of December 1889 :—

Meteorological Divisions.	Temperature.						Rainfall.							
			Averages for month.				Of month.			Rainy days.			Since 15th May 1889.	
	Highest observed during month.	Lowest observed during month.	Of highest of each day.	Of lowest of each day.	Of mean for each day.	Average mean of month above or below normal mean of month.	Average.	Normal average.	Variation.	Average number in month.	Normal average number in month.	Variation.	Average.	Normal average.
Orissa	84·9*	50·5*	79·3*	58·7*	69·0*	+0·9*	0·12	0·55	−0·43	0·6	1·1	−0·5	62·01	54·08
South-West Bengal	82·1	48·4	77·4	50·8	67·1	+0·8	0·01	0·21	−0·20	0·2	0·6	0·4	52·37	51·49
East Bengal	84·3	53·4	77·9	58·5	68·2	+1·7	0·15	0·36	−0·21	0·6	0·8	−0·2	75·53	73·72
North Bengal	81·2*	48·1*	77·9*	55·1*	66·5*	+1·8*	0·01	0·17	−0·16	0·1	0·6	−0·5	73·12	70·00
North Behar	79·9	44·9	75·8	52·2	64·0	+1·5	Nil	0·14	−0·14	0·0	0·5	−0·5	57·66	48·19
South Behar	81·8	44·6	76·3	51·4	63·9	+1·6	Nil	0·20	−0·20	0·0	0·5	−0·5	44·16	43·30
Chutia Nagpur	77·0*	43·7*	73·1*	50·0*	61·6*	+1·1*	Nil	0·34	−0·34	0·0	0·8	−0·8	43·08	48·91
Assam	84·6	45·6	77·0	56·7	66·9	+2·2								

* Pooree, Julpigoree, and Chyebassa not included.

Meteorological Office, Bengal,
The 14th January 1890.

A. Pedler,
Meteorological Reporter to the Govt. of Bengal.

Meteorological Report of the Province of

Meteorological Division.	District.	Representative station.	Station Observations.														
			Air pressure.			Wind.		Temperature.									
			Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from
Orissa.	Pooree	Pooree	30·031	30·046	?	N	151	?	?	54·4	4 & 9 Jan.	?	57·3	?	
		Gopalpore	30·026	30·076	—·048	NNW	213	81·7	4th Jan.	60·0	4 & 5 ,,	79·6	61·4	70·5	
		False Point	30·023	30·046	—·008	NW	120	80·4	7th—9th Jan.	53 0	4th ,,	79·0	57·3	68·2	
	Cuttack	Cuttack	29·984	30·009	—·038	Calm	21	83·3	7th, 9th, 10th Jan.	55·9	4th ,,	82·1	58·8	70·5	=
	Balasore	Balasore	30·005	30·067	—·051	NNW	124 6	81·3	7th, 9th Jan.	53·5	4th ,,	79·5	55·8	67·7	+
South-West Bengal.	South-West Midnapore, South 24-Pergunnahs	Saugor Island	30·023	30·050	—·001	North-westerly.	147	77·2	7th ,,	57·6	9th, 10th Jan.	75·3	59 9	67·6	+
	Midnapore	Midnapore	29 898	30·057	—·071	N	31·7	82·3	8th ,,	54·2	9th, 10th Jan.	80·2	56·8	68·5	+
	24-Pergunnahs, Howrah, Hooghly	Calcutta	30·026	30 049	—·071	N	51	78·5	9th ,,	55 3	9th ,,	76·9	57·2	67·0	+
	Burdwan	Burdwan	29·935	30·041	—·085	North-westerly.	30 9	80·5	8th ,,	53·7	9th ,,	78 8	57·4	68·1	+
	Bankoora	Bankoora	29·717	30·039	—·074	W	50	80·1	8th ,,	53·3	9th ,,	78·3	56·6	67 5	+
	Beerbhoom, West Burdwan	Raneegunge	29·716	30·069	—·064	W	45·4	80·7	6th ,,	54·4	9th ,,	79·1	56·8	67·9	+
	Moorshedabad	Berhampore	29·971	30·042	—·081	NW	40·2	70·1	7th ,,	55·7	9th ,,	77·3	57·0	67·2	+
	Nuddea	Krishnaghur	30·060	30·070	—·048	WNW	56·9	80 3	7th ,,	53·2	9th ,,	78·9	55·1	67·0	+
	Jessore, Khoolna	Jessore	30·060	30·035	—·070	Calm	22·0	79·7	7th ,,	57·0	9th ,,	78 7	59·1	68·9	+
East Bengal.	Chittagong	Chittagong	29 950	30·044	—·059	Calm & W	38·0	80·1	5th ,,	58·6	7th ,,	79 2	60·2	69 7	+
	Chittagong Hill Tracts	Demagiri	Observations not received.												
	Backergunge	Barrisal	30·022	30·035	—·053	Calm	28·2	79·3	8th Jan.	58·1	4th ,,	77·7	59 9	68·8	+
	Noakholly	Noakholly	30·005	30·051	—	Variable	53·3	79·0	7th & 10th Jan.	56·0	8th ,,	77·0	57·9	67·9	=
	Furreedpore	Furreedpore	30·005	30 047	—·048	Calm	39	74 0	4, 5, 8, 10 Jan.	57·5	9th ,,	73·8	58·2	66·0	+
	Dacca	Dacca	30·004	30 028	—·077	Variable	67·0	81·1	5th ,,	55 8	9th ,,	79·5	58·4	69 0	+
	Tipperah	Commillah	30·017	30·054	—·041	SE	30·7	80·9	5th ,,	56·5	8th ,,	78·0	58·3	68·7	+
	Mymensingh	Mymensingh	29·982	30·013	—·055	ENE	55·0	76·9	5th ,,	60·5	10th ,,	75·3	61·5	68·4	+
North Bengal.	Bogra	Bogra	29·955	30·022	—·064	Calm	24·9	80·8	5th ,,	55·3	4th ,,	77·6	56·5	67·0	+
	Pubna	Serajgunge	29·984	30·033	—·067	SSE	23·4	81·4	5th ,,	56·0	4th ,,	78·3	56·7	67·5	+
	Rajshahye	Rampo Beauleah	29 962	30·036	—·059	N	83·7	78·9	5th ,,	55·2	4th ,,	77·2	56·7	66·9	+
	Maldah	Maldah	29·971	30·057	—	NW	61·9	80·0	5th ,,	53·5	9th ,,	78 8	55·7	67·3	
	Dinagepore	Dinagepore	29·925*	30·053	—·033	NE	55	80·1	5th ,,	55·2	4th, 7th, 10th Jan.	77·8	56·1	67·0	+
	Rungpore	Rungpore	29·937	30 069	—·078	E	28	80·0	5th ,,	52 7	4th ,,	77·3	55·9	66·6	+
	Julpigoree, Cooch Behar	Julpigoree	29·755	30 060	—·086	North-erly.	21·5	?	8th ,,	55 4	4th ,,	?	58·7	?	
	Darjeeling Hill Tracts	Darjeeling	22·989	—	—	WSW	92·1	53·7	4th & 5th Jan.	35·9	4th ,,	53·4	37·7	45·5	+
North Bengal.	Purneah, North Bhagulpore	Purneah	29·917	30·052	—·070	Calm	26·4	77·7	5th ,,	50·0	4th ,,	74·3	52·2	63·2	+
	Mozufferpore	Mozufferpore	Observations suspended.												
	Durbhunga	Durbhunga	29·890	30·069	—·061	WNW	31	78·9	6th Jan.	54 9	9th ,,	70·5	53·3	66·1	+
	Chumparun	Motihari	29·825	30·070	—·039	Variable	76·2	?	.....	48·9	5th ,,	?	50·1	?	
	Sarun	Chupra	Observations incomplete.												
South-East Bengal.	Shahabad	Dehree	29·717	30·007	—·045	SW	116·0	77·9	9th Jan.	49·5	9, 10 ,,	76·0	53·8	64·7	+
		Buxar	29·824	30 085	—·043	WNW	50·3	76 9	6th ,,	48·9	8th ,,	7 ·5	51·5	64·9	+
		Arrah	29·871†	30 080†	—·032†	Calm	47·2	78·0	5th ,,	40·3	9th ,,	76·1	51·7	63·9	+
	Gya	Gya	29·682	30·087	—·047	S	103·9	77·9	7th ,,	50·4	9th ,,	76 6	52·7	64·7	+
	Patna	Bankipore	29·879	30·076	—·068	SW	19·5	77·5	6th ,,	50·2	8th ,,	75·6	53·3	64·5	+
	South Bhagulpore, Monghyr	Bhagulpore	29·883	30·055	—·060	Calm & WNW	43	79·1	6th ,,	53·0	9th ,,	76·7	54·6	65·6	+
	Sonthal Pergunnah	Doomka	29·533	30 064	—	NNW	48·3	78·6	6th ,,	51 9	9th ,,	76·0	54·8	65·8	=
Central Division.	Hazaribagh	Hazaribagh	27·993	30 092	—·045	Variable	117·6	74·3	10th ,,	50·3	9th ,,	72·9	51·9	62 4	+
	Lohardugga, Manbhoom	Ranchee	27·854	30 078	—·054	Calm	92·5	76·0	8th ,,	47·9	8th ,,	73·1	50·9	62·0	+
	Singbhoom	Chyebassa	29·282	30·088	—	SSW	23·8	81·5	8th ,,	49·3	10th ,,	75·9	53·1	66·0	=

* Means of six days. † Means of five days.

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the *humidity* of the atmosphere is expressed as percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The ... the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question, namely stations in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 10th of January 1890.

Average humidity at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	DISTRICT OBSERVATIONS. RAINFALL. Of week. Mean for district.	Of week. Normal mean.	Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since 15th May 1889. Mean for district.	Since 15th May 1889. Normal mean.	Since 15th May 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	
83	0·6	Nil	Nil	0·01	Nil	0·02	−0·02	74·88	55·19	+19·69	0·0	0·1	Pooree	Pooree	Orissa.
77	0·1	Nil											Gopalpore		
88	1·0	Nil											False Point		
75	1·4	Nil	Nil	0·04	Nil	0·04	−0·04	66·24	51·59	+14·65	0·0	0·1	Cuttack	Cuttack	
83	0	Nil	Nil	0·05	Nil	0·10	−0·10	49·89	52·70	−2·81	0·0	0·1	Balasore	Balasore	
93	0·1	Nil	Nil	0·06	Nil	0·09	−0·09	58·43	62·10	−3·67	0·0	0·1	Sangor Island	South-West Midnapore	South-West Bengal.
														South 24-Parganahs	
79	0·9	Nil	Nil	0·09	Nil	0·16	−0·16	46·20	51·23	−4·94	0·0	0·2	Midnapore	Midnapore	
92	0·9	Nil	Nil	0·08	Nil	0·15	−0·15	53·38	51·33	+2·05	0·0	0·2	Calcutta	24-Parganahs	
														Howrah	
														Hooghly	
76	1·4	Nil	Nil	0·07	Nil	0·07	−0·07	43·83	46·38	−2·55	0·0	0·2	Burdwan	Burdwan	
82	0·9	Nil	Nil	0·07	Nil	0·07	−0·07	55·88	52·36	+3·52	0·0	0·2	Bankoora	Bankoora	
80	1·7	Nil	Nil	0·10	Nil	0·10	−0·10	52·44	51·28	+1·16	0·0	0·2	Raneegunge	Beerbhoom	
														West Burdwan	
95	0	Nil	Nil	0·10	Nil	0·10	−0·10	51·15	50·12	+1·03	0·0	0·2	Berhampore	Moorshedabad	Nadia Bengal.
88	0·1	Nil	Nil	0·07	Nil	0·08	−0·08	51·49	48·97	+2·52	0·0	0·2	Krishnaghur	Nuddea	
93	0·7	Nil	Nil	0·07	Nil	0·11	−0·11	53·39	52·78	+0·61	0·0	0·2	Jessore	Jessore	
														Khoolna	
93	3·1	Nil	Nil	0·06	Nil	0·08	−0·08	100·02	113·10	−13·08	0·0	0·2	Chittagong	Chittagong	
			Nil	0·13	Nil	0·15	−0·15	65·13	80·78	−15·65	0·0	0·3	Demagiri	Chittagong Hill Tracts	
93	0·3	Nil	Nil	0·19	Nil	0·24	−0·24	77·82	76·56	+1·26	0·0	0·3	Barrisal	Backergunge	
91	0	Nil	Nil	0·19	Nil	0·37	−0·37	90·29	106·20	−15·91	0·0	0·3	Noakholly	Noakholly	
95	1·4	Nil	Nil	0·07	Nil	0·10	−0·10	60·32	55·51	+4·81	0·0	0·2	Furreedpore	Furreedpore	
93	1·1	Nil	Nil	0·08	Nil	0·10	−0·10	74·59	59·33	+15·26	0·0	0·2	Dacca	Dacca	
90	1·0	Nil	Nil	0·16	Nil	0·21	−0·21	55·45	69·03	−13·58	0·0	0·3	Commillah	Tipperah	
94	2·6	Nil	Nil	0·08	Nil	0·09	−0·09	87·03	67·30	+20·33	0·0	0·2	Mymensingh	Mymensingh	
93	0	Nil	Nil	0·05	Nil	0·06	−0·06	64·81	56·99	+7·82	0·0	0·2	Bogra	Bogra	
96	0·4	Nil	Nil	0·00	Nil	0·07	−0·07	55·07	52·96	+2·11	0·0	0·2	Serajgunge	Pubna	
90	0	Nil	Nil	0·16	Nil	0·16	−0·16	54·30	53·48	+0·82	0·0	0·2	Rampore Beauleah	Rajshahye	
88	1·0	Nil	Nil	0·09	Nil	0·09	−0·09	39·76	53·84	−14·08	0·0	0·2	Maldah	Maldah	
89	1·1	Nil	Nil	0·05	Nil	0·05	−0·05	57·37	56·65	+0·72	0·0	0·2	Dinagepore	Dinagepore	
93	0·6	Nil	0·02	0·09	0·02	0·09	−0·07	85·18	73·81	+11·37	0·2	0·2	Rungpore	Rungpore	North Bengal.
89	2·7	0·03	0·06	0·02	0·06	0·02	+0·04	117·19	111·22	+5·97	0·6	0·1	Julpigoree	Julpigoree	
														Cooch Behar	
84	5·4	0·46	0·22	0·08	0·22	0·09	+0·13	152·97	120·37	+12·60	1·5	0·3	Darjeeling	Darjeeling Hill Tracts	
94	0·4	Nil	Nil	0·06	Nil	0·07	−0·07	74·71	58·21	+16·50	0·0	0·2	Purneah	Purneah	
			Nil	0·10	Nil	0·12	−0·12	48·66	42·73	+5·93	0·0	0·2	Mozufferpore	North Bhagulpore	
														Mozufferpore	North Behar.
90	0	Nil	Nil	0·08	Nil	0·12	−0·12	51·84	44·16	+7·68	0·0	0·1	Durbhunga	Durbhunga	
90	0	Nil	Nil	0·05	Nil	0·06	−0·06	63·55	46·19	+17·36	0·0	0·1	Motihari	Chumparun	
			Nil	0·06	Nil	0·06	−0·06	40·13	42·27	−2·14	0·0	0·2	Chupra	Sarun	
82	0	Nil													
82	0·1	Nil	Nil	0·06	Nil	0·08	−0·08	40·07	39·68	+0·39	0·0	0·2	Dehree	Shahabad	
88	1·0	Nil											Buxar		
													Arrah		
75	0·6	Nil	Nil	0·07	Nil	0·10	−0·10	37·07	40·99	−3·92	0·0	0·2	Gya	Gya	
85	0	Nil	Nil	0·07	Nil	0·10	−0·10	43·49	40·88	+2·61	0·0	0·2	Bankipore	Patna	
89	0·6	Nil	Nil	0·06	Nil	0·06	−0·06	42·43	43·14	−0·71	0·0	0·2	Bhagulpore	South Bhagulpore	South Behar.
														Monghyr	
85	0	Nil	Nil	0·09	Nil	0·09	−0·09	54·15	50·43	+3·72	0·0	0·3	Doomka	Sonthal Pergunnahs	
72	1·4	Nil	Nil	0·19	Nil	0·19	−0·19	41·03	50·30	−7·27	0·0	0·3	Hazaribagh	Hazaribagh	
71	0·3	Nil	Nil	0·20	Nil	0·20	−0·20	44·54	48·84	−4·30	0·0	0·3	Ranchi	Lohardugga	Chutia Nagpore.
			Nil	0·09	Nil	0·09	−0·09	38·33	46·54	−8·21	0·0	0·2		Manbhoom	
74	0·7	Nil	Nil	0·09	Nil	0·12	−0·12	48·76	50·90	−2·14	0·0	0·2	Chyebassa	Singbhoom	

ten years. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
17 years. The means of the district are the numerical average of the rainfall return received in the district, i.e., from total rainfall at the subdivisional

ɜtement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 10th of January 1890.

ɔlogical ɜion.	District.	Station.	Rainfall. Saturday, 4th January 1890.	Sunday, 5th January.	Monday, 6th January.	Tuesday, 7th January.	Wednesday, 8th January.	Thursday, 9th January.	Friday, 10th January.	Total Number of rainy days.	Total Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
..	Pooree ...	Pooree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	80·63	51·08
		Khurdah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	76·57	56·25
		Bampur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	65·50	48·95
		False Point ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	70·80	03·27
		Gop ...	...	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Pipli .											?		?
	Cuttack	Jagatsingpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	73·97	46·73
		Banki ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	52·43	49·32
		Cuttack ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	75·18	56·03
		Kendrapara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	72·03	52·78
		Jajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	57·04	53·14
		Dharmsala .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·25	?
		Salipore .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	?
	Balasore ...	Chandbali ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	54·64	52·03
		Bhuddruck ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	57·66	51·32
		Sorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	46·05	50·87
		Balasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	46·61	57·54
		Jellasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	39·59	53·43
		Baripodah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	54·79	53·64
ɪh-West ɜngal.	Midnapore ...	Contai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	55·13	61·08
		Sangor Island ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	56·74	66·76
		Tumlook ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	49·40	50·89
		Midnapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	46·26	48·51
		Ghatial ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	43·19	54·26
		Kukrahaty ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·65	?
		Heria ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	05·06	?
		Bhagwanpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·72	?
		Garbetta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	?
	24-Pergunnahs	Diamond Harbour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	63·41	58·03
		Canning Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·80	
		Alipore Jail ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	51·80	55·46
		Barrackpore...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	51·79	49·52
		Dum-Dum ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	04·58	51·31
		Baraset .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	57·81	49·53
		Basseerhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	60·92	54·24
	Howrah ...	Howrah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	59·12	51·52
		Mohesreka (*Ooloberiah.*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	54·64	51·73
	Hooghly ..	Serampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	55·27	49·80
		Hooghly ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	36·92	47·84
		Jehanabad ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	41·16	54·70
	Burdwan ...	Culna .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	41·32	45·08
		Burdwan ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	47·07	47·54
		Cutwa ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	43·11	47·51
		Raneegunge .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	55·83	48·78
		Mankur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·71	?
	Bankoora ...	Bankoora ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	50·79	51·19
		Bishenpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	57·49	51·06
		Malara ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06		51·64
		Khatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	65·91	53·84
		Indas ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	?
		Kotalpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	?
		Anda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·44	?
		Gangajalghati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·17	?
		Raspore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	?
		Sonamukhi ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·33	?
	Beerbhoom .	Bh. Soory ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	59·06	53·56
		Hotampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	42·07	53·91
		Rampore Haut	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	47·78	51·13
		Bolpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·97	?
		Murarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	?
	Nuddea ...	Ranaghat .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	55·80	46·63
		Kishnaghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	42·95	46·81
		Chooadanga ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	49·81	50·79
		Meherpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	53·05	47·30
		Koushtea .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	55·91	54·15
	Khoolna ..	Satkhira .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	52·51	54·89
		Bagirhat ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	54 00	60·99
		Khoolna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	55·78	54·37
		Nakipur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Jessore ...	Narail .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	40·47	45·44
		Jessore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	62·35	53·87
		Jhenidah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	50·56	53·06
		Magoorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	56·48	48·94
		Bongong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	46·01	51·44
	Moorshedabad	Kandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	55·38	50·75
		Berhampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	46·16	50·90
		Lalbagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	47·13	50·59
		Azimgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13		50·78
		Jungipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	55·01	48·79
		Lalgola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	59·02	50·53
		Jiagunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·25	?
		Akhriguni ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	42·81	?
		Patkabari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
ɜ Bengal	Chittagong ...	Cox's Bazar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	123·89	135·14
		Chittagong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	76·42	93·95
		Kutubdia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113·09	?
		Satkanya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	65·66	?
	Chittagong Hill Tracts.	Rangamati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	63·04	83·33
		Ruma ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	67·20	79·96
	Backergunge	Patuakhally ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	87·20	87·35
		Perozepore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	72·16	69·60
		Burrisal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	72·62	67·23
		Bhola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	79·26	81·66

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 10th of January 1890 —contd.

Meteorological Division.	District.	Station.	Rainfall. Saturday, 4th January 1890.	Sunday, 5th January.	Monday, 6th January.	Tuesday, 7th January.	Wednesday, 8th January.	Thursday, 9th January.	Friday, 10th January.	Total number of rainy days.	Total Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
Bengal proper.		*Gourreddi*	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	61·31	?
		Bauphal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	92·89	?
	Noakholly	Noakholly	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	102·17	107·45
		Fenny	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·47	78·38	100·38
		Harishpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	82·90	?
		Ramganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	80·75	?
	Furreedpore	Madaripore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	60·80	55·10
		Furreedpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	63·80	55·95
		Goalundo	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	56·20	52·86
	Dacca	Munshigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	70·33	69·68
		Dacca	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	73·09	58·15
		Naraingunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	80·36	59·51
		Manickgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	67·09	49·70
		Joydebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·61	?
	Hill Tipperah	Agartola	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	44·08	61·12
	Tipperah	Comilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	62·17	75·03
		Chandpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	64·82	76·14
		Brahmunberia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	50·08	61·17
		Ramchandrapore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·14	?
		Nasirnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	80·59	?
		Daudkandi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	52·29	?
		Kasba	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	62·44	?
		Laksham	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·09	?
	Mymensingh	Kishoregunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	69·56	69·70
		Atia (*Tangail*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	61·00	55·09
		Mymensingh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	90·55	73·71
		Jamalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	85·14	64·51
		Nettrokona	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	125·02	72 04
		Subornakhali	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·43	?
		Durgapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·98	?
		Sherepore Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·09	?
		Dewanganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	56·31	?
North Bengal.	Pubna	Pubna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	49·87	53·38
		Serajgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	60·26	52·45
	Bogra	Sherepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	62·06	57·11
		Nowkhilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	60·90	53·90
		Bogra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	70·63	60·28
		Panchbibi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	64·96	55·43
	Rajshahye	Beauleah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	46·20	52·05
		Nattore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	58·84	54 53
		Naogaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	57·87	50·76
		Lalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	36·72	?
		Mando	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·27	?
	Maldah	Maldah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	50·53	51·37
		Chanchal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	28·96	56·29
		Gajol	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·79	?
		Sibganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·77	?
	Dinagepore	Mohadebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	53·63	55 93
		Churamon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	61·82	51·93
		Raigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	52·25	57·27
		Dinagepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	67·84	63·09
		Balooghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	61 28	50·95
		Thakoorgaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·47	?
	Rungpore	Bhawanigunge (*Gyabanda*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	87·55	61·40
		Rungpore	.....	.....	0·09	.....	.....	.....	.....	1	0·09	0·09	0·11	74·50	74·07
		Kurigram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 05	90·97	72·88
		Bardogra (*Nilphamari*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	87·09	84·74
		Ulipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	79·00	?
	Julpigoree	Julpigoree	.....	.....	.....	0·05	.....	.....	.....	1	0·05	0·05	0·03	123·33	116·48
		Alipore Door	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·58	?
		Fallacotta	.....	.....	.....	.....	0·20	.....	.....	1	0·20	0·20	?	127·03	?
		Debigany	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	89·02	?
		Bhagalpore (Nagrakatta).	.....	.....	0·12	0 22	0·08	.....	.....	3	0·42	0·42	?	138·93	?
	Cooch Behar	Dinhatta	.....	.....	0·19	.....	.....	.....	.....	1	0·19	0·19	0·03	98·19	95·75
		Cooch Behar	.....	.....	.....	0 05	.....	.....	.....	1	0 05	0·05	0·02	125·39	117·88
		Mekiligunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	121·57	10·21
		Mashbhenga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	117·63	111·17
	Darjeeling Hill.	Buxa	.....	.....	.....	0·10	0 41	.....	.....	2	0·51	0·51	0·23	191·00	191·06
		Silliguri	.....	.....	.....	.....	0·03	.....	.....	1	0·03	0·03	0·01	120·74	102·51
		Darjeeling	.....	.....	.....	.....	0·06	0·13	.....	2	0·16	0·16	0·11	128·03	108 23
		Kalimpong	.....	.....	.....	.....	0·16	.....	.....	1	0·16	0·16	0·01	91·52	82·67
		Kurseong	.....	.....	.....	0·12	0·36	0·15	.....	3	0·63	0·63	?	168·88	?
Behar	Purneah	Kissengunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	102·37	89·90
		Arrareah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	79·01	63·37
		Purneah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	63·45	61·19
		Gondwara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Balrampore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Matiari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Kaliaganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	North Bhagulpore.	Maddapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Scopool	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	60·85	49·14
		Protabganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	67·20	47·75
	Durbhunga	Tajpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·85	?
		Durbhunga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	42·44	42 76
		Madhubani	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	50·01	45·36
		Rahera	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	63·11	44·47
		Roshera	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·96	?
	Mozufferpore	Sitamarhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·84	?
		Mozufferpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	55·06	42·69
		Hajipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	48·41	44 91
		Pare	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	42·52	41·51
		Mahua	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	37·09	?
		Sinhar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41·02	?
		Pupri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	47·60	

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 10th of January 1890—concld

Meteorological Division.	District.	Station.	Rainfall. Saturday, 4th January 1890.	Sunday, 5th January.	Monday, 6th January.	Tuesday, 7th January.	Wednesday, 8th January.	Thursday, 9th January.	Friday, 10th January.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
North Behar —concluded.	Chumparun...	Motihari ...	.....	.....	.....	.....	.. ..	.....	.....	Nil	Nil	Nil	0·06	74·70	44·2
		Bettiah ...	. ...	. .	... ..	.....	.. ..	.. ..	.....	Nil	Nil	Nil	0·05	52·29	47·8
		Ragahs ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·87	?
		Burhurwa ..	.....	... .	... ..	.....	... ..	.....	.....	Nil	Nil	Nil	?	51·70	?
	Sarun ...	Gopalgunge ..	... ..	. .	.....	.. ..	.. ...	.....	.....	Nil	Nil	Nil	0·04	35·48	42·7
		ew n	. ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	41·20	43·3
		Chuprah ...	.	... ..	.....	.. ...	.....	.....	... ..	Nil	Nil	Nil	0·08	40·74	40·6
South Behar	Shahabad *	Buxar	.. .	... ...	. ..	.....	.. ..	... ..	.....	Nil	Nil	Nil	0·12	47·44	37·8
		Dehree	..	.. ..	.....	.. ..	.....	.....	... ..	Nil	Nil	Nil	0·04	42·06	39·3
		Bhaboosh ...	.....	.. ..	. ..	... ..	....	.....	... ..	Nil	Nil	Nil	0·07	38·16	40·3
		Sasseram ..	... ..	.....	.....	.....	.....	.....	... ..	Nil	Nil	Nil	0·08	29·41	40·2
		Arrah ...	.....	... ..	.. ..	... ..	.....	.....	.....	Nil	Nil	Nil	0·09	42·69	39·7
		Mohaniah ...	.....	. ....	.....	.....	.....	.. ..	.....	Nil	Nil	Nil	?	?	?
	Gya ..	Aurungabad...	.....	...	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	35·42	42·3
		Gya ...	.. .	.....	... ..	.....	.. ..	.....	... ..	Nil	Nil	Nil	0·07	39·85	42·1
		Nowadah .	... ..	.... .	.....	.....	....	... ..	.....	Nil	Nil	Nil	0·03	39·59	39·4
		Johanabad ...	.....	... .	.....	. ..	.....	.....	.....	Nil	Nil	Nil	0·15	33·40	39·5
		Arwal ...	.....	..	.....	... ..	.. ..	.....	. ..	Nil	Nil	Nil	?	34·34	?
		Daudnagar ..	.....	.. ..	.....	.....	.....	... ..	... ..	Nil	Nil	Nil	?	26·69	?
		Sherrghati ...	... ..	.....	... ..	.....	.....	.. ...	.....	Nil	Nil	Nil	?	20·29	?
		Raiauli ..	.....	.....	... .	.... .	. ..	... ..	.....	Nil	Nil	Nil	?	17·92	?
		Pakri Barawan	.. ..	.....	.....	.....	... ..	.. ...	.....	Nil	Nil	Nil	?	31·90	?
	Patna ...	Patna ...	... ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	51·49	41·5
		Dinapore ..	.....	... ..	.....	.. ..	.....	.....	.....	Nil	Nil	Nil	0·09	45·53	41·6
		Behar ...	.....	.. ..	...	... ..	.....	... ..	... ..	Nil	Nil	Nil	0·09	41·08	41·4
		Barh ...	. ...	... ..	.....	... ..	.....	.....	. ..	Nil	Nil	Nil	0·09	35·81	39·4
		Bekram ...	.....	. .	.....	... ..	.....	.....	.....	Nil	Nil	Nil	.	43·28	?
		Hilsa ...	.....	.. ..	.....	...	.....	.....	.....	Nil	Nil	Nil	?	35·21	?
	Monghyr ...	Begoosarai ...	.....	.....	.... .	.....	.....	.....	.....	Nil	Nil	Nil	0·06	47·02	39·6
		Monghyr	.....	.....	... ..	.....	.....	.. ...	.....	Nil	Nil	Nil	0·07	41·67	40·1
		Jamui ...	.....	.... .	....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	39·48	42·4
		Gogri ...	... ..	..	.....	.....	... ..	.....	... ..	Nil	Nil	Nil	?	39·19	?
		Sheikpura ...	.....	.....	.....	.....	.....	.. ..	.....	Nil	Nil	Nil	?	43·32	?
	South Bhagulpore	Bhagulpore ...	.....	... ..	.....	... ..	... ..	.....	... ..	Nil	Nil	Nil	0·04	45·06	41·8
		Banka .	... ..	.....	... .	.....	.....	.....	.....	Nil	Nil	Nil	0·09	38·34	43·3
		Kalgong ...	.....	.. .	. ..	.....	.....	.....	.....	Nil	Nil	Nil	?	45·97	?
		Bangaon ...	....	.. ..	.....	... ..	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Sonthal Pergunnahs.	Rajmehal ...	.....	.....	.... .	... .	.....	.... .	.....	Nil	Nil	Nil	0·02	50·90	52·0
		Godda ...	... ..	... .	.. .	.. ..	.....	.....	.....	Nil	Nil	Nil	0·09	49·04	47·2
		Pakour ...	.....	... ..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	73·50	55·1
		Nya Doomka	....	.....	.....	.....	...	.....	... ..	Nil	Nil	Nil	0·15	56·75	52·8
		Deoghur ...	... ..	.....	... ..	.....	... ..	.....	.....	Nil	Nil	Nil	0·09	40·40	50·2
		Jumura ...	.... .	... ..	...	.....	...	.....	.....	Nil	Nil	Nil	0·15	45·21	48·8
		Mohagama ...	... ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	56·41	?
		Nanihat ...	.....	.. ..	....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·87	?
Chutia Nagpur.	Hazaribagh ...	Pachamba ... (*Giridi*).	.....	....	.....	.....	.....	.... .	.....	Nil	Nil	Nil	0·00	38·90	47·1
		Hazaribagh ...	... ..	.....	... ..	.....	.....	.....	.....	Nil	Nil	Nil	0·17	49·10	46·7
		Semtagurah	. ..	.. ..	... .	.....	.....	.....	.....	Nil	Nil	Nil	0·15	30·24	46·5
		Mahudi Hills	. .	... ..	....	... ..	.....	.....	. ..	Nil	Nil	Nil	0·28		47·2
		Jhoomra Hills	.....	.....	. .	... ..	.....	.....	. .	Nil	Nil	Nil	0·26	43·00	62·2
		Barhi ...	... ..	... ..	..	.. ..	.....	.....	. .	Nil	Nil	Nil	?	31·36	?
		Chatra ...	. ..	.....	.....	.....	.....	.....	... ..	Nil	Nil	Nil	?	46·04	?
		Karaglsha .	.....	... .	... .	... ..	.....	.....	.. .	Nil	Nil	Nil	?	30·35	?
		Ramgnar ..	. ..	.....	.....	.....	.....	.....	... ..	Nil	Nil	Nil	?		?
	Lohardugga ..	Lohardugga ...	.....	.....	.. .	.....	.....	.....	.. ..	Nil	Nil	Nil	0·17	45·24	50·8
		Ranchi ...	...	.....	.....	.. ..	.. ..	... ..	.....	Nil	Nil	Nil	0·10	53·61	51·6
		Palamow .	.....	.....	.....	.....	.....	... ..	... ..	Nil	Nil	Nil	0·14	34·16	42·7
		Silli ...	..	.. .	.. ..	.....	.....	. ..	... .	Nil	Nil	Nil	?	33·80	?
		Baiumat ...	.. ..	... .	. ..	.....	... ..	.....	.. ..	Nil	Nil	Nil	?	?	?
		Hossenabad..	. ..	. .	.. .	.....	... ..	.....	.....	Nil	Nil	Nil	?	41·40	?
		Garwah .	.....	... .	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28·77	?
	Singbhoom	Chyebassa ...	. ..	... .	...00	... ..	... ..	.....	.. ..	Nil	Nil	Nil	0·12	48·76	51·1
		Chakradhar-pore.	....	.....	.....	.....	.....	... .	.....	Nil	Nil	Nil	?	40·80	?
		Ghatsilla ...	.....	... ..	..	.....	.....	.....	.....	Nil	Nil	Nil	?	58·70	?
		Ruharagura..	.....	.....	. ..	... ..	....	.....	.....	Nil	Nil	Nil	?	53·80	?
	Manbhoom ...	Purulia ...	. ..	... .	.....	. ....	.....	.....	.....	Nil	Nil	Nil	0·07	48·46	48·6
		Gobindpore ..	... ..	.....	... ..	... ..	.. ...	.....	.....	Nil	Nil	Nil	0·10	39·19	44·6
		Raghunath-pore.	. ..	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	?	45·91	?
		Barrabhoom	.....	... .	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·32	?
		Jhalda ..	... ..	.....	.....	.....	... ..	.....	... ..	Nil	Nil	Nil	?	51·42	?
		Chas	... ..	... ..	....	.....	.....	... ..	.....	Nil	Nil	Nil	?	58·56	?

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 14th January* 1890.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 10TH JANUARY 1890.

NORMAL north-east monsoon conditions obtained over the whole of Bengal throughout the previous week. Over the greater part of the province similar conditions have again prevailed during the present week, but there has been an exception to the prevailing fine weather over a part of the north, and to a smaller extent over part of the centre, of the province, from the fact that a very feeble area of relatively low pressure was formed on the 5th which included many stat in the centre of the province, stretching from Dinagepur on the north to Jessore in the so and from Bankoora on the west to Serajgunge in the east, and round which there was a l kind of cyclonic circulation of winds, the centre of the circulation being to the east of Berhampore. The feeble area of low pressure was again perceptible on the 6th, the centre being apparently a little north of its position on the previous day, and again there was a slight circulation of winds round the centre. On the 7th the lowest pressure in the province was at Bogra, near which apparently the feeble low-pressure area again existed. But on the 8th pressure had become slightly low over a part of North and East Bengal, while on the 9th the lowest pressure in the province had retreated southwards to Burrisal, when conditions became practically normal again. It will be thus seen that there was a tendency for slightly disturbed conditions to set in over the centre and north of the province for the period, the 6th to the 9th of January. The disturbance was, however, not sufficient to do more than give slightly cloudy weather at some of the stations in the centre of the province, but in the hills and at the stations nearest the hills the disturbance showed itself by giving rather heavily-clouded skies and light rain showers These showers were practically entirely confined to the Julpigoree, Cooch Behar, and Darjeeling Hills districts. In most cases the falls were slight only, and the only station which received a fall larger than half an inch was Kurseong.

Over the remainder of the province fine north-east monsoon weather has continued, though, as is frequently the case when weather is slightly disturbed, temperature and humidity have been somewhat high; but the skies have remained almost cloudless, and rain has been entirely absent from the remainder of the province for the whole week.

Pressure—On the 4th of January fell very slowly at some of the stations in the centre of the province, while it was rising at some of the stations in East and North Bengal. A further general fall took place on the following day except at some of the south-eastern stations. On the 6th a rather rapid rise took place, which was continued on the 7th, but on the 8th pressure had fallen moderately again, though there was again a rise at the end of the week. For the whole province for the week the mean pressure has been considerably in defect of the normal, the average defect ranging from about five to eight-hundredths of an inch.

Temperature—Has been generally increasing during the week, and in all districts, except Orissa, the mean temperature has been rather considerably in excess of the normal, the excess ranging up to more than four degrees in East and North Bengal. For the whole province the mean temperature has been 2·8° in excess of the normal.

The general distribution of temperature during the week, its range from day to night, and its variation from the normal, are best shown in the following table, where the average maximum, minimum and mean temperatures for the week at nine typical stations in different districts of the province are compared with the normal It will be seen that both day and night temperatures have been in excess of the normal, the night temperatures, if anything, showing rather the greater excess:—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 10th January 1890.

	Normal mean maximum temperature for the week ending 10th January.	Actual mean maximum temperature for the week ending 10th January 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 10th January.	Actual mean minimum temperature for the week ending 10th January 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 10th January.	Actual mean daily temperature for the week ending 10th January 1890.	Variation of actual mean from the normal.
Cuttack	83·7	82·1	−1·6	59·8	58·8	−1·0	71·8	70·5	−1·3
Calcutta	76·1	76·9	+0·8	54·6	57·2	+2·6	65·4	67·0	+1·6
Dacca	77·0	79·5	+2·5	54·8	58·1	+3·6	65·9	69·0	+3·1
Burdwan	77·3	78·8	+1·5	54·2	57·4	+3·2	65·7	68·1	+2·4
Patna	72·4	75·6	+3·2	48·0	53·3	+4·4	60·7	64·5	+3·8
Gya	75·0	76·6	+1·6	51·3	52·7	+1·4	63·1	64·7	+1·6
Purneah	74·5	74·3	−0·2	47·6	52·2	+4·7	60·9	63·2	+2·3
Hazaribagh	71·6	72·9	+1·3	49·3	51·9	+2·6	60·5	62·4	+1·9
Darjeeling	46·9	53·4	+6·5	35·7	37·7	+2·0	41·3	45·5	+4·2

Rainfall.—A few showers have fallen in the Julpigoree, Cooch Behar, and Darjeeling Hills districts, but the falls are as a rule small. The largest fall is one of 0·63 inch at Kurseong and of 0·42 inch at Nagrakotta, but in all other cases the falls have been less than a quarter of an inch. In other districts, beyond a slight shower at Rungpore, there has been absolutely no rain.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 10th of January 1890 :—

Meteorological Divisions.	Temperature.						Rainfall.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
	°	°	°	°	°	°	Inches.	Inches.	Inches.				Inches.	Inches.	Inches.	Inches.
Orissa*	83·3	53·5	80·0	58·3	69·2	0	Nil	0·04	−0·04	0·9	0·1	−0·1	Nil	0·05	62·01	53·58
South-West Bengal ...	82·3	53·2	78·2	57·3	67·7	+2·5	Nil	0·08	−0·08	0·0	0·2	−0·2	Nil	0·11	52·37	51·67
East Bengal	81·1	55·8	77·5	59·2	68·4	+4·1	Nil	0·12	−0·12	0·0	0·2	−0·2	Nil	0·16	75·53	73·87
North Bengal*	81·4	52·7	77·8	56·3	67·0	+4·5	0·02	0·07	−0·05	0·2	0·2	0	0·02	0·07	73·14	69·94
North Behar	78·9	50·0	75·4	54·0	64·7	+3·3	Nil	0·06	−0·06	0·0	0·2	−0·2	Nil	0·08	57·60	48·27
South Behar	79·1	48·9	76·3	53·1	64·7	+3·4	Nil	0·07	−0·07	0·0	0·2	−0·2	Nil	0·08	44·16	43·42
Chutia Nagpur	76·0*	47·9*	73·0*	51·4*	62·2*	+1·6*	Nil	0·16	−0·16	0·0	0·3	−0·3	Nil	0·17	43·08	49·05

* Poorea, Julpigoree, Motiharee, Chupra and Chyebassa not included.

Meteorological Office, Bengal; *The 14th January* 1890.

A. Pedler,
Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 5th to 11th January 1890.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature.						Hygrometry.			Rainfall past 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Jan. 1890 ...	5th ...	29·992	69·7	79·9	20·4	59·5	73·4	65·5	·524	60·3	63	.....
,, ,, ...	6th ...	30·094	69·7	79·9	20·5	59·4	71·6	65·6	·552	61·7	71	.....
,, ,, ...	7th ...	·120	69·1	79·9	21·6	58·3	71·6	65·6	·552	61·7	71	.....
,, ,, ...	8th ...	·058	70·4	80·9	21·0	59·9	72·6	66·6	·574	62·9	72	.....
,, ,, ...	9th ...	·100	67·3	77·9	21·2	56·7	70·6	63·6	·496	58·7	66	.....
,, ,, ...	10th ...	·053	67·4	77·9	21·0	56·9	69·6	64·1	·526	60·4	73	.....
,, ,, ...	11th ...	·025	69·0	78·9	19·9	59·0	71·1	65·6	·558	62·1	73	.....

	Inches.
The mean 10 A.M. pressure of the seven days	30·063
	°
The mean temperature of the seven days	68·9
The extreme variation of temperature	24·2
The maximum temperature	80·9
	%
The mean 10 A.M. relative humidity of the seven days	70
	Inches.
The total fall of rain from 5th to 11th January 1890	Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. Little,
For Meteorological Reporter to the Govt. of India.

Meteorological Office, India; *The 13th January* 1890.

MEMORANDUM.

THE total number of deaths registered during the month of November 1889 in the districts of Bengal amounted to 147,795, against 148,610 in the preceding month, 138,989 in November 1888, and an average of 155,663 in the corresponding months of the previous five years 1884—88. These figures correspond to annual death-rates of 26·88, 27·00, 25·44 and 28·20 respectively. It will thus be seen that while the death-rate for November 1889 was less than that of the preceding month and of the average mortality of November, it was in excess of the mortality of November 1888. Of the 147,795 deaths registered in November 1889, 76,066, or 27·84 per thousand, were males and 71,729, or 25·92 per thousand, were females.

2. The highest death-rates were returned in order of sequence from the following districts. For comparison the mortality in them during November 1888 is also exhibited :—

Districts.	Ratio per *mille* during—		*Districts.*	Ratio per *mille* during—	
	Nov. 1889.	Nov. 1888.		Nov. 1889.	Nov. 1888.
Serampore	47·04	29·76	Shahabad ...	33·60	39·48
Monghyr	40·32	32·04	Dinajpur ...	33·48	33·12
Jessore	37·92	33·24	Gya ...	32·76	33·48
Backerganj	37·08	27·96	Noakhali ...	32·40	29·04
Cuttack	37·08	13·80	Bhagulpore ...	32·28	32·04
Hughli	35·40	27·84	Khulna ...	32·16	32·76
Julpaiguri	35·40	35·64	Rajshahye ...	31·68	26·64
Poori	35·04	16·68	Howrah ...	29·64	24·00
Balasore	34·56	17·76			

3. The following statement compares the rates of mortality under the several heads of disease during the three periods, viz., November 1889, 1888, and the average for that month of the five years 1884—88 :—

	Ratio per *mille* during—		
	November 1889.	November 1888.	Mean of previous five years, 1884—88.
Cholera	·96	1·32	1·92
Small-pox	·01	·03	·02
Fever	20·76	19·56	21·60
Bowel-complaints	·72	·60	·84
Injury	·24	·01	·24
Other causes	3·84	3·48	3·36

The only noticeable point indicated by the above figures is that cholera was considerably less fatal in November 1889 than in either of the past periods with which that month is compared, and that fever as compared with November 1888 has increased somewhat.

4. In the statement below the districts are exhibited in which the highest proportions of deaths were recorded :—

Cholera.	Ratio per *mille.*	*Fever.*	Ratio per *mille.*	*Other Causes.*	Ratio per *mille.*
Cuttack	7·92	Monghyr	35·52		
Serampore	5·40	Julpaiguri	33·24	Poori	18·60
Jessore	4·80	Dinajpur	31·80	Backerganj ...	10·68
Poori	4·56	Jessore	30·48		
Balasore	4·56	Purneah	29·16		
Howrah	2·76	Rajshahye	28·92		
Faridpore	2·64	Gya	28·80		
		Serampore	28·56		
		Noakhali	27·96		
		Shahabad	27·96		
		Rungpore	26·64		
		Bhagulpore	26·40		
		Hughli	26·04		
		Khulna	25·32		
		Backerganj	25·32		
		Hazaribagh	24·36		
		Maldah	24·12		

5. The following table exhibits the death-rates among the five principal *classes* which comprise the population of the Bengal province, viz., Hindus, Mahomedans, Other classes, Buddhists, and Christians, arranged so as to show the graduated rates of mortality among them respectively :—

Classes.	Ratio per *mille*—	
	Nov. 1889.	Nov. 1888.
Hindus	27·48	24·84
Mahomedans	26·52	27·12
Other classes	16·20	18·60
Buddhists	15·48	15·84
Christians	14·64	15·48

6. Referring to mortality in relation to *Age*, infants under one year furnished a death-rate of 190·32 per 1,000 of the living, against 172·32 per 100 in November 1888, and old men of 60 years and upwards of 73·08 per 1,000, against 64·68 in November 1888. The mortality under the other groups of ages ranged from 38·52 per 1,000 among persons between 50 and 60 years of age to 12·00 per 1,000 among persons between 10 and 15 years. The corresponding proportions in November 1888 were 35·04 and 11·88 respectively.

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

The 13th January 1890.

Statement showing the Results of the Registration of Deaths in the Districts in Bengal for the month of November 1889.

DIVISIONS.	DISTRICTS.	4 POPULATION.			5 MORTALITY ACCORDING TO— Disease. Deaths from—							Ratio per 1,000 of population per annum.							6 Comparison with previous periods.		7 Deaths among—		8 Sex. Ratio per 1,000 of population per annum.		9
		Males.	Females.	Total.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous month.	Ratio of deaths per 1,000 of population per annum in the corresponding month of the previous year.	Males.	Females.	Males.	Females.	Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population.
BURDWAN	Burdwan	668,295	723,528	1,391,823	34	...	2,013	61	13	491	2,314	·24	...	19·20	·48	·10	4·20	24·43	24·12	19·68	1,463	1,376	26·28	23·80	114
	Bankura	507,196	534,618	1,041,732	2	2	1,109	33	7	244	1,395	·01	·01	12·79	·36	·06	2·53	15·72	17·28	13·44	737	651	17·40	14·16	133
	Birbhum	381,563	412,865	794,428	12	...	1,239	5	12	311	1,568	·12	...	19·09	·47	·12	5·88	25·44	27 24	24·72	798	890	25·08	25·80	97
	Midnapore	1,243,195	1,272,370	2,515,565	114	15	4,984	239	47	853	5,353	·43	·09	19·44	1·08	·12	3·98	25·44	25·92	22·80	2,779	2,573	25·76	24·24	110
	Hughli	315,665	347,385	663,050	39	...	1,440	150	20	208	1,858	7·0	...	28·4	5·76	·36	5·23	53·40	24·64	27·84	932	974	37·32	33·60	111
	Serampore	174,366	177,589	351,955	160	..	818	135	14	265	1,382	5·40	...	28·53	5·52	·36	6·96	47·04	34·44	29·76	694	698	47·76	46·44	103
	Total (Hughli including Serampore).	490,031	524,974	1,015,005	199	..	2,278	324	34	503	3,338	2·36	...	26·88	3·72	·36	5·88	39·36	31·32	23·44	1,676	1,652	41·04	37·92	108
PRESIDENCY	Howrah	316,479	318,302	635,381	147	3	791	264	21	350	1,575	2·76	·04	14·88	4·92	·36	6·60	29·64	23·88	24·00	817	768	50·43	28·99	105
	24-Pergunnahs	860,841	812,521	1,673,362	149	8	2,434	153	47	443	3,274	·86	·04	17·41	1·08	·24	3·36	23·49	19·32	32·52	1,7.0	1,504	2·.80	24·20	111
	Nuddea	805,779	849,442	1,655,721	74	...	2,396	16	35	502	3,013	·48	...	17·28	·10	·24	3·60	21·72	24·00	28·92	1,565	1,448	23·28	20·40	118
	Jessore	959,271	990,104	1,949,375	782	...	4,928	20	34	372	6,138	4·80	...	30·48	·12	·12	2·28	37·92	27·12	33·24	3,153	2,956	33·36	29·16	111
	Murshidabad	586,483	640,307	1,226,790	74	...	2,136	14	17	274	2,515	·72	...	29·88	·12	·12	2·64	34·68	27·96	37·44	1,379	1,289	28·14	24·24	89
	Khulna	568,402	511,546	1,079,948	70	...	1,279	11	28	508	2,900	·72	...	25·32	·12	·24	5·64	32·16	27·33	32·76	1,442	1,458	30·13	34·32	93
	Dinajpur	782,282	732,054	1,514,336	...	...	4,018	8	29	154	4,209	...	...	31·80	·06	·12	1·44	33·48	27·12	37·12	2,144	2,095	33·84	31·32	108
	Rajshahye	660,710	678,903	1,339,603	4	...	3,240	20	43	237	3,544	·01	...	23·92	·12	·34	2·04	31·64	30·00	30·84	1,779	1,774	32·04	31·32	102
	Rungpore	1,067,701	1,030,283	2,097,984	12	...	4,370	14	29	343	5,068	·06	...	20·81	·08	·10	1·92	23·02	29 83	31·56	2,640	2,424	29·64	28·20	105
RAJSHAHYE	Bogra	372,193	361,200	734,393	2	...	1,242	1	16	212	1,513	·04	...	20·88	·01	·24	3·36	24·72	23·16	25·44	768	745	24·73	24·72	100
	Pubna	648,311	663,417	1,311,728	77	...	2,419	9	29	109	2,624	·60	...	22·08	·07	·12	·84	24·00	26·52	27·84	1,353	1,272	24·93	23·93	104
	Darjiling	89,351	66,294	155,645	...	...	279	32	2	61	374	...	...	21·48	2·40	·12	4·68	28·80	21·20	28 32	18	178	24·23	33·16	81
	Julpaiguri	305,372	270,418	552,300	1	...	1,617	13	10	81	1,722	·01	...	33 24	·24	·12	1·51	35·40	32 28	33·84	86	847	34·20	33·72	93
DACCA	Dacca	1,033,963	1,042,447	2,116,350	71	5	2,899	274	51	956	4,251	·38	·02	16·42	1·44	·24	5·40	24 12	23·04	21·60	2.2.	1,959	28·64	21·60	123
	Faridpore	805,989	825,745	1,631,734	352	2	2,702	64	27	557	3,704	2·64	·01	14 80	·36	·12	4·08	27·12	29 64	20·16	1.9.	1,774	28·68	25·68	111
	Backerganj	978,479	927,410	1,905,889	2.	...	4,026	61	65	1,769	5,89	·12	...	25·12	·36	·36	10·68	37·08	24·91	27·96	2,56.	3,027	35·23	39·12	93
	Mymensing	1,555,849	1,501,103	3,056,943	28	13	4 094	64	25	765	4,9.7	·10	·04	15 91	·24	·09	3·00	19 51	19 72	19·56	2,087	2,290	29·61	16·24	113
CHITTAGONG	Chittagong	531,849	600,692	1,132,541	...	...	1,859	91	33	177	2,133	...	...	19·56	·96	·33	1·79	22 80	22 05	19·44	1,031	1,103	23·64	21·96	103
	Noakhali	415,248	405,524	820,772	6	...	1,919	17	31	244	2,222	·18	...	27·6	·12	·49	3·48	31 40	24 90	29·04	1,033	1,159	31·67	22·31	140
	Tipperah	769,459	745,911	1,514,361	20	1	2,197	58	44	640	2,960	·12	·07	17·40	·36	·24	5 04	13 05	20·28	23·52	1,514	1,446	24·00	27·36	93
PATNA	Patna	856,501	895,058	1,751,559	42	6	3,007	200	39	621	3,955	·24	·03	29·76	1·32	·24	4·20	27 01	34 68	22 56	1,413	2,042	28·71	32·76	99
	Gya	1,018,441	1,031,241	2,124,682	51	15	5,100	42	74	520	5,803	·24	·08	25·80	·12	·36	2·88	32 76	4·72	33 48	2,64.	2,.39	32·53	31·63	113
	Shahabad	960,250	1,014,659	1,964,909	177	24	4,589	55	51	627	5,516	1·08	·12	27·06	·24	·24	3 72	3 .9	42 1.	32 18	2,83.	2,881	35·76	13 24	119
	Mozufferpore	1,265,731	1,316,323	2,582,050	325	...	3,888	167	69	870	4,349	1 44	...	15 72	·72	·24	1·68	19 92	2 .1	16 2.	2,.15	2,001	21·84	2) 16	125
	Durbhanga	1,225,788	1,207,659	2,433,447	423	1	4,065	141	47	508	4,993	1·92	·003	19 48	·12	·12	1 32	22 68	2 .4	13 92	2,754	2,239	25·20	14·83	120
	Sarun	1,165,847	1,189,532	2,285,479	74	11	1,951	307	67	1,748	4,158	·36	·04	16·21	1·56	·24	9 12	21·73	23·30	16·08	2,170	1,956	25·68	20·64	115
	Chumparun	870,627	850,981	1,721,608	41	23	2,.02	21	24	488	3,205	·24	·12	19·12	·12	·24	3·84	23 32	20·88	23·76	1,737	1,.09	23·88	20·64	115
	Monghyr	969,124	1,000,650	1,969,774	73	3	5,583	54	45	616	6,636	·31	·01	35·52	·24	·24	3·72	4 32	5·.6	32·04	3,209	3,327	41·84	39 54	102
BHAGULPORE	Bhagulpore	979,119	987,039	1,966,158	145	2	4,542	54	33	722	5,297	·84	·01	26·40	·24	·12	4·32	32·25	33·.8	32·04	2,6.9	2,628	32·64	31·92	104
	Purneah	937,080	911,607	1,848,687	187	...	3,122	5	22	80	3,416	1·.0	...	29·16	·02	·12	·48	22·08	21·36	33 36	1,813	1,603	24·16	21·00	110
	Maldah	346,998	363,430	710,428	57	...	1,435	6	9	81	1,538	·96	...	24·12	·98	·12	1·32	21·73	35·64	70·32	858	780	29·64	24·00	123
	Sonthal Pergunnahs	785,330	782,763	1,568,093	57	...	1,615	28	15	232	1,947	·36	...	12·24	·12	·12	1·68	14 88	13 80	13·68	1,120	827	17·04	12·60	134
ORISSA	Cuttack	877,702	917,353	1,795,055	1,202	8	2,683	312	81	1,156	5,551	7·92	·03	17 88	2·52	·44	7·92	37·03	2·.40	13·81	2,731	2,795	37·51	37·00	102
	Poori	446,709	441,878	888,587	340	38	456	286	55	1,284	2,599	4 56	·48	6 61	3·84	·72	13·80	35·04	24·95	16·58	1,391	1,218	37·03	34 65	107
	Balasore	461,461	483,819	945,280	360	...	1,.93	562	15	497	2,7.6	4 56	...	16·32	7·08	·12	6 24	34·56	26·52	17·76	1,411	1,315	36·61	25·92	110
CHOTA NAGPORE.	Hazaribagh	544,903	559,839	1,104,742	...	...	2,245	38	27	204	2,514	...	...	24·36	·33	·24	2·16	27·24	32 43	30·36	1,3.3	1,213	28·59	16·51	113
	Louardugga	796,657	812,587	1,609,244	...	2	1,776	108	...	457	2,383	...	·01	17·20	·72	...	3·48	17·64	24·24	22·44	1,233	1,128	18·60	14·40	119
	Singbhum	226,681	227,094	453,775	2	...	461	18	13	105	600	·04	...	12·12	·36	·24	2·76	15·84	18·24	19·44	328	274	17·16	14·40	119
	Manbhum	325,428	532,900	1,058,228	2	13	1,076	77	15	157	1,350	·01	·12	12·12	·84	·12	2 16	16·08	19·92	13·80	724	656	16·44	14·76	113
	TOTAL FOR THE PROVINCE.	32,663,700	33,195,834	65,859,534	5,821	198	114,239	4,451	1,418	21,671	147,795	·96	·01	20·76	·72	·24	3·84	26 83	27·00	25·44	76,063	71,729	27·84	25·92	109

DIVISIONS.	DISTRICTS.	MORTALITY ACCORDING TO— Class. Deaths among— Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Ratio per 1,000 of population per annum. Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
BURDWAN ...	Burdwan	...	2,311	503	...	...	...	24·90	22·80	...	...
	Bankura	...	1,234	66	...	74	...	16·20	15·48	...	10·44
	Birbhum	...	1,401	272	...	15	...	27·12	20·04	...	12·33
	Midnapore	...	4,850	283	...	239	...	25·92	20·64	...	24·36
	Hughli	1	1,599	316	...	...	41·86	15·88	32·88	...	...
	Serampore	1	1,162	219	...	...	32·76	47·76	44·04	...	...
	Total (Hughli including Serampore).	2	2,761	575	...	...	36·72	40·08	36·36	..	...
PRESIDENCY ...	Howrah	6	1,987	282	...	...	35·04	30·72	25·56	...	...
	24-Pergunnahs ...	11	2,142	1,111	...	...	12·9	21·72	21·48	...	...
	Nuddea	10	1,185	1,618	...	...	15·60	22·80	21·00	...	...
	Jessore	1	2,490	3,857	...	...	24·56	33·84	37·44	...	...
	Murshidábad ...	...	1,859	1,126	...	...	...	26·16	22·80	...	...
	Khulna	...	1,292	1,648	...	...	...	2·52	3·60	...	...
RAJSHAHYE ...	Dinajpur	1	1,220	2,312	...	6	26·16	34·44	34·80	...	50·16
	Rajshahye	...	694	2,880	...	...	...	2·52	3·60	...	...
	Rungpore	...	1,895	3,169	...	...	...	27·84	29·04	...	...
	Bogra	...	289	1,224	...	...	...	24·60	24·72	...	...
	Pubna	1	767	1,856	...	...	105·24	23·44	23·40	...	...
	Darjiling	10	330	21	11	2	141·84	31·08	36·00	6·96	...
	Julpaiguri	...	1,055	635	...	23	...	34·44	8·48	72·72	...
DACCA ...	Dacca	20	1,868	2,347	...	...	27·24	26·40	22·44	...	...
	Faridpore	2	1,465	2,237	...	...	8·64	2·72	27·48	...	...
	Backerganj	5	1,579	4,28	2	...	16·68	30·60	49·56	4·92	...
	Mymensing	...	1,479	3,020	...	78	...	22·80	17·76	...	33·00
CHITTAGONG ...	Chittagong	1	551	1,111	90	...	11·28	24·6	22·56	19·92	...
	Noakhali	1	441	1,781	...	...	20·40	24·36	35·04	...	...
	Tipperah	...	1,0 5	1,946	...	...	...	23·84	23·16	...	...
PATNA ...	Patna	5	3,573	377	...	...	23·64	27·87	21·12	...	...
	Gya	...	5,322	581	...	...	...	33·12	29·88	...	...
	Shahabad	1	5,056	324	...	...	43·44	34·20	23·88	...	...
	Mozufferpore ...	...	3,5 1	488	...	...	...	29·16	15·48	...	...
	Durbhanga	1	4,484	518	...	...	36·84	23·04	19·68	...	...
	Sarun	...	3,740	366	...	...	...	22·44	16·20	...	...
	Chumparun	4	2,781	410	...	...	24·72	22·56	20·76	...	...
	Monghyr	...	6,088	532	...	6	...	44·16	31·96	...	9·96
	Bhagulpore	...	4,913	384	...	...	...	33·36	24·72	...	...
	Purneah	...	1,913	1,503	...	...	...	21·84	23·28	...	...
	Malsah	...	929	650	...	...	...	29·40	26·76	...	...
	Santal Pergunnahs	1	1,151	130	...	665	3·84	16·20	14·28	...	13·03
ORISSA ...	Cuttack	5	5,490	126	...	...	25·56	37·20	3·80	...	...
	Poori	...	2,574	25	...	...	...	25·28	21·36	...	...
	Balasore	...	4,276	41	...	5	58·80	35·04	20·64	...	12·24
CHOTA NAGPORE.	Hazaribagh ...	...	2,140	244	...	131	...	27·72	27·48	...	21·36
	Lohardugga ...	24	1,210	166	...	965	7·92	16·08	25·08	...	18·48
	Singbhum	2	500	5	...	...	7·92	15·72	41·16	...	...
	Manbhum	1	1,277	54	...	48	21·72	16·08	14·16	...	8·64
	TOTAL FOR THE PROVINCE.	119	98,051	47,249	103	2,263	14·64	27·48	26·52	15·48	16·20

MORTALITY ACCORDING TO— Age. Deaths.

Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
533	293	216	113	143	338	272	308	237	401
234	142	137	64	81	131	127	130	150	209
413	247	188	7	78	155	105	123	11	19
1,14	615	421	199	263	511	500	459	427	78
38	214	139	68	109	221	197	210	171	25
27	172	133	63	73	148	143	135	139	157
665	376	274	131	182	359	340	345	310	407
351	202	88	65	62	161	142	116	121	261
515	478	263	128	104	371	349	267	276	524
647	427	272	143	134	245	244	214	224	409
875	754	358	357	553	577	473	376	455	753
391	33	289	142	117	213	221	213	177	348
607	447	240	135	195	306	272	214	174	353
764	770	433	203	248	474	480	337	228	279
627	521	365	184	262	447	394	272	165	28
818	736	464	194	230	653	605	448	384	509
3.6	269	139	77	85	165	157	118	69	145
24	424	339	203	174	249	299	199	147	373
4	45	23	24	24	27	7	58	33	22
473	23	95	5	62	174	208	119	91	138
859	532	285	178	210	337	393	287	233	869
671	471	311	193	200	345	342	295	250	624
1,547	531	6 0	211	219	494	423	332	352	853
7 7	582	376	257	289	631	572	471	384	778
23	397	194	88	99	193	156	177	177	371
43	326	223	85	75	146	103	130	128	382
65	364	173	131	180	331	245	194	214	467
604	492	249	124	190	290	316	394	513	859
743	793	559	259	183	474	508	681	701	1,094
8 4	543	305	175	133	491	544	576	600	1,195
247	493	338	194	165	422	511	593	563	761
388	735	347	356	285	547	623	526	514	622
467	441	213	140	128	319	420	444	467	1,044
29	376	320	157	110	531	511	308	369	604
884	1,240	452	214	119	433	387	564	629	1,519
860	704	407	233	204	536	513	574	548	714
237	217	213	119	453	465	331	320	228	274
291	420	199	85	90	154	143	112	85	222
22	272	133	124	129	206	157	140	156	20
354	293	425	248	268	507	499	415	451	827
1,141	780	148	98	116	247	289	279	242	434
4	260	190	91	109	236	254	256	245	361
666	337	253	139	83	189	231	212	245	404
38	373	214	141	114	204	252	212	279	296
324	337	104	83	49	91	99	62	69	71
195	177	124	86	101	151	148	117	126	152
24,555	20,468	12,179	6,736	6,796	14,373	14,241	13,355	12,520	22,557

RATIO PER 1,000 OF POPULATION PER ANNUM.

Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
209·04	26·28	15·48	10·08	13·92	15·84	14·64	24·12	29·28	60·00
96·48	13·92	10·80	7·56	10·20	8·76	10·32	22·56	24·96	43·08
236·88	36·72	22·32	10·92	13·92	13·68	10·32	17·04	23·76	49·56
219·00	25·56	14·52	9·12	13·68	12·84	16·32	23·40	35·76	68·88
213·12	41·40	24·12	13·08	21·84	20·40	22·08	32·24	42·84	81·84
262·32	64·68	47·28	24·72	27·84	25·20	29·52	36·60	46·56	96·72
269·04	49·56	31·80	16·92	23·88	22·08	24·72	35·52	53·88	97·00
226·08	35·64	13·44	13·72	12·84	15·84	18·12	22·80	25·20	82·20
149·28	28·56	14·16	9·60	14·28	14·88	20·16	31·44	42·60	82·80
246·88	25·20	12·84	10·56	13·56	11·16	17·64	24·96	46·92	96·12
203·40	54·48	30·84	21·84	28·80	21·48	26·16	29·52	35·64	76·80
179·52	26·08	19·20	15·00	14·16	12·48	15·12	22·44	27·60	59·64
242·40	38·16	16·56	14·76	24·12	19·20	21·96	21·32	33·48	73·56
265·32	53 76	20·64	16·20	25·20	21·84	25·92	27·48	34 92	44·88
233·88	36 52	21·48	16·20	30·12	23·28	24·84	27·4	27·72	48·24
190·20	36 24	17·52	10·92	17·76	21·96	22·56	27·36	37·08	52·20
255·24	25 92	13·68	12·72	17·16	16·08	17·88	21·84	29·28	47·16
80·52	28·32	19·32	19·32	22·08	14·16	19 20	19·56	24·48	50·04
180 60	35·16	14·76	13·56	18·12	24·96	27·0	29·80	36 24	49·92
351·36	40·44	12·84	10·2	17·76	21·60	23·40	29·04	32·88	51·24
191·44	21·96	10·20	9·24	15·48	13·92	16·32	18·36	24·24	78·48
240·72	26·52	15·48	13·32	19·32	15·60	16·20	22·08	34·20	76·32
327·20	41 64	26 88	12·96	15·96	17·28	19·56	22·56	39·84	103 44
113·88	16·44	9·00	10·08	13·44	14·76	15·84	21·36	27·96	54·72
143·08	32·28	12·12	7·68	12·24	13 08	16·20	21·84	31·44	72·24
247·92	42·36	20·16	11·40	13·44	13·44	18·48	22·32	33 12	109·56
222·36	20·88	8·76	9·84	16·92	15·84	14·64	17·52	31·08	71·16
192·96	27·84	11·28	8·88	10·56	11·52	14 28	25·44	49·20	80·16
208·44	34·44	14·76	14·64	15·72	16·08	19·32	25·56	59·28	104·64
230·88	28·44	13·32	10·32	12·96	17·52	24·72	34·92	60·60	113 04
64·60	18·24	10·20	8·76	11·76	12·24	16·56	26·40	39·84	59·16
92·40	28·08	10·32	15·36	19·08	15·72	18·48	21·84	35·16	58·80
104·52	20·64	7·56	8·96	10·32	11·52	14·64	22·08	39·60	91·32
81·12	22·08	15·72	10·68	11·52	13·68	14·52	20·52	42·60	75·72
279·96	35·60	15·60	13·44	17·28	19·08	20·16	36·12	60·84	93·48
320·28	61·32	18·00	14·28	10·56	16·80	1·84	33·12	62 04	101·16
92·28	27·84	12·00	13·56	18·60	16 08	30 00	20·64	30·60	41·28
133·12	39·01	21·84	14·40	18·00	15·84	17·04	20·04	27·96	61·68
135·96	15·36	7·80	8·16	13·56	10·80	8·88	12·96	23·76	51·20
384·56	41·16	13·84	15·48	23·52	19 92	24·48	31·20	46·92	88·08
347·68	27·48	13·02	13·08	20 76	18·72	25·68	39·84	49·08	105·84
389·04	35·28	16·08	10·44	16·32	17·16	23·04	31·12	51·36	87·48
133·32	28·32	16·44	13 20	13·08	12·48	17·52	26·04	50·76	112 32
91·20	14·52	9·36	9 60	11·88	9 12	13·44	21·96	37 68	84·60
142·80	16·08	7·80	4·80	9·12	8·28	8·64	21 72	31·92	43·68
71	16·08	5·16	9 60	13 32	10 68	12·00	16·08	26·73	34·92
82·32	15 24	8·16	9 60	13 32	10 68	12·00	16·20	15·60	17 88
190·32	39·12	14 76	12 00	16·20	15·60	17 88	25·08	38·52	73·08

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

The 13th January 1890.

W. H. GREGG, *Dip. Publ. Health, Camb.*,

Sanitary Commissioner for Bengal.

MEMORANDUM.

THE principal Municipalities in Bengal returned, during the week ending 28th December 1889, the birth and death-rates of 24 and 27·9 per 1,000 of population, respectively, as opposed to 25·2 and 30 2 per 1,000 in the preceding week ending 21st December, indicating a falling off in the registration of both births and deaths.

2. These events were returned in the highest proportions by the following Municipalities :—

Births.	Ratio per *mille.*	*Deaths.*	Ratio per *mille.*
Ranaghat	59·9	Poori	73·4
Utterpara	47·2	Serampore	68·7
Howrah	38·4	Narainganj	62·1
Serampore	35·3	Jessore	61·2
Hughli and Chinsurah	34·5	Utterpara	56·6
Rampore Beauleah	34·2	Ranaghat	53·9
Santipore	33·3	Darjiling	51·9
Narainganj	33·1	Hughli and Chinsurah	44·3
		Comillah	42·4
		Dacca	36·3
		Burdwan	33·6
		Howrah	31·5
		Purneah	31·2
		Gya	30·1

3. Referring to the specific diseases, there was a diminution of mortality from fever, while the fatal results from the other diseases exhibited only fractional differences—*vide* statement appended below :—

	Ratio per *mille* during the weeks ending—	
	28th December 1889.	21st December 1889.
Cholera	3·2	2·4
Small-pox	·4	·2
Fever	10·4	12·8
Bowel-complaints	4·8	5·2
Injury	·6	·5
Other causes	8·4	9·1

4. The following Municipalities returned conspicuously high mortality from cholera, small-pox, fever, bowel-complaints, and the unspecified diseases coming under the head of "Other causes" :—

Cholera.	Ratio per *mille.*	*Small-pox.*	Ratio per *mille.*	*Fever.*	Ratio per *mille.*	*Bowel-complaints.*	Ratio per *mille.*	*Other causes.*	Ratio per *mille.*
Narainganj ...	38·1	Poori ...	12·6	Darjiling ...	37·0	Serampore ...	23·6	Poori ...	27·3
Comillah ...	30·8			Ranaghat ...	35·9	Hughli and Chinsurah ...	14·8	Serampore	25·5
Chittagong ...	23·6			Poori ...	20·9	Poori ...	12·6	Dacca ...	14·9
Dacca ...	9·1			Purneah ...	20·8	Howrah ...	11·4	Gya ...	11·6
Howrah ...	6·3								

5. The death-rates according to *Sex*, *Class* and *Age* stood as shown below :—

According to Sex.	Ratio per *mille.*	*According to Class.*	Ratio per *mille.*	*According to Age.*	Ratio per *mille.*
Males	32·0	Christians	7·5	Under 1 year ...	200·8
Females	23·5	Hindus	28·5	1 and under 5 years ...	22·9
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population	146	Mahomedans ...	27·0	5 „ 10 „ ...	11·3
		Buddhists	25·7	10 „ 15 „ ...	8·6
				15 „ 20 „ ...	18·0
				20 „ 30 „ ...	17·5
				30 „ 40 „ ...	19·3
				40 „ 50 „ ...	26·2
				50 „ 60 „ ...	32·9
				60 years and upwards ...	91·0

The 13th January 1890.

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

1	2	3			4			5			6	7							8						9	10		11		12
DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—																		
					NUMBER OF—.			RATIO PER 1,000 OF POPULATION PER ANNUM.				Disease.														Sex.				
												DEATHS FROM—							RATIO PER 1,000 OF POPULATION PER ANNUM.											
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	Deaths.		Ratio per 1,000 of Population per annum.		Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population.
																											Males.	Females.	Males.	Females.	
Burdwan ...	Burdwan	18,663	16,017	34,080	6	4	10	9·2	6·1	15·3	150	1	...	11	3	...	7	22	1·5	...	16·8	4·6	..	10·7	33·6	45·8	10	12	28·8	39·0	72
Midnapore ...	Midnapore ...	16,927	16,633	33,560	11	5	16	17·0	7·7	24·8	220	...	...	6	3	...	7	16	...	...	9·3	4·6	...	10·8	24·8	17·0	5	11	15·4	34·4	44
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	12	9	21	19·7	14·8	34·5	133	1	...	12	9	...	5	27	1·6	...	19·7	14·8	...	8·2	44·3	72·2	16	11	52·5	36·1	144
Serampore ...	Serampore ...	13,559	12,937	26,496	10	8	18	19·6	15·7	35·3	125	1	2	7	12	...	13	35	2·0	3·9	13·7	23·6	...	25·5	68·7	70·7	22	13	84·4	52·2	161
	Utterpara	3,046	2,464	5,510	2	3	5	18·9	28·3	47·2	66	3	...	...	1	...	2	6	28·3	...	...	9·4	...	18·9	56·6	56·6	2	4	34·1	84·4	40
Howrah ...	Howrah	53,153	37,660	90,813	36	31	67	20·6	17·8	38·4	116	11	1	10	20	1	12	55	6·3	·6	5·7	11·4	·6	6·9	31·5	29·2	35	20	34·2	27·6	126
	Bali	7,836	6,979	14,815	2	3	5	7·0	10·5	17·5	66	1	...	3	2	...	...	6	3·5	...	10·5	7·0	...	...	21·1	24·6	3	3	19·9	22·4	86
Nuddea ...	Kishnaghur ...	13,263	14,214	27,477	1	2	3	1·9	3·8	5·7	50	...	...	3	...	...	2	5	...	...	5·7	...	...	3·8	9·5	22·7	1	4	3·9	14·6	21
	Ranaghat	4,028	4,655	8,683	9	1	10	53·9	6·0	59·9	900	...	...	6	2	...	1	9	...	...	35·9	12·0	...	6·0	53·9	41·9	6	3	77·5	33·5	233
	Santipore	13,708	15,979	29,687	11	8	19	19·3	14·0	33·3	137	...	...	7	...	...	2	9	...	...	12·3	...	...	3·5	15·8	5·2	5	4	19·0	13·0	146
Jessore ...	Jessore	4,830	3,665	8,495	...	4	4	...	24·5	24·5	No male birth.	3	...	3	...	...	4	10	18·3	...	18·3	...	...	24·3	61·2	73·5	7	3	75·4	42·6	178
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	8	5	13	21·0	13·1	34·2	160	...	...	7	1	2	1	11	...	...	18·4	2·6	5·3	2·6	28·9	34·2	7	4	33·8	23·0	143
Darjiling ...	Darjiling	4,579	2,439	7,018	1	3	4	7·4	22·2	29·6	33	...	...	5	...	...	2	7	...	...	37·0	...	...	14·8	51·9	22·2	4	3	45·6	64·0	70
Dacca ...	Dacca	42,782	37,379	80,161	9	14	23	5·8	9·1	14·9	64	14	...	9	7	3	23	56	9·1	...	5·8	4·5	1·9	14·9	36·3	26·6	39	17	47·4	23·6	204
	Narainganj ...	7,605	4,956	12,561	4	4	8	16·5	16·5	33·1	100	8	...	3	1	...	3	15	33·1	...	12·4	4·1	...	12·4	62·1	70·4	13	2	88·9	21·0	419
Chittagong ...	Chittagong ...	13,340	8,790	22,130	4	...	4	9·4	...	9·4	No female birth.	10	...	1	...	...	1	12	23·5	...	2·3	...	...	2·3	23·2	30·5	10	2	39·0	11·8	354
Tipperah ...	Comillah	8,153	5,353	13,506	1	6	7	3·9	23·1	27·0	18	8	...	2	...	...	1	11	30·8	...	7·7	...	...	3·9	42·4	46·2	7	4	44·6	38·9	116
Patna	Patna City ...	78,762	81,475	160,237	21	31	52	6·8	10·1	16·9	67	2	...	18	12	1	19	52	·6	...	5·8	3·9	·3	6·2	16·9	14·0	29	23	19·1	14·7	136
Gya	Gya	38,290	37,831	76,121	18	14	32	12·3	9·6	21·9	123	2	...	24	1	...	17	44	1·4	...	16·4	·7	...	11·6	30·1	32·1	23	21	31·2	25·9	111
Shahabad ...	Arrah	20,960	22,505	43,465	14	6	20	16·7	7·2	23·9	233	...	...	13	2	2	...	17	...	...	15·5	2·4	2·4	...	20·3	12·0	7	10	17·4	23·1	74
Mozufferpore..	Mozufferpore ...	23,084	19,658	42,742	6	5	11	7·3	6·1	13·4	120	...	...	9	4	2	3	18	...	...	10·9	4·9	2·4	3·6	21·9	20·7	11	7	24·8	18·5	133
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	16	15	31	12·6	11·8	24·4	106	...	...	12	3	...	5	20	...	...	9·4	2·4	...	3·9	15·7	22·8	10	10	15·4	16·1	94
Sarun	Chupra	25,116	26,554	51,670	13	16	29	13·1	16·1	29·2	81	...	...	3	1	...	10	14	...	...	3·0	1·0	...	10·1	14·1	20·1	10	4	20·7	7·8	286
Bhagulpore ...	Bhagulpore ...	29,640	27,813	57,453	19	14	33	17·2	12·7	29·9	135	...	...	12	...	...	9	21	...	...	10·9	...	...	8·1	19·0	34·4	14	7	24·6	13·1	184
Monghyr ...	Monghyr	28,154	29,366	57,520	17	12	29	15·4	10·8	26·2	141	...	...	11	8	1	8	28	...	...	9·9	7·2	·9	7·2	25·3	33·4	20	8	36·9	14·2	257
Purneah ...	Purneah	8,463	6,553	15,016	2	2	4	6·9	6·9	13·9	100	...	...	6	1	...	2	9	...	...	20·8	3·5	...	6·9	31·2	43·5	3	6	15·4	47·6	38
Poori	Poori	13,247	11,537	24,784	4	8	12	6·4	16·8	25·2	50	...	6	10	6	...	13	35	...	12·6	20·9	12·6	...	27·3	73·4	90·2	20	15	78·5	67·6	116
	Total ...	550,936	510,588	1,061,574	257	233	490	12·6	11·4	24·0	110	65	9	213	99	12	172	570	3·2	·4	10·4	4·8	·6	8·4	27·9	30·2	339	251	32·0	25·5	139

DISTRICTS.	NAMES OF MUNICIPALITIES.	13 — MORTALITY ACCORDING TO— Class. Deaths among— Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	14 — Ratio per 1,000 of population per annum. Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan ...	Burdwan	...	14	8	...	...	...	30·7	40·5	...	...
Midnapore ..	Midnapore ...	...	16	...	...	...	...	32·1	...	...	...
Hughli ...	Hughli and Chinsurah	...	24	2	...	...	...	49·4	25·3	...	...
Serampore ...	Serampore ...	...	29	6	...	...	...	59·8	332·6	...	...
	Utterpara	...	6	...	...	...	...	58·6	...	...	...
Howrah ...	Howrah	1	26	16	...	...	27·5	29·0	40·6	...	...
	Bali	...	5	1	...	...	...	19·4	39·7	...	...
Nuddea ...	Kishnaghur	...	2	3	...	...	...	5·6	18·8	...	...
	Ranaghat	...	7	2	...	...	...	49·7	76·2	...	...
	Santipore	...	7	2	...	...	...	17·6	11·6	...	...
Jessore ...	Jessore	...	6	4	...	...	...	69·2	54·4	...	...
Rajshahye ...	Rampore Beauleah	...	6	5	...	...	...	31·5	26·5	...	...
Darjiling ...	Darjiling	...	7	...	...	...	...	79·2	...	...	...
Dacca	Dacca	...	34	22	...	...	...	43·9	29·1	...	...
	Naraingunj ...	...	9	6	...	...	...	74·8	50·6	...	...
Chittagong ...	Chittagong ...	...	2	9	1	...	...	17·9	30·6	216·7	...
Tipperah ...	Comillah	...	2	9	...	...	...	17·5	63·3	...	...
Patna	Patna City ...	...	41	11	...	...	...	17·9	14·0	...	...
Gya ...	Gya	...	34	10	...	...	...	29·5	32·3	...	...
Shahabad ...	Arrah	...	7	10	...	...	...	11·7	41·9	...	...
Mozufferpore ..	Mozufferpore ...	...	12	6	...	...	...	20·8	25·9	...	...
Durbhanga ...	Durbhanga ...	...	18	2	...	...	...	19·3	5·9	...	...
Sarun	Chupra	...	12	2	...	...	...	15·7	8·7	...	...
Bhagulpore ...	Bhagulpore ...	...	11	10	...	...	...	14·4	30·2	...	...
Monghyr ...	Monghyr	...	24	4	...	...	...	29·9	16·5	...	...
Purneah ...	Purneah	...	7	2	...	...	...	39·2	18·4	...	...
Poori ...	Poori	...	35	...	...	...	...	74·2	...	...	...
	TOTAL ...	1	415	153	1	...	7·6	28·5	27·0	25·7	...

DISTRICTS.	NAMES OF MUNICIPALITIES.	15 — MORTALITY ACCORDING TO— Age. Deaths. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	3	...	1	...	1	3	4	4	3	2
Midnapore ..	Midnapore ...	3	1	...	...	...	1	2	2	2	5
Hughli ...	Hughli and Chinsurah	4	1	1	1	...	8	4	2	2	4
Serampore ...	Serampore ...	7	...	2	1	2	2	3	5	7	6
	Utterpara	1	...	...	...	...	...	1	2	1	1
Howrah ...	Howrah	10	7	5	...	2	7	6	6	5	6
	Bali	1	...	...	...	...	...	...	1	...	4
Nuddea ...	Kishnaghur	1	...	...	...	1	1	...	...	...	2
	Ranaghat	...	1	...	...	2	1	...	1	2	2
	Santipore	2	...	...	...	1	...	1	2	...	3
Jessore ...	Jessore	3	1	1	1	...	1	...	1	1	1
Rajshahye ...	Rampore Beauleah	2	1	...	...	...	2	2	1	2	1
Darjiling ...	Darjiling	...	1	...	...	...	2	1	2	...	1
Dacca	Dacca	8	1	1	4	3	13	7	5	5	9
	Naraingunj ...	4	1	...	...	...	4	4	...	2	...
Chittagong ...	Chittagong ...	...	...	1	...	1	1	3	6	...	...
Tipperah ...	Comillah	1	...	...	...	...	1	4	...	1	4
Patna	Patna City ...	12	2	4	2	2	3	5	5	4	13
Gya ...	Gya	6	5	...	...	1	5	3	2	4	19
Shahabad ...	Arrah	3	..	...	3	1	1	1	1	...	7
Mozufferpore ..	Mozufferpore ...	2	4	3	...	...	...	...	3	2	4
Durbhanga ...	Durbhanga ...	3	3	2	...	2	1	1	2	2	4
Sarun	Chupra	5	2	...	...	2	2	...	...	...	3
Bhagulpore ...	Bhagulpore ...	1	4	...	1	...	3	1	1	2	8
Monghyr ...	Monghyr	5	1	1	1	3	3	8	2	...	4
Purneah ...	Purneah	2	...	...	...	1	3	...	2	...	1
Poori ...	Poori	9	5	2	2	2	2	4	5	2	2
	TOTAL ...	98	41	24	16	28	71	65	63	49	115

DISTRICTS.	NAMES OF MUNICIPALITIES.	16 — MORTALITY ACCORDING TO— Age. Ratio per 1,000 of population per annum. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	236·4	...	22·3	...	16·6	26·3	30·2	47·1	63·5	70·2
Midnapore ..	Midnapore ...	210·0	22·1	...	...	...	7·1	18·8	27·9	50·4	142·1
Hughli ...	Hughli and Chinsurah	259·0	23·4	18·0	21·0	...	67·0	36·4	24·9	40·0	100·2
Serampore ...	Serampore ...	512·7	...	41·4	23·4	47·6	19·3	31·4	77·1	190·1	234·3
	Utterpara	323·0	...	...	...	...	...	40·0	148·4	141·3	200·0
Howrah ...	Howrah	253·1	65·7	41·3	...	21·3	16·9	16·2	26·5	47·4	83·2
	Bali	148·6	...	...	...	...	...	...	26·9	...	294·2
Nuddea ...	Kishnaghur	104·8	...	...	...	23·2	10·8	...	...	...	60·2
	Ranaghat	...	65·4	...	...	166·9	34·5	...	51·8	142·6	182·8
	Santipore	123·1	...	...	...	23·4	...	13·0	29·6	...	79·4
Jessore ...	Jessore	804·1	105·3	68·6	76·2	...	25·8	...	49·5	93·4	113·5
Rajshahye ...	Rampore Beauleah	256·2	36·7	...	...	...	25·0	28·9	21·2	83·3	84·0
Darjiling ...	Darjiling	...	86·9	...	...	...	52·0	36·3	150·3	...	307·7
Dacca	Dacca	219·2	7·1	5·3	26·2	21·4	44·1	31·2	31·0	54·9	84·0
	Naraingunj ...	745·5	45·6	...	...	...	77·9	97·2	...	133·0	...
Chittagong ...	Chittagong ...	...	...	20·8	...	21·5	11·2	46·8	138·2	...	...
Tipperah ...	Comillah	175·1	...	...	...	...	18·8	104·3	...	64·9	306·3
Patna	Patna City ...	144·8	7·1	12·4	7·2	9·3	5·4	11·2	13·8	14·7	48·9
Gya ...	Gya	174·3	40·9	...	...	9·9	17·7	12·3	10·6	31·6	181·9
Shahabad ...	Arrah	121·1	...	...	35·3	16·2	6·6	8·1	11·1	...	126·2
Mozufferpore ..	Mozufferpore ...	108·9	51·5	34·7	...	...	...	...	31·2	32·0	85·5
Durbhanga ...	Durbhanga ...	100·2	20·5	13·3	...	25·9	3·9	4·7	14·0	23·7	65·1
Sarun	Chupra	184·3	20·1	...	...	30·0	11·3	...	...	...	45·9
Bhagulpore ...	Bhagulpore ...	43·6	38·4	...	8·3	...	14·3	5·6	8·3	24·4	115·5
Monghyr ...	Monghyr	175·1	8·4	7·4	9·1	41·3	15·1	46·6	16·2	...	58·0
Purneah ...	Purneah	367·5	...	...	...	52·3	47·5	...	56·1	...	64·4
Poori ...	Poori	1,544·6	144·7	46·4	55·4	55·9	19·7	51·3	78·2	46·6	57·6
	TOTAL ...	206·8	22·9	11·3	8·6	18·0	17·5	19·3	26·2	32·9	91·0

PUBLIC WORKS DEPARTMENT, BENGAL.

IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1889-90.

Areas leased for Irrigation up to the end of October 1889.

CIRCLE.	DISTRICT.	CANAL.	Estimated full discharge.	Average discharge in month.	Discharge utilised.	Approximate area of land irrigated during the year up to the end of the month.	Approximate area of land under irrigation up to the same date last year.	DETAILS OF AREAS LEASED.								RAINFALL, 1889-90.		RAINFALL, 1888-89.		REMARKS.
								Five years, all crops.	Five years, kharif.	ANNUAL LEASES.					Grand Total.	During month.	Up to end of month.	During month.	Up to end of month.	
										Kharif.	Rabi.	Sugarcane.	Bhadoi.	Hot-weather.	Total.					
			C. ft.	C. ft.	C. ft.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Inches.	Inches.	Inches.	Inches.	
ORISSA ...	Cuttack ...	Taldunda, 1st Reach.	1,342	442	189	10,483	6,925	.....	10,483	.....	384	12	.....	.....	396	10,879	8·45	60·19	0·63	57·58	
		Taldunda, 2nd Reach.	566	239																	
		Machgong ...	776	252	240	27,748	23,067	.....	27,748	.....	222	14	.....	.....	236	27,984	8·75 11·15	56·35 63·53	0·10 1·80	42·72 46·93	
		Kendrapara ...	1,067	652·23	516·54	47,959	46,259	.....	51,305	42	3,983	36	.....	.....	4,061	55,366	5·20	59·06	0·46	34·44	
		Gobri ...	372·82	60·07	39·90	1,844	1,457	.....	2,148	.....	215	3	.....	.....	218	2,366	8·50	60·62	0·55	44·42	
		Gobri Extension	648	82·57	22·61	1,840	.....	.....	1,559	.....	7	.....	.....	.....	7	1,566	No gauge fixed.				
		Pattamoondi ...	685	253·17	170·28	7,596	7,153	.....	9,303	.....	543	.....	.....	.....	543	9,846	.....	.....	.....	.....	
		High Level, Range I.	608	261·91	215·85	16,240	16,343	.....	17,188	.....	480	3	.....	.....	483	17,671	8·31	62·08	0·05	37·59	
		High Level, Range II.	727·16	64·00	17·57	2,370	1,986	.....	2,374	.....	61	.....	.....	.....	61	2,435	.....	.....	.....	.....	
	Balasore ...	High Level, Range III.	727·16	611·05	562·00	35,749	11,310	.....	34,096	.....	.....	88	.....	.....	88	34,184	4·13	40·48	1·79	49·41	
		Total ...	.....	.....	.....	153,829	116,480	.....	156,204	42	5,895	156	.....	.....	6,093	162,297	.....	.....	.....	.....	
	Total of the corresponding period of last year.		.....	.....	.....	.....	.....	.....	111,655	112	2,625	169	.....	.....	2,906	114,561	.....	.....	.....	.....	
SOUTH-WESTERN.	Midnapore ...	Midnapore ...	1,411	1,001	530	61,584	46,530	.....	60,208	.....	.....	.....	.....	.....	.....	60,208	2·37	42·98	0·79	61·80	Whole month discharging.
		Panchkoorah ...	522	93	80	3,493	4,616	.....	4,335	.....	.....	.....	.....	.....	.....	4,335	4·45	49·54	1·85	55·16	24 days d scharging.
	Howrah ...	Tidal Reaches, Ranges I and II.	.....	.....	.....	357	389	.....	312	.....	.....	.....	.....	.....	.....	312	.....	.....	.....	.....	
		Total ...	.....	.....	.....	65,434	51,535	.....	64,855	.....	.....	.....	.....	.....	.....	64,855	.....	.....	.....	.....	
	Total of the corresponding period of last year.		.....	.....	.....	.....	.....	.....	52,334	5	.....	.....	.....	.....	5	52,339	.....	.....	.....	.....	
SONE ...	Shahabad ...	Western Main ...	4,342	3,139	138	14,804	13,254	14,988	.....	2,763	767	159	38	284	4,010	18,998	0·86	44·93	0·30	39·72	
		Buxar	1,226	933	749	61,219	48,026	44,168	.....	21,618	321	2,006	842	3,348	28,129	72,797	1·71	41·10	0·28	36·49	
		Arrah	2,000	1,945	1,324	119,827	122,360	84,459	.....	37,445	.....	2,194	198	8,373	38,204	124,664					
	Patna and Gya.	Eastern Main ...	1,466	1,332	1,145	1,319	1,570	1,991	.....	702	.....	13	2	.....	717	1,808	.....	45·67	.....	41·15	
		Patna				51,625	52,315	36,764	.....	17,453	216	271	287	.....	18,227	54,991					
		Total ...	.....	.....	.....	248,334	237,524	182,470	.....	80,980	1,304	4,643	1,361	11,992	89,290	272,750	.....	.....	.....	.....	
	Total of the corresponding period of last year.		.....	.....	.....	.....	.....	159,931	.....	53,994	1,003	3,050	330	9,054	67,431	257,352	.....	.....	.....	.....	
	Grand Total ...		.....	.....	.....	468,097	405,609	183,470	221,059	70,022	7,199	4,799	1,361	11,992	95,373	499,902	.....	.....	.....	.....	
	Grand Total of the corresponding period of last year		.....	.....	.....	.....	.....	189,921	163,989	54,111	3,628	3,219	330	9,054	70,342	424,252	.....	.....	.....	.....	

CALCUTTA;

The 13*th January* 1890.

G. A. G. SHAWE,

Under-Secretary to the Govt. of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 11th January 1890, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 11th January 1890.			Week ending Saturday, the 12th January 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	2,151	2,99,830	5,298	1,745	4,01,590	7,290
Jute	248	1,51,400	2,642	199	1,25,225	2,252
Firewood	161	93,775	1,363	147	81,425	1,207
Other articles	1,107	2,50,460	3,707	1,200	2,22,620	3,398
Total ...	3,667	7,95,465	13,010	3,291	8,30,860	14,147

NOTE.—The total amounts of tollage for the week ending the 4th January 1890 and the corresponding week of the previous year should be Rs. 11,963 and Rs. 11,698 instead of Rs. 21,963 and Rs. 11,963 as published at page 69 of the Supplement to the *Calcutta Gazette* of the 8th January 1890.

Eastern Bengal State Railway.

Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of October 1889, as compared with the same month of the previous year.

Staples.	1889.		1888.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1888.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	6,440	2,226	8,310	2,100	8,666	10,410	.....	1,744
Cotton, raw	64	221	41	98	285	139	146	.....
Cotton twist and yarn—								
1.—European								
2.—Indian								
Cotton piece-goods—								
1.—European—								
a.—In bales and bundles	2,720	77	2,822	207	2,797	3,029	.....	232
b.—In boxes								
2.—Indian—								
a.—In bales and bundles								
b.—In boxes								
Grains—								
2.—Rice	2,354	1,343	1,868	6,690	3,697	8,558	.....	4,861
5.—Others	700	5,390	1,610	4,555	6,140	6,165	.....	25
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed								
b.—Undressed								
2.—Skins of sheep, &c.—	8	664	10	869	672	879	.....	207
a.—Dressed								
b.—Undressed								
Jute—								
1.—Raw—								
a.—Screwed	.....	12,295	1	9,670	12,295	9,671	2,624	.....
b.—Unscrewed	141	49,664	58	71,361	49,805	71,419	.....	21,614
2.—Gunny-bags and cloth	125	853	149	1,724	978	1,873	.....	895
Metals—								
1.—Copper, unwrought								
2.—Brass, unwrought								
3.—Brass and copper, wrought	703	146	890	95	849	985	.....	136
4.—Iron								
5.—Tin								
6.—Others								
Oils—								
2.—Kerosine	408	9	410	11	417	421	.....	4
3.—Others	212	24	165	34	236	189	47	.....
Oilseeds—								
1.—Linseed								
2.—Rape and mustard								
3.—Til or gingelly								
4.—Niger	90	781	175	1,708	871	1,883	.....	1,012
5.—Castor								
6.—Poppy								
7.—Others								
Provisions—								
2.—Betelnuts	99	772	121	427	871	548	323	.....
3.—Others	428	729	481	292	1,157	773	384	.....
Railway plant and rolling-stock	3,917	1,883	2,424	815	5,800	3,239	2,561	.....
Salt	3,138	26	3,289	29	3,164	3,318	.....	154
Sugar—								
1.—Drained	482	200	663	318	688	981	.....	293
2.—Undrained								
Tea—								
1.—Foreign	.....	2,208	18	1,748	2,208	1,760	532	.....
2.—Indian								
Wood—								
1.—Timber	84	83	141	128	167	269	.....	102
2.—Firewood	1,989	.....	1,814	.....	1,989	1,814	175	.....
Tobacco	47	1,398	66	1,249	1,445	1,315	130	.....
All other articles of merchandise—								
1.—Unmanufactured	2,370	1,050	2,498	1,465	3,420	3,963	.....	543
2.—Manufactured								
Hay, straw, and wooloo (C. & S.-E. Section) ...	641	.....	606	.....	641	606	35	.....
Total ...	27,220	82,128	28,620	105,593	109,348	134,213	6,957	31,822

Comparative Statement of traffic, Eastern Bengal State Railway, for October 1889.

INCREASES.

	Tons
Jute, screwed	2,624
Is due to extensive despatches during the month from Goalundo, Rungpore, Kaunia, and Haldibari chiefly.	
Hay, straw and wooloo	35
From Mogra Hât principally.	
Firewood	175
From Bansra and Canning principally.	

DECREASES.

Coal	1,744
Due to sufficient stock for railway and flotilla purposes.	
Rice	4,861
This decrease is due to a partial failure of the crops.	
Jute, unscrewed	21,614
Heavy decrease is due to the dulness of the market, and an increase in the despatches of baled jute, and also to the jute crop having come down unusually earlier in 1888.	

CALCUTTA, *the* 30*th December* 1889.

F. P. QUINLAN,
Examiner of Accounts.

Bengal Central Railway.

Abstract of principal commodities carried over the Bengal Central Railway during the month of October 1889, *as compared with the same month of the previous year.*

STAPLES.	1889.		1888.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1888.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	1,014	1	968	...	1,015	968	47	.....
Cotton, raw	1	1	2	.....	2	2	.....	.....
Cotton twist and yarn—								
1.—European								
2.—Indian								
Cotton piece-goods—								
1.—European—								
a.—In bales and bundles	358	....	270	.....	358	270	88	.....
b.—In boxes								
2.—Indian—								
a. In bales and bundles								
b. In boxes								
Grains—								
2.—Rice	127	28	6	314	155	320	.....	165
5.—Others	82	93	59	139	175	198	.....	23
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed								
b.—Undressed								
2.—Skins of sheep, &c.—	1	28	.....	28	29	28	1	.....
a.—Dressed								
b.—Undressed								
Jute—								
1.—Raw—								
a.—Screwed	.....	.....	.....	26	.....	26	.....	26
b.—Unscrewed	.....	5,428	.....	12,021	.....	12,021	.....	6,593
2.—Gunny bags and cloth	4	1	3	.....	5	3	2	.....
Metals—								
1.—Copper, unwrought								
2. Brass, unwrought								
3.—Brass and copper, wrought								
4.—Iron	30	9	54	24	39	78	.....	39
5.—Tin								
6.—Others								
Oils—								
2.—Kerosine	97	.....	96	.....	97	96	1	.....
3.—Others	91	.....	51	.....	91	51	40	.....
Oilseeds—								
1.—Linseed								
2.—Rape and mustard								
3.—Til or gingelly								
4.—Niger								
5.—Castor	31	45	91	97	76	188	.....	112
6.—Poppy								
7.—Others								
Provisions—								
2.—Betelnuts	.....	739	3	386	739	389	350	.....
3.—Others	7	58	40	24	65	64	1	.....
Railway plant and rolling-stock	35	20	94	57	55	151	.....	96
Salt	217	4	228	.....	221	228	.....	7
Sugar—								
1.—Drained	15	171	10	295	186	311	.....	125
2.—Undrained								
Wood—								
1.—Timber	.....	.....	24	25	.....	49	.....	49
2.—Firewood	16	36	28	22	52	50	2	.....
Tobacco								
All other articles of merchandise—								
1.—Unmanufactured	395	179	300	298	574	598	.....	24
2.—Manufactured								
Total ...	2,521	6,841	2,333	13,756	9,362	16,089	532	7,259

Comparative Statement, Bengal Central Railway, for October 1889.

INCREASES.

	Tons.
Coal	138
This slight increase is probably due to a greater demand required for railway and flotilla consumption.	

DECREASES.

Jute	6,846
There was no great demand, and the market was steadily dull throughout this month.	

CALCUTTA, *the 7th January* 1890.

F. P. QUINLAN,
Examiner of Accounts.

EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the four weeks ended 23rd November 1889, as compared with the same period of 1888.

Staples.	1889.		1888.		Increase.		Decrease.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
ANIMALS, LIVING — Horses, ponies, and mules	No. 635	8,819	No. 637	7,553	No.	1,266	No. 2	.....
ANIMALS, LIVING — Cattle	,, 1,088	5,144	,, 563	3,776	,, 525	1,368	,, ...	.....
ANIMALS, LIVING — Sheep and goats	,, 4,026	3,232	,, 3,213	2,257	,, 813	975	,, ...	.....
ANIMALS, LIVING — Other kinds	,, ...	.....	,, ...	.....	,, ...	.....	,, ...	.....
Borax	1,115	778	314	257	801	521	.....	.....
Canes and rattans	95	75	97	72	.....	3	2	.....
Caoutchouc (Indian-rubber)	.....	.....	.....	.....	.....	.....	.....	.....
Chinese and Japanese ware	37	60	88	119	.....	.....	51	59
Coal and coke, up	5,62,309	1,45,517	5,20,589	1,71,517	41,810	.....	.....	26,000
Ditto, down	19,55,617	2,64,037	24,03,727	3,30,507	.....	.....	4,48,110	75,470
Cotton, raw	2,08,880	1,04,427	68,203	60,312	1,40,677	44,115	.....	.....
COTTON, MANUFACTURED. — Twist and yarn (European)	7,769	9,948	7,693	10,186	76	.....	.....	240
COTTON, MANUFACTURED. — Ditto (Indian)	12,997	7,483	14,380	9,106	.....	.....	1,383	1,623
COTTON, MANUFACTURED. — Piece-goods (European)	1,55,550	1,75,205	1,93,390	2,22,389	.....	.....	37,840	47,184
COTTON, MANUFACTURED. — Ditto (Indian)	22,547	20,352	27,700	25,930	.....	.....	5,153	5,578
DRUGS AND MEDICINES. — Asafœtida	387	252	661	462	.....	.....	274	210
DRUGS AND MEDICINES. — Other sorts, not intoxicating	1,423	1,690	1,572	1,735	.....	.....	139	45
DRUGS AND MEDICINES. — Intoxicating drugs (other than opium, *i.e.*, arsenic, bhang, ganja, and charas, &c.)	735	528	610	456	125	72	.....	.....
DYEING MATERIALS. — Indigo	47,009	1,02,751	29,301	60,207	18,608	42,544	.....	.....
DYEING MATERIALS. — Madder or manjit	.....	.....	.....	.....	.....	.....	.....	.....
DYEING MATERIALS. — Safflower	110	19	146	30	.....	.....	36	11
DYEING MATERIALS. — Turmeric	7,400	5,540	7,666	5,340	.....	197	266	.....
DYEING MATERIALS. — Other kinds	5,881	2,054	6,277	2,889	.....	65	396	.....
Earthenware and porcelain	742	1,835	752	1,853	.....	.....	10	18
FIBROUS PRODUCTS. — Jute, raw	65,402	10,068	1,50,979	28,294	.....	.....	85,577	17,626
FIBROUS PRODUCTS. — Do., manufactured (gunny bags and cloths).	59,536	32,416	60,139	32,621	.....	.....	603	205
FIBROUS PRODUCTS. — Other fibres, raw	20,523	5,793	27,381	6,508	.....	.....	6,858	715
FIBROUS PRODUCTS. — Ditto, manufactured	1,149	419	1,22.	369	.....	50	74	.....
FRUITS & NUTS — Cocoanuts	5,401	2,299	5,552	2,905	.....	.....	151	607
FRUITS & NUTS — All other kinds	41,538	37,320	30,998	32,306	4,540	5,014	.....	.....
GRAIN & PULSES — Wheat	2,21,665	70,935	3,63,0.3	89,475	.....	.....	1,41,400	18,540
GRAIN & PULSES — Gram and pulses	1,77,728	55,3.8	2,33,158	82,658	.....	.....	55,410	29,340
GRAIN & PULSES — Rice, husked	4,65,538	59,929	4,96,0 8	92,429	.....	.....	30,480	32,500
GRAIN & PULSES — Do., unhusked	39,812	5,163	74,882	8,233	.....	.....	35,070	3,070
GRAIN & PULSES — Other rain and spring crops	1,37,372	20,167	1,57,852	28 8 7	.....	300	10,480	.....
Government stores	20,164	25,369	23,525	26,456	.....	.....	3,362	1,087
Gums and resins	5,517	3,993	4 5 3	3,2 4	934	709	.....	.....
HIDES & SKINS — Hides of cattle	50,158	24 7 8	53,290	28,398	.....	.....	3,132	4,210
HIDES & SKINS — Skins of sheep, goats, and small animals.	12,087	5,067	12,493	6,625	.....	.....	406	1,559
Horns	636	138	1,148	552	.....	.....	512	414
LAC — Lac, dye	374	193	374	193	.....	.....	.....	.....
LAC — Do., shell	11,018	8,492	16,589	13,35	.....	.....	5,581	4,867
LAC — Do., stick and other kinds	16,585	5,170	21,426	6,18	.....	.....	4,841	1,018
LEATHER — Leather, unmanufactured	2,373	3,888	2,656	4,509	.....	.....	283	621
LEATHER — Ditto, manufactured	2,929	4,164	3,9 5	6,07	.....	.....	996	1,925
Liquors	15,357	14,527	16,265	14,0..	.....	502	908	.....
Mats	603	220	375	183	228	37	.....	.....
Minerals	1,18,102	20 8 5	88,38.	17,1.6	29,717	3,639	.....	.....
METALS AND MANUFACTURES OF. — Brass and copper	28,048	21,818	15,353	9,079	12,695	12,739	.....	.....
METALS AND MANUFACTURES OF. — Iron	85,566	48,675	1,05,507	54,449	.....	.....	19,941	5,774
METALS AND MANUFACTURES OF. — Other metals	7,601	6,763	4,33.	3,743	3,366	3,020	.....	.....
Oils	93,061	56,789	53,027	28,316	40,034	28,443	.....	.....
Opium	12,102	13,781	32,255	32,412	.....	.....	20,153	18,631
Paints and colours	15,412	2,085	2,774	2,019	12,641	36	.....	.....
PROVISIONS — Ghee	23,902	16,550	22,289	13,805	1,613	2,7.4	.....	.....
PROVISIONS — Other kinds	8,424	7,501	8,048	8,697	.....	.....	224	1,396
Railway materials, Construction Account	60,867	1,097	82,259	2,076	.....	.....	21,392	979
Ditto ditto, Foreign	1,24,892	65,207	1,04 326	62,32	20,566	2,886	.....	.....
Salt	6,17,770	1,22,065	5,33,227	1,11,267	1,14,540	10,8 8	.....	.....
SALTPETRE, &c. — Saltpetre	65,983	27,215	55,674	22,133	12,309	5,082	.....	.....
SALTPETRE, &c. — Other saline substances	10 565	3,798	16,808	4,792	.....	.....	6,303	994
SEEDS — Oil-seeds — Linseed	1,49,360	48,949	3 83,700	1,10,86.	.....	.....	2,34,340	61,920
SEEDS — Oil-seeds — Mustard and rape	1,44,391	32,870	1,80,611	27 370	13,780	5,500	.....	.....
SEEDS — Oil-seeds — Til or anjelly	3,818	1,041	7,008	1,941	.....	.....	3,190	900
SEEDS — Oil-seeds — Other oilseeds	71,901	23,904	84,501	24,894	.....	.....	12,600	990
SEEDS — Other seeds — Indigo seed	2,964	929	5,454	1,339	.....	.....	2,490	410
SEEDS — Other seeds — Tea seed	.....	.....	.....	.....	.....	.....	.....	.....
SEEDS — Other seeds — Other kinds	94,144	19,585	37,384	9,295	56,760	10,290	.....	.....
SILK — Silk, raw	1,354	968	1,474	1,030	.....	.....	120	62
SILK — Do., manufactured (European)	.....	.....	.....	.....	.....	.....	.....	.....
SILK — Do., ditto (Indian)	233	286	189	188	44	98	.....	.....
Spices	15,967	7,8.8	10,780	7,33.	5,187	520	.....	.....
Stone and marble	1,13,056	14,518	86,0.8	11,705	26,998	2,803	.....	.....
SUGAR — Sugar, refined	64,348	21,001	75,475	20,667	...	335	11,127	.....
SUGAR — Do., unrefined	1,21,989	35,011	53,191	16,314	68,798	18,697	.....	.....
TEA — Tea, Indian	4,134	4,319	4,874	6,344	.....	.....	740	2,025
TEA — Do., Foreign	6.	41	35	36	31	5	.....	.....
Tobacco	33,766	14,963	27,391	10,570	6,37.	4,39	.....	.....
WOOD — Timber	26,280	5,03 3	19,500	2,302	6,771	2,101	.....	.....
WOOD — Firewood	20,910	1,382	15,8.4	952	5,056	430	.....	.....
WOOL — Wool, raw	1,99	716	1,884	1,080	.....	.....	475	364
WOOL — Do., manufactured (European).	.....	.....	.....	.....	..	.....	.....	.....
WOOL — Wool, manufactured (Indian)	4,412	5,375	5,362	7,062	... ..	.....	950	1,687
WOOL — Shawls	... ...	.....	.. ..	.....	.....	.....	.....	.....
All other articles of merchandise	2,14,9.6	1,57,878	2,72,429	1,76,.01	... ...	.....	57,453	18,713
Bones	22,135	5,972	22,163	6,112	... ...	..	28	140
Potatoes	37,993	25,1.8	28,0.2	15,13.	9,961	10,018	.....	.....
Total	68,27,074	21,06,401	74,43,334	22,74,257	6,54,920	2,22,451	12,71,150	3,90,307

General remarks on the fluctuation of staples carried over the East Indian Railway during four weeks ended 23rd November 1889.

INCREASES.

Cotton.—The increase under this head is due to despatches of cotton from stations in the North-Western Provinces to Calcutta for export and to Bombay for local consumption.

Indigo.—Due to the season this year being earlier than last.

Fruits, other kinds.—This was in betelnuts from Howrah.

Minerals.—Principally in lime from Rajband, Durgapur, Raneegunge, and Asansol on the chord line and from Katni on the Jubbulpore line for Calcutta.

Brass and Copper.—This increase was in despatches of the unmanufactured article from Howrah and of manufactured ware from Mirzapur; the corresponding month of 1888 showed a heavy decline in the brass and copper traffic owing to the high rates then prevailing.

Oil.—This increase was in kerosine oil from Howrah.

Potatoes.—Due chiefly to despatches of hill potatoes from the North-Western and Oudh and Rohilkhand Railways.

Other rain and spring crops.—There was a decrease in the weight carried attended with an increase in earnings, and this was principally due to there having been in 1888 a heavy short-distance traffic coming to us from the Bengal and North-Western Railway.

Railway material, Foreign.—The increase was due to considerable despatches, during the early portion of the month, of permanent-way materials for the Delhi-Umballa-Kalka Railway.

Salt.—This was chiefly due to despatches of salt from Howrah.

Saltpetre.—The increase principally from Patna and from the Bengal and North-Western and Oudh and Rohilkhund Railways to Howrah.

Stone.—Chiefly in despatches of road metal from Pakur on the loop line to Calcutta.

Sugar and jaggree.—In earnings the largest increase was from stations on the Patna-Gya line, which despatch principally to the Great Indian Peninsula Railway *vid* Jubbulpur. In weight carried we dealt with a heavy cross and short-lead traffic from the Oudh and Rohilkhund Railway *vid* Aligarh and the North-Western Railway.

Tobacco.—Principally from Barh and the Tirhoot State Railway.

DECREASES.

Coal and coke.—In upwards traffic there was an increase in the weight carried attended with a decrease in the earnings, and this was due to the shorter average lead. The decrease in the downward traffic is due to consignments for export having been held back owing to a difficulty in obtaining steamers in which to ship coal.

Piece-goods.—The decrease was principally in despatches from Howrah, which were very brisk during the corresponding period of 1888.

Jute, raw.—The decrease was principally in traffic from the Assam-Behar State Railway *vid* Sahebgunge owing to the jute crop in the Purneah district having suffered this year owing to floods.

Wheat.—Due to there being no demand for export to Europe.

Gram and Pulses.—There were exceptional despatches last year from Delhi and the Punjab to Howrah to meet requirements on the east coast, where a famine was apprehended.

Rice (husked and unhusked).—There was an increase in the downward traffic, but despatches up-country fell off owing to there having been an exceptional demand last year.

Hides and skins.—The decrease was principally in despatches from the Tundla district to Howrah owing to want of demand.

Lac.—Principally in shellac from Mirzapur to Howrah.

Iron.—The decrease was principally in consignments from the Barakar Iron Works and in despatches of sugarcane rollers from Delhi and Delhi-Shahdara.

Opium.—Despatches were held over by the Government authorities owing to unsettled weather.

Seeds.—The decrease was chiefly in linseed, and was due to exhaustion of stocks.

N. ST. L. CARTER, *Traffic Manager.*

TRAFFIC MANAGER'S OFFICE, CALCUTTA, *8th January* 1890.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for the last 10 *days of December* 1889, *on* 1,525½ *miles open*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period	306,189	3,90,349 10 0	35,75,782 30	8,29,203 0 0	30,939 14 0	12,65,492 8 0	93,300½	118,204	211,504½
Per mile of railway	.....	261 12 6	.....	543 9 0	24 3 5	829 8 11	..	.....	.....
For previous 25 weeks of half-year	5,995,471	67,81,948 1 0	5,38,80,113 30	1,22,49,471 10 0	2,37,390 7 5	1,92,68,819 2 5	1,045,149¾	2,034,427½	3,079,877½
Total for 26 weeks	6,301,660	71,81,297 11 0	5,74,55,896 30	1,30,78,674 10 0	2,74,329 5 5	2,05,34,311 10 5	1,138,450	2,152,631¼	3,291,382
COMPARISON.									
Total for corresponding period of previous year	275,692	3,84,276 2 1	36,63,108 30	8,39,471 14 5	−87,862 14 8	11,35,885 1 10	82,320½	128,543½	210,862½
Per mile of railway corresponding period of previous year	.....	251 14 5	.....	550 4 8	−57 9 6	744 9 7	..	....	.....
Total to corresponding date of previous year	6,076,968½	69,11,491 0 6	6,25,84,315 30	1,33,58,691 11 3	3,44,638 5 6	2,06,15,021 1 3	1,712,729½	2,186,443¼	3,899,171½

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI. Railway, dated 23rd July 1883.

Receipts for the last 9 days of December 1888.			Receipts for the last 10 days of December 1889.			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,525½	11,35,885	745	1,525½	12,65,493	830	1,525½	3,25,39,726	547	1,525½	3,25,61,067	547	21,341	.....

PATNA-GYA STATE RAILWAY

Approximate Return of Traffic for the last 10 *days of December* 1889, *on* 57½ *miles open.*

	Coaching Traffic		Merchandise and Mineral Traffic		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period ...	19,807	11,315 7 0	52,079 0	3,449 9 0	50 0 0	14,825 0 0	2,547	1,892	4,439
Or per mile of railway	344	198 2 9	910 20	60 2 1	0 14 0	259 2 10	.....	.....	.....
For previous 25 weeks of half-year	*346,835	*1,94,173 6 0	†11,12,808 20	†57,769 13 0	‡1,662 9 3	2,53,605 12 3	39,903½	18,186	58,089½
Total for 26 weeks ..	366,642	2,05,508 13 0	11,64,887 20	61,209 6 0	1,712 9 3	2,68,430 12 3	42,450½	20,078	62,52?½
Comparison									
Total for corresponding period of previous year	16,286	8,977 15 4	50,746 30	2,661 14 0	652 12 9	12,292 10 1	2,392	824	3,216
Per mile of railway corresponding period of previous year ..	285	156 15 4	887 10	46 8 7	11 6 7	214 14 6	... ..	.....	.....
Total to corresponding date of previous year	347,173½	1,90,802 8 6	10,81,477 30	61,963 9 0	2,067 1 6	2,54,832 14 0	43,059	17,970	66,029

* Added number of passengers 7,745 and Rs. 5,237
† Ditto maunds 53,560 „ 804
Ditto „ 52
} on account of differences between the approximate and audited returns to week ended 23rd November 1889.

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for the last 9 days of December 1888.			Receipts for the last 10 days of December 1889			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Receipts	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	12,293	215	57½	14,825	259	57½	3,08,758	165	57½	*3,82,431	171	13,673	.....

* Added Rs. 6,145 on account of difference between the approximate and audited figures to week ended 23rd November 1889.

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for the last 10 *days of December* 1889, *on* 22¼ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period ...	22,680	5,936 12 0	10,691 20	424 6 0	10 0 0	6,371 2 0	1,236	90	1,326
Or per mile of railway ...	.....	266 13 2	... ...	19 1 2	0 7 2	286 5 6	... ..	.....	.....
For previous 25 weeks of half-year	*440,748	*1,07,988 2 0	†2,35,232 10	†6,849 1 0	‡155 3 6	1,14,992 6 6	22,958	2,112	25,070
Total for 26 weeks ...	463,428	1,13,924 14 0	2,45,923 30	7,273 7 0	165 3 6	1,21,363 8 6	24,254	2,202	26,456
Comparison.									
Total for corresponding period of previous year	21,534½	5,519 0 0	8,462 10	370 5 0	13 10 6	5,902 15 6	1,190	74	1,264
Per mile of railway corresponding period of previous year	... ...	248 0 9	... ...	16 10 3	0 9 10	265 4 10	.....	.....	.....
Total to corresponding date of previous year	464,451½	1,14,980 15 5	1,35,528 20	5,371 11 0	182 6 0	1,20,535 0 5	24,258	* 1,284	25,542

* Added number of passengers 1,250 and deducted Rs. 614
† Ditto maunds 11,570 and „ 57
‡ Ditto „ 6
} on account of differences between the approximate and audited returns to week ended 23rd November 18

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No XXI, Railway, dated 23rd July 1883.

Receipts for the last 9 days of December 1888.			Receipts for the last 10 days of December 1889.			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
22¼	5,913	265	22¼	6,371	286	22¼	2,04,882	238	22¼	*2,03,996	235	.....	2,886

* Deducted Rs. 771 on account of difference between the approximate and audited figures to week ended 23rd November 1889.

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for last 10 days of December 1889, on 747 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated), including steam-boat.	Total earnings.	Traffic Train-mile run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for last 10 days ...	182,780	1,05,310 0 0	8,57,090 0	2,19,100 0 0	31,520 0 0	3,55,930 0 0	33,000	47,000	80,000
Or per mile of railway ...	245	141 0 0	1,147 0	293 0 0	†18 0 0	452 0 0	.....	.....	.....
For previous 25 weeks of half-year	3,593,408	16,58,444 0 0	1,50,46,756 0	40,47,210 0 0	4,41,127 0 0	*61,46,781 0 0	552,766	746,091	1,298,857
Total for 26 weeks .	3,776,188	17,63,754 0 0	1,59,03,846 0	42,66,310 0 0	4,72,647 0 0	65,02,711 0 0	585,766	793,091	1,378,857
COMPARISON.									
Total for corresponding 9 days of previous year ...	171,372	70,903 0 0	8,89,715 0	2,38,181 0 0	50,659 0 0	3,59,743 0 0	29,969	40,170	70,139
Per mile of railway corresponding period of previous year ..	255	105 0 0	1,322 0	354 0 0	†36 0 0	495 0 0	.....	.....	.....
Total to corresponding date of previous year	3,575,846	16,13,140 0 0	1,62,61,990 0	42,02,141 0 0	4,71,636 0 0	62,86,917 0 0	548,261	807,717	1,355,978

* Audited up to week ending 23rd November 1889.
† Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

Receipts for last 9 days of December 1888.			Receipts for last 10 days of December 1889.			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889-90	Total decrease in 1889-90
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
673	3,59,743	535	747	3,55,040	477	673	82,42,389	314	722	*86,38,163	307	3,95,774	...

* Audited up to week ending 23rd November 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for last 10 days of December 1889, on 125 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for last 10 days ...	32,340	15,350 0 0	45,880 0	3,540 0 0	560 0 0	19,350 0 0	5,500	3,000	8,500
Or per mile of railway	259	122 0 0	367 0	28 0 0	5 0 0	155 0 0	.....	.....	.....
For previous 25 weeks of half-year	689 877	2,42,726 0 0	13,82,562 0	1,25,067 0 0	5,486 0 0	*3,73,279 0 0	89,693	50,438	140,131
Total for 26 weeks ...	722,217	2,57,976 0 0	14,28,422 0	1,28,607 0 0	6,046 0 0	3,92,629 0 0	95,193	59,438	154,631
COMPARISON.									
Total for corresponding last 9 days of previous year	28,330	15,398 0 0	61,810 0	3,510 0 0	260 0 0	19,168 0 0	3,310	4,161	7,471
Per mile of railway corresponding period of previous year ...	227	123 0 0	494 0	28 0 0	2 0 0	153 0 0	.....	.....	.....
Total to corresponding date of previous year	694,533	2,37,980 0 0	15,05,021 0	1,44,205 0 0	2,168 0 0	3,84,353 0 0	93,624	65,942	159,570

* Audited up to week ending 23rd November 1889.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

Receipts for last 9 days of December 1888.			Receipts for last 10 days of December 1889.			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889-90.	Total decrease 1889-90.
Mean mileage worked	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	19,168	153	125	19,350	155	125	5,46,155	112	125	*5,72,477	117	26,322	.....

* Audited up to week ending 23rd November 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for last 10 *days of December* 1889, *on* 86 *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for last 10 days ...	24,060	8,280 0 0	50,540 0	5,400 0 0	230 0 0	14,000 0 0	3,600	3,300	6,900
Or per mile of railway	280	96 0 0	588 0	64 0 0	3 0 0	163 0 0	.....	.....	.....
For previous 25 weeks of half-year	385,483	1,26,578 0 0	7,39,690 0	62,398 0 0	5,191 0 0	*1,94,067 0 0	62,670	22,418	85,088
Total for 26 weeks ...	409,543	1,34,858 0 0	7,90,230 0	67,788 0 0	5,421 0 0	2,08,067 0 0	66,270	25,718	91,988
Comparison.									
Total for corresponding last 9 days of previous year	19,305	6,309 0 0	38,035 0	3,734 0 0	184 0 0	10,227 0 0	3,100	858	3,958
Per mile of railway corresponding period of previous year	224	73 0 0	453 0	44 0 0	2 0 0	119 0 0	.....	.....	.....
Total to corresponding date of previous year	374,130	1,19,101 0 0	4,16,548 0	34,435 0 0	4,017 0 0	1,58,483 0 0	65,804	17,196	83,060

* Audited up to week ending 23rd November 1889.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for last 9 days of December 1888.			Receipts for last 10 days of December 1889.			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	10,227	119	86	14,000	163	86	2,23,474	67	86	*2,83,234	84	59,760	.....

* Audited up to week ending 23rd November 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for last 10 *days of December* 1889, *on* 27¼ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	4,158	1,592 0 0	24,123 0	1,328 0 0	29 0 0	2,949 0 0	727	363	1,090
Or per mile of railway ...	153	58 0 0	885 0	49 0 0	1 0 0	108 0 0	.....	.....	.....
For previous 24 weeks of half-year	79,209	28,440 0 0	2,36,288 0	14,949 0 0	1,565 0 0	44,054 0 0	12,652	10,146	22,798
Total for the half-year ...	83,367	30,032 0 0	2,60,411 0	16,277 0 0	1,594 0 0	47,003 0 0	13,379	10,509	23,888
Comparison.									
Total for corresponding period (for last 9 days) of previous year	3,639	1,367 0 0	18,126 0	1,066 0 0	15 0 0	2,448 0 0	654	505	1,159
Per mile of railway corresponding week of previous year ...	134	50 0 0	665 0	39 0 0	1 0 0	90 0 0	.....	.....	.....
Total to corresponding date of previous year	a79,369	28,429 0 0	3,09,026 0	18,211 0 0	2,103 0 0	48,813 0 0	12,278	11,686	23,964

a Includes figures for supplementary adjustments.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

Receipts for last 9 days of December 1888.			Receipts for last 10 days of December 1889.			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27¼	2,448	90	27¼	2,949	108	27¼	a75,241	73	27¼	73,722	71	.....	1,519

a Includes figures for supplementary adjustments.

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for last 10 *days of December* 1889, *on* 273 *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	51,339	22,556 0 0	2,78,064 0	32,074 0 0	6,237 0 0	61,467 0 0	7,624	10,465	18,089
Or per mile of railway	188	83 0 0	1,019 0	120 0 0	4 0 0	207 0 0*	.	.	. .
For previous 24 weeks of half-year	1,002,673	3,09,228 0 0	42,48,973 0	4,28,462 0 0	95,629 0 0	8,93,319 0 0	132,538	137,297	269,855
Total for the half-year ...	1,054,012	3,31,784 0 0	45,27,037 0	4,61,136 0 0	1,01,866 0 0	9,54,786 0 0	140,162	147,762	287,944
COMPARISON.									
Total for corresponding period (for last 9 days) of previous year	43,215	16,519 0 0	1,45,789 0	14,247 0 0	3,188 0 0	33,954 0 0	7,504	5,389	12,893
Per mile of railway corresponding week of previous year ..	158	61 0 0	534 0	52 0 0	1 0 0	114 0 0*	.....	.....	. ...
Total to corresponding date of previous year	a1,002,827	3,53,530 0 0	33,70,141 0	3,09,611 0 0	88,713 0 0	7,51,853 0 0	129,871	140,365	270,236

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."
a Includes figures for supplementary adjustments.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

Receipts for last 9 days of December 1888			Receipts for last 10 days of December 1889			Total receipts from 1st April 1888 to 31st December 1888.			Total receipts from 1st April 1889 to 31st December 1889.			Total increase in 1889-90	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week		
	Rs	Rs		Rs.	Rs.		Rs	Rs.		Rs	Rs	Rs.	Rs.
273	33,954	124	273	61,467	225	263·68	a12,49,503	125	273	14,79,154	113	2,29,651	.. .

a Includes figures for supplementary adjustments.

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The Calcutta Gazette.

WEDNESDAY, JANUARY 22, 1890.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 157A.

GENERAL.—*The 30th December* 1889.—Mr. B. G. Geidt, Covenanted Deputy Collector, is appointed to perform the functions of a Collector under section 4 of Act VII (B.C.) of 1880 in the district of Sarun.

The 16th January 1890.—Mr. R. H. Renny, Assistant Commissioner, Palamow, Lohardugga, is appointed to act as Deputy Commissioner of Manbhoom, during the absence, on leave, of Mr. E. N. Baker, or until further orders.

Mr. J. T. Jarbo, Deputy Magistrate and Deputy Collector, Lohardugga, is appointed to have charge of the Palamow sub-division of that district during the absence, on deputation, of Mr. R. H. Renny, or until further orders.

The 17th January 1890.—In modification of the order of the 31st ultimo, Baboo Kedar Nath Biswas, Deputy Magistrate and Deputy Collector, is transferred to the district of Nuddea, and is appointed to have charge of the Ranaghat sub-division of that district.

Baboo Bejoy Madhub Mookerjee, Deputy Magistrate and Deputy Collector, Ranaghat, Nuddea, is transferred to the district of Jessore, and is appointed to have charge of the Narail sub-division of that district.

Baboo Juggut Doorlub Bysack, Deputy Magistrate and Deputy Collector, Narail, Jessore, is transferred to the Sudder station of the district of Cuttack.

The services of Mr. F. A. Slack, Officiating Magistrate and Collector, Chittagong, are placed at the disposal of the Revenue Department of this Government.

Mr. C. P. Caspersz is appointed to act temporarily as Magistrate and Collector of Chittagong on being relieved of his present appointment as Officiating District and Sessions Judge of Noakholly.

The order of the 15th January 1889, appointing Baboo Jugut Chunder Roy, Sub-Deputy Collector, Basirhat, 24-Pergunnahs, to be a Special Deputy Collector for employment under the Burdwan Estate in Midnapore, and placing his services at the disposal of the Revenue Department of this Government, is cancelled.

Kumar Girindra Narain Deb, Officiating Joint-Magistrate and Deputy Collector, Jessore, is posted temporarily to the Sudder station of the district of the 24-Pergunnahs.

The 18th January 1890.—Mr. H. Cox, Joint-Magistrate and Deputy Collector, Sewan, Sarun, is allowed leave for thirty-five days under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

The 20th January 1890.—Moulvie Husmut Hossein, Sub-Deputy Collector, Patna, is allowed leave for ten days, under article 291 of the Civil Service Regulations, with effect from the 3rd proximo, or such subsequent date as he may avail himself of it.

The 21st January 1890.—Mr. G. A. Grierson, Officiating Magistrate and Collector, Gya, is allowed furlough for eight months, under article 340 of the Civil Service Regulations, with effect from the 1st March 1890, or such subsequent date as he may avail himself of it.

The order of the 13th November 1889, transferring Baboo Khereda Chunder Sen, Temporary Deputy Magistrate and Deputy Collector, Dinagepore, to Tiperrah, is cancelled.

POLICE.—*The 21st January* 1890.—Mr. W. J. Kilby, District Superintendent of Police, Rungpore, is transferred to Moorshedabad.

Mr. C. P. Crouch, District Superintendent of Police, Balasore, is transferred to Rungpore.

Mr. G. R. K. Meares, District Superintendent of Police, Moorshedabad, is transferred to Purneah.

Mr. J. B. Birch, District Superintendent of Police, Julpigoree, is transferred to Monghyr.

Mr. C. E. Gouldsbury, District Superintendent of Police, Purneah, is transferred to Balasore.

Mr. F. Wilcox, District Superintendent of Police, Backergunge, on leave, is transferred to Howrah.

Mr. H. S. Schurr, District Superintendent of Police, Howrah, is transferred to Backergunge.

Baboo Jadub Chunder Deb, Assistant Superintendent of Police, Burdwan, is transferred to the 24-Pergunnahs.

Mr. R. Castle, Assistant Superintendent of Police, is posted to Moorshedabad on being relieved of his present appointment as Assistant Superintendent of Police in charge of the district police of Backergunge.

Mr. J. Cowie, Assistant Superintendent of Police, in charge of the district police of Dinagepore, is transferred to Julpigoree, and appointed temporarily to have charge of the district police of that district.

ECCLESIASTICAL.—*The 16th January* 1890.—The Revd. G. W. Panes, in charge of the Bethel Southal Mission, is hereby licensed, under section 9, Act XV of 1872, to grant certificates of marriage between persons who are Native Christians.

The Revd. G. W. Panes is also appointed to be a Registrar of Births and Deaths under Act VI of 1886.

EDUCATION.—*The 21st January* 1890.—Baboo Dina Nath Sen, Officiating Inspector of Schools, Eastern Circle, is allowed leave for one month and fifteen days, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

MEDICAL.—*The 21st January* 1890.—Surgeon D. G. Crawford, Officiating Civil Surgeon, Midnapore, is allowed leave for fifteen days under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

The following notifications are republished from the *Assam Gazette*:—

No. 425 *of* 1889.—*The 28th December* 1889.—Mr. H. LeMesurier, C.S., Assistant Commissioner, is transferred from Habiganj in the Sylhet district to the district of Cachar as a temporary arrangement.

No. 96*G.*—Mr. F. C. French, C.S., who has recently been appointed a member of the Bengal Civil Service, is posted as an Assistant Commissioner, third grade, to Tezpur.

No. 171*G.*—The following is published for information:—

FINANCE AND COMMERCE DEPARTMENT, CALCUTTA.

No. 5535, dated Calcutta, the 30th December 1889.

The undermentioned officer has been granted by Her Majesty's Secretary of State for India extension of leave as advised in list dated 6th December 1889—

Mr. H. Luttman-Johnson, Covenanted Judge and Commissioner, Assam, 5 weeks' furlough.

No. 61*J.*—*The 9th January* 1890.—The Chief Commissioner empowers Mr. W. B. Brown, C.S., Assistant Commissioner, to try summarily the offences mentioned in section 260 of the Criminal Procedure Code (Act X of 1882).

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

at 7h. P.M. on 28th June 1859, during thick weather, and estimated to be about 12 feet above water; the position assigned by dead reckoning, being lat. 42° 16′ N., long. 137° 18′ E.

The rock was searched for on two occasions by French vessels of war without success prior to 1886. In September 1886, eight of Her Majesty's ships passed near the assigned position of the rock, in such a manner that an area of 40 miles in latitude and 62 miles in longitude was examined, and no sign of the rock was observed.

In June 1888, an American whaling barque reported having seen two rocks from 8 to 12 feet high, about 500 yards apart, in lat. 42° 30′ N., long. 137° 5′ E., or about 15 miles north-westward of the *Voevoda's* reported position.

Consequent on this latter report a further special search has been made by five of Her Majesty's ships on the China station throughout 7th September 1889. During this search the position of the rocks reported by the American whaling barque, as well as that of the Waywoda rock, was passed over without seeing any signs of a rock above water, or obtaining any soundings indicative of shallow ground.

After a careful review of the above circumstances, it is considered that the objects seen by both the *Voevoda* and the American whaling barque were floating, and therefore the rock has been removed from the Admiralty Charts.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 6th January* 1890.

[Second Publication.]

NOTIFICATION No. 4Mne.

The 7th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 4).

JAPAN.

KIUSIU—NORTH-WEST COAST.

Sunken rocks in Iki Channel, and on south coast Iki sima.

THE British Admiralty has given notice (No. 434 of 1889) of the existence of the undermentioned sunken rocks lying in Iki channel, and on the south coast of Iki sima:—

1. A rock, with a depth of 1¾ fathoms, lies near the fairway in Iki channel, with Yebosi sima light-house bearing S. 75° E., and the eastern extreme of Na sima North.
   Position, lat. 33° 42′ 35″ N., long. 129° 52′ 20″ E.
2. A rock, with a depth of 2¼ fathoms, lies in Iki channel, with the north extreme of Na sima, in line with the Watch-house on Iki sima, bearing N. 87° W., and Akasi saki, the north-east extreme of Iki sima, N. 44° W.
   Position, lat. 33° 44″ 40′ N., long. 129° 54′ 10″ E.
3. A rock, with a depth of 1¾ fathoms, lies off the south coast of Iki sima, with Ko saki bearing S. 73° W., distant 4¼ cables.
   Position, lat. 33° 42′ 25″ N., long. 129° 43′ 30″ E.
4. A rock (*Tsurizone rock*), with a depth of 1¾ fathoms, lies 4¼ cables southward of Hira sima, with Ko saki bearing N. 86° E., and western extreme of Naga sima N. 7° W.
   Position, lat. 33° 41′ 35″ N., long. 129° 37′ 50″ E.
5. A rock (*Sorazone rock*), with a depth of 3¼ fathoms, and 5 cables in extent in a north and south direction, lies nearly in the fairway of the southern entrance to Go no Ura, 6 cables distant from Tskuye sima, and with the north-west extreme of that islet in line with the north extreme of Hira sima.
   Position, lat. 33° 43′ 5″ N., long. 129° 39′ 40″ E.
6. A rock (*Ozone rock*), awash at low water spring tides, is an extension of the shoal shown on Admiralty Chart No. 127, on the eastern side of entrance to Go no Ura; it lies 3¼ cables from the coast of Iki sima, with the south extreme of Haru sima bearing S. 86° W., and north-east extreme of Oö sima N. 45° W.
7. The rock (*Hirase rock*) in the northern part of Go no Ura, and shown on Admiralty Charts as "Covers," lies a little westward of the position given, with Tskuye sima bearing S. 27° W., distant 1 8/10 miles.

CAUTION.—There are many rocks and shoals near the coasts in this locality as yet not charted. Careful navigation is therefore needed.

The depths given are at low water spring tides.

(*The bearings are Magnetic, Variation 4° Westerly in* 1889).

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 6th January* 1890.

[Second Publication.]

NOTIFICATION No. 5Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 5).

TASMANIA.

BASS AND BANKS STRAITS.

Intended alteration in colour of light-houses.

THE British Admiralty has given notice (No. 439 of 1889) that on 1st January 1890, or as soon after as may be, the light-houses on the coasts of Tasmania, together with those on King island and Kent group (Bass strait) and on Goose and Swan islands (Banks strait), will be painted entirely white.

At present the lower parts of the light-houses are painted white, and the upper parts red.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[Second Publication.]

NOTIFICATION No. 6Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 6).

ARABIAN SEA.

NINE DEGREES CHANNEL.

Unsuccessful search for reef reported north-east of Minikoi Island.

THE following Notice to Mariners (No. 443 of 1889), issued by the British Admiralty, is republished with reference to Nos. 80 and 85, dated, respectively, the 23rd August and 6th September last, issued by this office:—

In consequence of a reef having been stated to exist in the Nine Degrees channel, about 50 miles north-east of Minikoi island, in lat. 8° 48′ N., long 73° 40′ E., by the Master of the S.S. *Noord Braband*, August 1889, who reported it as being 3 miles in length in a south-east and north-west direction, an examination of the locality has been made by Commander R. F. Hoskyn, R.N., in charge of the India Marine Survey, with the following result:—

The examination, carried out in the I.G.S.S. *Investigator*, and extending over three days, from 2nd to 4th November 1889, embraced the reported position of the reef between lat. 8° 35′ and 9° 5′ N., and long. 73° 15′ to 74° 0′ E. The least depth found on the suspected spot was 1,179 fathoms, gray ooze, and no indication was afforded by the soundings of the existence of shallow water. On one occasion, however, some patches of what appeared to be discoloured water were observed; but they were all examined and proved to be merely the reflection of clouds in smooth streaks of water.

Throughout the time the weather was uniformly fine, and favourable for observations, and the positions of the soundings were satisfactorily determined.

Considering the detailed nature of this examination by Commander Hoskyn, and the fact of the locality being near the track of shipping using the Nine Degrees channel, the existence of this extensive danger is considered disproved.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[Second Publication.]
NOTIFICATION No. 7Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 7).

AUSTRALIA—EAST COAST.

PIONEER RIVER APPROACH.

Sunken rock north-eastward of Round Top island.

THE British Admiralty has given notice (No. 444 of 1889) of the existence of a sunken rock lying about 6 cables north-eastward of Round Top island, Pioneer river approach.

This rock (*Taroba rock*), with about 19 feet over it at low water, lies with the following bearings:—

Round Top island summit ...	...	...	S.W. ½ S.
Flat Top island light-house ...	...	...	West.

Position: lat. 21° 9′ 45″ S., long. 149° 17′ 50″ E.

(*The bearings are Magnetic. Variation 7° Easterly in* 1889.)

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[Second Publication.]
NOTIFICATION No. 8Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 8).

AUSTRALIA—SOUTH COAST.

PORT PHILLIP ENTRANCE.

Submarine telegraph cable between Swan island and Observatory Point.

THE British Admiralty has given notice (No. 446 of 1889) that a submarine telegraph cable has been laid between Swan island and Observatory Point within the entrance to port Phillip.

The cable is laid from Swan beacon to Pope's Eye fort (situated near the white pile beacon on the south-west part of that shoal) and thence to Observatory Point.

CAUTION.—Mariners are warned that anchorage within 4 cables on either side of this cable is prohibited.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[Third Publication.]
NOTIFICATION No. 1Mne.

The 6th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 1).

BAY OF BENGAL.

BURMA COAST.

The floating light-vessel "Colombo" replaced below Elephant Point.

WITH reference to Notice to Mariners, No. 115, dated the 28th November last, issued by this Office, the Officiating Port Officer of Rangoon has given notice that the floating light-vessel *Colombo* has been replaced off the Spit below Elephant Point, and the schooner *Pharos* removed.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 4th January* 1890.

[Third Publication.]

NOTIFICATION No. 2Mne.

The 6th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 2).

BAY OF BENGAL.

ORISSA COAST.

Inner bar-buoy adrift.

A TELEGRAPHIC communication has been received from the Collector of Customs Balasore, that the *inner bar-buoy* has drifted out of position.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th January* 1890.

JAIL DEPARTMENT.

ERRATUM.—*For* "28th September 1889" *read* "20th September 1889" in the Jail Department notification No. 9494, dated the 10th December 1889, printed in page 1046 of the *Calcutta Gazette* dated the 18th December 1889 (Part I).

A. S. LETHBRIDGE,
Inspector-General of Jails, Bengal.

CALCUTTA, *the 14th January* 1890.

Revised Notification No. 25, dated 6th January 1890.

No. 683.—*The 18th January* 1890.—Mr. C. H. C. Sevenoaks made over charge of the Midnapore Jail to Mr. H. M. Owen on the afternoon of the 20th December 1889.

A. D. LARYMORE,
Offg. Inspector-General of Jails, Bengal.

No 712.—*The 20th January* 1890.—Mr. A. D. Larymore made over charge of the Alipore Jail to Mr. M. S. Emerson on the afernoon of the 16th January 1890.

A. D. LARYMORE,
Offg. Inspector-General of Jails, Bengal.

ECCLESIASTICAL.

THE REVEREND THEODORE EDWARD FORTESCUE COLE, B.L., of Downing College, Cambridge, Junior Chaplain, has been appointed by the Lord Bishop of Calcutta a Surrogate in the Diocese for granting episcopal licenses of marriage.

C. H. REILY,
Registrar of the Diocese.

DIOCESAN REGISTRY OFFICE, *the 16th January* 1890.

HIGH COURT NOTICES.

BABOO HARA GOBIND MOOKERJEE, Additional Subordinate Judge of Rungpore, is appointed to be a District Delegate, under section 235A of Act X of 1865, and section 52 of Act V of 1881, within the local limits of the district of Julpigooree.

By order of the High Court,

C. M. W. BRETT, *Registrar.*

HIGH COURT, *the 21st January* 1890.

Dates of Criminal Sessions for the year 1890.

No. of Sessions.	Day of the week.	Date.
First Sessions	Monday	February, 17th.
Second ,, ...	Ditto	April, 28th.
Third ,, ...	Ditto	July, 14th.
Fourth ,, ...	Ditto	September, 1st.
Fifth ,, ...	Ditto	December, 8th.

By order,

J. G. APCAR, *Clerk of the Crown.*

HIGH COURT, CROWN OFFICE, *the 13th January* 1890.

Sheriff's Office, the 22nd January 1890.

NOTICE is hereby given that the First Criminal Sessions of the year 1890 of the High Court of Judicature at Fort William in Bengal for the Town of Calcutta and Factory of Fort William, and the places subordinate thereto, will be holden at the Court-house in the Town of Calcutta, on Monday, the seventeenth day of February next, at 11 o'clock in the forenoon, and so on from day to day until the said Sessions be over. And it is hereby proclaimed that all persons who will prosecute any of the prisoners to be brought up for trial at the said Sessions be present then and there to prosecute.

H. B. H. TURNER, *Sheriff.*

শরিফ আফিস, সন ১৮৯০ সাল তারিখ ২২শে জানুয়ারি।

সকলকে সমাচার দেওয়া যাইতেছে যে সুবে বাঙ্গালার ফোর্ট উইলিয়ম দুর্গের অধীন শহর কলিকাতার ও অন্যান্য স্থানের ফৌজদারী বিচার নিষ্পত্তি জন্য আগামী সন ১৮৯০ সালের ১৭ই ফেব্রুয়ারি সোমবার বেলা ১১ ঘটিকার সময় এবং যে পর্য্যন্ত সেশিয়ানের কার্য্য শেষ না হয় প্রতিদিন উক্ত সময়ে কলিকাতার হাই কোর্টের আপল আদালত ঘরে সন ১৮৯০ সালের প্রথম ক্রমিনেল সেশিয়ান বসিবেক এবং এতদ্দ্বারা প্রচার করা যাইতেছে যে, যে সকল ব্যক্তি কোন কয়েদির বিরুদ্ধে ফৌজদারী মিছিল করিবেক তাহারা উক্ত স্থানে উক্ত সময়ে হাজির থাকিয়া মোকদ্দমা করে ইতি।

এইচঃ বিঃ এইচঃ টারনার, শরিফ।

SMALL CAUSE COURT NOTICE.

Notice.

UNDER section 7, Act IX of 1887, notice is hereby given that the Small Cause Court Judge of Dacca and Munshigunge will hold his sittings at Munshigunge from the 19th to the 26th February next, and the rest of the days of the month at Dacca, Sundays and holidays excepted.

K. C. CHATTERJI, *First Sub-Judge, for District Judge.*

JUDGE'S OFFICE, DACCA, *the 18th January* 1890.

EDUCATION DEPARTMENT, BENGAL.

Subordinate Educational Service.

The 8th January 1890.—Babu Braja Syam Mazumdar, Departmental Sub-Inspector of Schools, 24-Pergunnahs (class VI), is allowed leave of absence for two months, under Article 294 of the Civil Service Regulations, with effect from the 11th November 1889.

Babu Rajani Kanta Sanyal, B.A., is appointed to act as Departmental Sub-Inspector of Schools, 24-Pergunnahs, and in class VI *vice*, Babu Braja Syam Mazumdar, on leave.

The 21st January 1890.—Babu Tripura Charan Banerjea, B.A., Third Master of the Bhagulpore Zillah School, class VI now under the Court of Wards is allowed leave of absence for four weeks, under Article 372 of the Civil Service Regulations, with effect from the 12th February 1890, the date on which his services will be transferred to this Department.

A. CROFT, *Director of Public Instruction.*

List of Holidays and Vacations for Government Colleges in Bengal for the year 1890.

MONTH.	Vacations and Holidays.
January ...	1st—New Year's day. 25th—Sripanchami.
February ...	.....
March ...	6th—Dolejatra.
April ...	4th and 5th Easter holidays. 12th—Chait Sankranti. 28th to 30th ...
May ...	1st to 31st ... } Summer vacation.
June ...	1st to 22nd ... }
July ...	28th or 29th—Eed-uz-zoha.
August ...	7th—Janmastami. 25th and 26th, or 26th and 27th—Mohurrum.
September ...	.....
October ...	10th to 31st ... } Durga Puja vacation. 1st ... }
November ...	11th and 12th—Kali Puja. 20th and 21st—Jagadhatri Puja.
December ...	24th to 31st—Christmas holidays.

Collegiate schools will remain open up to the 10th May, and will reopen on the 23rd June.

A. CROFT,
Director of Public Instruction.

Examination of Candidates for Pleadership and Mookhtarship in Mofussil Courts subordinate to the High Court.

THE next examination of candidates for Pleadership will be held in the Senate House of the Calcutta University on *Wednesday and Thursday, the 19th and 20th of February* 1890, instead of on Monday and Tuesday, the 24th and 25th of February as originally notified.

The next examination of candidates for Mookhtarship will be held at Calcutta, Patna, Dacca, Cuttack, Gauhati, and Sylhet on *Wednesday and Thursday, the 19th and 20th of February* 1890, instead of on Monday and Tuesday, the 24th and 25th of February as originally notified.

Two papers will be set each day for the Pleadership Examination at 10 A.M. and 2 P.M., respectively, and the two papers for the Mookhtarship candidates will be set on the 19th February at the same hours.

Under no circumstances will any candidate be admitted to the examination-room after these hours.

The candidates will be required to produce at the examination extracts from the Register, which will be furnished to them by the District Judge through whom their applications have been sent to the Board of Examiners.

No candidate will be allowed to enter the examination-room with any memoranda or loose papers of any description (with the exception of the extracts abovementioned).

All writing materials will be provided, with the exception of pens, which the candidates must bring with them.

HENRY T. HYDE,
Secy. to the Board of Exmrs. for Pleadership and Mookhtarship.

NOTIFICATIONS OF THE BOARD OF REVENUE.

No. 1594B.

NOTICE is hereby given that the Second Sale of Opium, the provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall Street, on Monday, the 3rd February 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. They may be ascertained by reference to the Notification issued on the 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Board of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th February 1890, respectively, that is to say, no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 8th February 1890, and no Bank of Bengal Receipts in full payment of lots will be accepted after 3-30 P.M. of Tuesday, the 18th February 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the opium manufactured at the Patna and Ghazeepore Factories will be brought to sale during the year 1890 about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so:—

DATES.		Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Monday, 3rd March	1890	2,250	2,500	4,750
On or about Wednesday, 2nd April	,,	2,250	2,500	4,750
On or about Thursday, 1st May	,,	2,250	2,500	4,750
On or about Monday, 2nd June	,,	2,250	2,500	4,750
On or about Wednesday, 2nd July		2,250	2,500	4,750
On or about Monday, 4th August		2,250	2,500	4,750
On or about Monday, 1st September		2,250	2,500	4,750
On or about Wednesday, 1st October		2,250	2,500	4,750
On or about Monday, 3rd November		2,250	2,500	4,750
On or about Monday, 1st December		2,250	2,500	4,750
TOTAL		22,500	25,000	47,500

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L.P., CALCUTTA, *the 30th December* 1889.

Notification under Section 30 *of Act XII of* 1882 (*The Indian Salt Act*).

IN exercise of the powers conferred by the second paragraph of Notification No. 769, dated 11th February 1888, issued by the Governor-General of India in Council (in the Department of Finance and Commerce), under section 28 of Act XII of 1882, and published at pages 67-72 of the *Gazette of India*, dated 11th February 1888, the Commissioner of Salt, Abkari, and Separate Revenue, Madras Presidency, under section 30 of Act XII of 1882, authorises the officer named below to exercise the powers of a Salt Revenue Officer:—

Locality.	Name.	Rank.	Powers to be conferred on each.	REMARKS.
Basudebpore Circle	Mr. C. M. Sherman	Inspector, 4th grade.	Salt Revenue Officer.	

E. MILLETT, *Assistant Secretary.*

BOARD OF REVENUE (SEPARATE REVENUE), *Madras, the 8th January* 1890.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that at the bye-election held on the 30th ultimo in Ward No. I of the Joynagore Municipality, Baboo Mathura Mohon Chakravarti has been duly elected a Commissioner for that Ward in the place of Baboo Hem Nath Datta, deceased.

A. BHATTACHARJEE, *Personal Assistant, for Commissioner on tour.*

COMMR.'S OFFICE, PERSY. DIVN., CALCUTTA, *the 15th January* 1890.

NOTIFICATION.

IT is hereby notified for general information that at the election held on the 16th ultimo, Moulvi Nasir Hossain Khan has been elected as a Municipal Commissioner in the Peerbohur Ward of the Patna Municipality in the place of Baboo Gurupershad Sen, who has ceased to be a Commissioner under section 20 of the Municipal Act.

JOHN BOXWELL, *Offg. Commissioner.*

PATNA COMMR.'S OFFICE, BANKIPORE, *the* 10*th January* 1890.

The Calcutta Gazette.

WEDNESDAY, JANUARY 22, 1890.

PART IA.

Orders and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following orders, issued by the Government of India, in the Home Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATIONS—ESTABLISHMENTS.

Calcutta, the 16th January 1890.

No. 22.—Mr. N. S. Alexander is permitted to resign Her Majesty's Bengal Civil Service, with effect from the 15th March 1890, or the subsequent date on which he may sail from India.

JUDICIAL.

The 15th January 1890.

No. 49.—The Hon'ble Amir Ali, C.I.E., Barrister-at-Law, took his seat as an Officiating Judge of the High Court of Judicature at Fort William in Bengal on the forenoon of the 2nd January 1890.

EDUCATION.

The 17th January 1890.

No. 25.—The Governor-General in Council is pleased to appoint the following gentlemen to be Fellows of the University of Calcutta :—

The Hon'ble J. F. Norris, Q.C.
The Ven'ble Archdeacon Michell.
The Reverend H. Whitehead, M.A.
Maharajah Sir Narendra Krishna, K.C.I.E.
Maulavi Ashraf-ud-din Ahmad.
Baboo Shyama Charan Ganguli, B.A.
„ Bepin Bihari Gupta, M.A.

A. P. MACDONNELL.
Secretary to the Govt. of India.

The following orders, issued by the Government of India, in the Military Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

Fort William, the 17th January 1890.

FURLOUGH AND LEAVE.

No. 48.—Surgeon-Major R. G. Mathew has been granted by the Secretary of State f India furlough out of India (m.c.) for six months, in commutation of privilege leave, und Rules IX and XV of the Regulations of 1868.

VOLUNTEER CORPS.

APPOINTMENTS.

No. 65.—*Northern Bengal Volunteer Rifle Corps*—

Captain A. E. Couper, East Surrey Regiment, Officiating Adjutant, is confirmed in tha appointment, with effect from the 11th November 1889.

E. H. H. COLLEN,
Secretary to the Govt. of India.

The Calcutta Gazette.

WEDNESDAY, JANUARY 22, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 14th January 1890.—It is hereby notified that, under section 19, Act III (B.C) of 1885, the Lieutenant-Governor is pleased to appoint Syed Mohamed Hossein to be a member of the Sudder Local Board, in the district of Backergunge, *vice* Syed Abdur Raub.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 16th January 1890.—It is hereby notified for general information that the Lieutenant-Governor intends, in the exercise of the power vested in the Local Government by section 86 (*b*) of Act III (B.C.) of 1884, and on the recommendation of the Commissioners of the Lohardugga Municipality made at a meeting, to sanction the levy by the Commissioners, under section 143 of the Act, of a fee on the registration under section 142 of all carts which are kept or habitually used within the Municipality, unless good reasons are shown to the contrary within one month from the date of the publication of this notification within the Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 17th January 1890.—Under Rules 11 and 10 of the Rules prescribed by the Government of India under the Local Authorities Loan Act, 1879, in the notifications of the Department of Finance and Commerce, Nos. 15 and 16, respectively, dated the 1st January 1889, the Lieutenant-Governor has been pleased to authorize the Inspectors of Local Works in their respective jurisdictions to inspect all works undertaken by District Boards and Municipalities by means of loans granted to or raised by them under these rules, and the accounts connected therewith.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Bepin Behari Banerjee to be a Commissioner of the Jhaldah Municipality, in the district of Manbhoom, *vice* Baboo Khetra Nath Ghosh, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th January 1890.—It is hereby notified that, under section 27, Act III (B.C) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Khetra Mohun Mitter, Deputy Magistrate, to be a Commissioner of the Pooree Municipality, *vice* Baboo Rajgopal Roy, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th January 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Howrah Local Board, in the district of Howrah, under section 25 of Act III (B.C.) of 1885, of Baboo Shib Chundra Mullick to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th January 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Uluberiah Local Board, in the district of Howrah, under section 25 of Act III (B.C.) of 1885, of Baboo Tincowri Ghose to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 20th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Chandra Kanta Guha to be a Commissioner of the Sherepore Municipality, in the district of Mymensingh, *vice* Baboo Gopal Govindo Gupta, who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

ERRATUM.

The 20th January 1890.—In the notification, dated the 29th November 1889, published at page 266, Part IB of the *Calcutta Gazette* of the 4th December 1889, containing the names of the members of Local Boards in the district of Patna, *for* "Munshi Lekha Ram," an elected member of the Behar Local Board, *read* "Munshi Lekh Narain," and *for* "Shah Ali Hussain," an appointed member of the Behar Local Board, *read* "Shah Ata Hussain."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 20th January 1890.—Whereas a notification, dated the 14th October 1889, was published at page 223, Part IB of the *Calcutta Gazette* of the 16th idem, declaring the intention of the Lieutenant-Governor to extend the provisions of Act V (B.C.) of 1880 to the Netrokona Municipality, in the district of Mymensingh, and whereas no objections were raised to the proposal within six weeks of the date of publication of the notification within the Municipality, the Lieutenant-Governor is pleased, in exercise of the power vested in him by section 1 of Act V (B.C.) of 1880, to extend the provisions of the said Act to the Netrokona Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 21st January 1890.—Whereas a notification dated the 18th September 1889 announcing the intention of the Lieutenant-Governor to extend the provisions of the Bengal Vaccination Act V (B.C.) of 1880 to the Perozepore Municipality in the district of Backergunge, was published at page 197, Part IB of the *Calcutta Gazette* of the 25th idem, and whereas no sufficient objection has been raised to the proposal within six weeks from the date of the publication of the notification within the Municipality, it is hereby notified for general information that, in exercise of the power conferred on him by section 1 of the said Act, the Lieutenant-Governor extends the provisions of the Act to the Perozepore Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 21st January 1889.—In exercise of the power conferred on the Local Government by section 414 of Act II (B.C.) of 1888, the Lieutenant-Governor has been pleased to confirm the following bye-laws which have been made by the Commissioners of Calcutta under section 412, clauses (*a*), (*b*), (*c*), and (*d*), and published in the manner prescribed in section 415 of the Act.

* (*a*) All matters and things connected with the supply and use of water—

Washing animals in the streets.

1. No person shall wash or cleanse, or cause to be washed or cleansed, in any public street, lane, or thoroughfare, or in upon, or by the side of, any tank, reservoir, bathing place, aqueduct, well, cistern, conduit, or other water-works belonging to the Commissioners and provided by them for the domestic use of the inhabitants of the town, any vehicle, carriage, or cart, dog, horse, or other animal.

Washing apparel, &c.

2. No person shall wash, cleanse, or cause to be washed or cleansed, in any public street, lane, or thoroughfare, or in, upon, or by the side of, any tank, reservoir, bathing place, aqueduct, well, cistern, conduit, stand-pipe, or other water-works belonging to the Commissioners (and provided by them for the domestic use of the inhabitants of the town) any wool, cloth, or wearing apparel, or any utensil for cooking or other purposes, or leather, or skins of any animal, or any foul or offensive thing, unless specially set apart by the Commissioners for that purpose.

Stop-cocks, taps, and ferrules to be approved by Commissioners.

3. All stop-cocks, taps, and ferrules for new connections shall be of a pattern approved of by the Engineer to the Corporation.

Occupier to effect repairs in case of leakage.

4. Should any leakage occur in a communication pipe, cistern, tap, or other water fittings, the occupier, or, in case of a vacant house, the owner shall within 48 hours engage an authorized plumber, who shall be bound to effect the repairs within a further period of 12 hours.

Water for ornamental or business purposes to be taken through meter.

5. Water for ornamental or business purposes must, unless otherwise agreed upon under section 154, be taken through a meter, the working of which is to be approved of by the Engineer to the Corporation. The meter shall be provided, and any repairs which may be necessary from time to time shall be carried out at the cost of the person taking the supply. The meter shall be of a pattern, and be fixed in a position to be approved of by the Commissioners.

Usual deduction to be allowed.

6. In calculating the sum payable for water under Rule 5, the allowance prescribed by section 155 shall be deducted from the amount consumed, and only the surplus consumption charged for at the rate of 2,000 gallons per rupee.

Cistern not to be put up or its size increased without sanction of the Commissioners.

7. No person shall put up any cistern at any latrine or water closet, or otherwise, or increase the size of such cistern without the previous sanction of the Commissioners.

Prohibition for bathing or using water of a tank for drinking purposes, &c.

8. Whenever a public notice has been issued under section 323, Act II (B. C.) of 1888, prohibiting the removal or use of the water of any particular tank for the purpose of drinking, no person shall, so long as such public notice is in force, bathe in such tank or take away the water thereof whether in a gumlah, mussuck, kulsee, water-cart or any other vessel without a written authority from the Commissioners.

(*b*) The time and place of bathing for persons of each sex in places provided or set apart for bathing purposes—

Place of bathing set apart for persons of either sex.

1. No person of one sex shall bathe in or otherwise use any bathing place belonging to and set apart by the Commissioners for the use of persons of the other sex.

Diseased persons not to bathe in tanks.

2. No person suffering from leprosy or any contagious disease shall bathe in or otherwise use any bathing place belonging to the Commissioners.

Committing nuisance not allowed in any bathing place.

3. No person shall commit a nuisance by obeying a call of nature in any bathing place belonging to the Commissioners.

(*c*) The deposit, whether in the public streets or otherwise, of rubbish and offensive matter, the removing and carrying away of the same, and charging the person responsible for such deposit with the expenses of removing it—

Dust, dirt, ashes, kitchen or stable refuse not to be deposited in streets except as the Commissioners shall direct.

1. Where the provisions of section 298, Act II (B.C.) of 1888, have been complied with by the Commissioners, no person, the entrance to whose premises is within 50 yards of a dust-box, shall deposit, or cause to be deposited, any offensive matter or rubbish in any public street except in the dust-bin or box provided by the Commissioners. If such box or bin is full, the offensive matter or rubbish may be deposited by the side of it.

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* The bye-laws are grouped for convenience under the heads of the several sub-sections of section 412, but it is not thereby meant that this sub-section is the sole authority for each bye-law. A bye-law is passed sometimes partly under the authority of one sub-section, partly of another, partly of the general provision at the end of the section. If any question therefore is raised as to whether any bye-law is authorised by the sub-section under which it is placed, it must be understood that its validity must be tried under all the provisions of section 412 before it is declared *ultra vires*.

2. Where the provisions of section 298 of Act II (B. C.) of 1888 have not been complied with, no person shall deposit, or allow to be deposited, in any public street any offensive matter or rubbish except between such hours as may from time to time be determined by the Commissioners in meeting, and duly notified to the public.

Dust, dirt, ashes, &c., not to be deposited where the provisions of section 298 have not been complied with except between such hours as may be determined by the Commissioners.

3. No person shall dig, or allow to be dug, in Calcutta any cesspool, tank, well or pit, or any excavation for the purpose of taking earth therefrom or for storing offensive matter or rubbish without the special permission of the Commissioners.

Tank, hole, or excavation not to be dug in Calcutta without permission.

4. Every person who shall exercise in Calcutta any of the professions, trades, or callings prescribed in the following schedule (Rule 7) shall take out a half-yearly permit and pay to the Commissioners such sum as may be due by him according to the rates mentioned in the said schedule for the removal and carrying away of offensive matter or rubbish resulting from such business, trade, profession or calling.

Refuse resulting from any business or trade to be removed under half-yearly permits.

5 The Commissioners may in their discretion remit or refund the whole, or such portion thereof as they may think fit, of the amount so payable if they are satisfied that any such person removes the offensive matter or rubbish himself, or has exercised any such business, trade, profession or calling for a portion of the half-year only.

Discretion of the Commissioners to refund or remit whole or portion of the amount payable for removal of business or trade refuse.

6. Such permit shall be for a period of six months commencing in April and October in each year—and shall be taken out not latter than the 1st of June and the 1st of December in that year.

Permit shall be for six months, commencing in April and October in each year.

7. The following is the schedule of rates for removing offensive matter or rubbish refuse resulting from bazar, screw-house, stable, cow-shed, &c. :—

Schedule of rates for removing offensive matter, rubbish, &c.

	Per month. Rs. A.
For a large cart of eighty baskets	40 0
For a small cart of forty baskets	20 0
For every second class horse, pony or mule	1 0
For every third class horse, pony or mule	0 8
For every bull or buffalo used for drawing a cart	0 4
For every cow or buffalo kept by a gowala	0 2
For every donkey	0 2
For every basket load	0 8
For every ten goats or sheep	0 8

List of traders that are liable to pay the trade refuse tax—

Livery-stable keeper	per cart-load.
2nd class hackney carriage owner ...	„ horse.
3rd do. do.	„ horse.
Carters	„ bullock.
Gowalas...	„ cow.
Horse dealers	„ horse.
Screw-house keepers	„ cart or basket-load.
Bazar-owners	„ ditto
Shoe-makers	„ basket-load.
Coach-builders	„ cart or basket-load.
Hotel-keepers	„ ditto.
Boarding house keeper	„ ditto.
Shepherds	„ every 10 sheep.
Goatherds	„ every 10 goats.
Iron founders	„ cart or basket-load.
Hide store-keepers	„ ditto.
Sugar candy manufacturers	„ ditto.
Flour, oil, and soorkey mill-owners ...	„ ditto.

8. No person shall steep in any river, khal, tank, or ditch within municipal limits any jute, hemp, or other organic matter likely to render the water of such river, khal, tank, or ditch offensive or noxious to the neighbourhood.

Jute, hemp, &c., not to be steeped in any khal, tank, &c.

9. No person shall, without the written permission of the Commissioners, set up any obstruction in any public water-course.

Obstructions not to be set up in any drain or water course.

10. The skinning platform situated at the east end of the square mile of ground belonging to the Commissioners at Dhappa has been provided and set apart for the deposit of the carcasses of animals removed in accordance with the provisions of section 306, Act II (B.C.) of 1888.

Dead animals to be removed within three hours after death.

11. No fee shall be charged for the reception of a carcass removed to the platform by the occupier or person in charge of the animal if deposited with its skin, but if the skin is removed before deposit, a fee of Re. 1 shall be charged for every carcass when deposited.

No fée to be charged for reception of carcass removed by the owner.

12. The proper officer of the Corporation to whom the death shall be reported shall be the Inspector of the Ward in which the premises are situated.

Inspector of the Ward the proper officer to whom the death of an animal to be reported.

13. The fee for the removal of a carcass to the skinning platform by the Commissioners shall be—

Fees for removal of carcasses.

	Rs.	A.
For every horse, bull, bullock, cow, pony, or for any other animal weighing more than 2 maunds	1	8
For every sheep, pig, or for any other animal weighing more than 1 maund	1	0
For every animal not specified above weighing less than 1 maund	0	8

No Inspector when called upon shall neglect to remove a carcass.

14. No person shall deposit, or cause to be deposited, any carcass, or any part of a carcass, in any place other than the place appointed by the Commissioners for the reception of such carcass, and no person shall throw, or cause to be thrown, any carcass, or any part of a carcass, into any public street, lane, or thoroughfare, or into any drain without the express permission of the Commissioners.

Carcasses to be deposited only in such places as may from time to time be appointed by the Commissioners.

15. No person shall construct or place over any public drain any bridge, platform, building, or structure of any kind except by, and with the written permission of, the Commissioners, and in such manner as they shall direct.

Bridge, platform, &c., not be constructed or placed over any public drain.

16. No person shall prepare any channel, or convey water by any channel, across any public thoroughfare except in such manner as shall have been first approved by the Commissioners.

Water not to be conveyed through any channel across any public thoroughfare.

17. No person shall picket animals, or collect carts, or form any encampment upon any public ground within the limits of the Municipality without the permission of the Commissioners.

Animals not be picketed or carts collected upon any public ground.

18. No person shall throw or cause to be thrown, any corpse or carcass, or any part of a corpse or carcass, into any river or nulla or canal or on the banks of any river, nulla or canal within the limits of the Town of Calcutta.

Corpses or carcasses not be thrown into rivers, &c.

19. No person shall take down, alter or remove any fencing, bar, chain or post, or extinguish or remove any lights placed or fixed across or in any street for purposes of public safety, and to prevent the passage of carts, cattle, carriages and horses or other animals while those streets are under repairs, or while works are being carried on in them by the Commissioners.

Fencing, bar, &c., fixed across or in any street not to be taken down or altered.

20. No person shall place or leave, except for temporary relief, any furniture, wares, or merchandise, or any cask, tub, basket, pail or bucket, or shall place or use any standing place, stool, bench, stall, or show-board on any public street, or shall place any blind, shade, covering, awning or other projection over or along any such public street, unless permission to do so has been obtained in writing from the Commissioners

Furniture, goods, awning or other projection not to be placed over or along any footway without the permission of the Commissioners.

21. No person shall place, hang up, or otherwise expose for sale any goods, wares, merchandise, matter, or anything whatsoever, so that the same project into or over any public street or beyond the line of any house, shop, or building, at which the same are so exposed, so as to obstruct or incommode the passage of any person over or along such public street.

Goods, wares, merchandise, &c., not to be hung or placed so as to project into or over any footway or beyond the line of any house or shop.

22. No person shall place any line, cord, or pole across any street, or hang or place any clothes thereon, without the sanction of the Commissioners.

Line, cord, or pole not to be placed across any street or clothes hung thereon.

23. No person shall erect any scaffoldings for hoards which are not well secured.

Scaffolding for hoards not to be erected unless well secured.

24. No person shall drive any cart conveying stone, ballast or bricks without properly securing the same from falling into the public street.

Carts conveying stone, ballast, &c., to properly secure the same.

(*d*) The conditions under which persons shall be permitted to drive registered carts—

1. No person shall be permitted to drive a registered cart unless he is of the age of fourteen years or upwards, and unless he complies with the regulations mentioned below.

Age of carters.

2. He shall always drive on the extreme left of the road in a line with other carts proceeding in the same direction, and shall not in any way make an attempt to pass the cart immediately in front of him.

Cart to be driven on the left of the roadway.

3. When there is a train of more than ten carts in front of him and proceeding in the same direction, he shall leave a clear space of not less than six feet between his own and the last cart of the train, and drive in a line with the train as hereinbefore provided.

Carters to keep in line when there is a train of ten carts.

4. No person shall load or unload carts in narrow thoroughfares except in such portions thereof as admit the passage of another cart alongside.

Loading and unloading of carts in narrow thoroughfares.

5. When loading or unloading goods in streets which admit of the passage of two carts abreast, the carter shall rest his cart alongside of the footpath with one of its wheels touching the curb-stone.

Loading and unloading of carts in wide streets.

6. He shall light his lamp as soon as it becomes dark, and obey all reasonable orders of the police on duty.

Lighting of carts.

H. J. S. COTTON,
Offg. Secretary to the Govt. of Bengal.

DECLARATION.

18th January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Bankoora Municipality for a public purpose, viz., for the construction of a slaughter-house in the village of Junbedia on the side of the Bara Chakra road, pergunnah Bishenpore, thana Bankoora, zillah Bankoora, it is hereby declared that for the above purpose a piece of land measuring, more or less, 8 cottahs and 9½ gandas of standard measurement, is required. The land is bounded on the North by the paddy lands of Paresh and Kángál Raut; on the South by the Bara Chakra road; on the West by Paresh Raut's land; and on the East by Sheik Mazooddin Ahmed's *Danga*.

This declaration is made under the provisions of section 6 of Act X of 1870 to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, JANUARY 22, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Monghyr will be put up for sale at the Collector's Office of that district on 28th January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.		*I.—Permanently-settled estates.*		Rs. A. P.	Rs. A. P.	Rs. A. P.
13	Jora, pergunnah Salemabad.	613 14 0	.....	2a. 13g. 6c. 13b. ...	Kuldip Narain Singh and others.	102 5 0	.....	104 6 0
13	Ditto ...	613 14 0	.....	3a. 3d. 18c. 6f. 14r. ...	Ramman Singh and others.	122 10 0	.....	74 10 6
283	Belchhi, pergunnah Amerthu	641 1 0	.....	2a. 8d.	Gopal Singh and others ...	96 3 0	.....	10 1 0
283	Ditto ...	641 1 0	.....	3a.	Ramadheen Rai and others.	120 1 0	.....	20 1 0
602	Parora, pergunnah Ballia.	830 15 0	.....	1 dam	Lachmi Kumri	2 10 0	.....	0 2 0
602	Ditto ...	830 15 0	.....	1a. 11d. 1c. 1d. 4r. 2p.	Lal Mohun Mullik and others.	132 2 0	.....	1 5 6
629	Sultanpur Tetri, pergunnah Ballia.	893 0 0	.....	11a. 9d 1k.	Sheik Tohower Hossain and others.	639 5 0	.....	131 15 0
804	Tafuqa Tulsipur and others, pergunnah Malki.	932 10 0	.....	1a. 18d. 2d.	Manohar Lal and others...	110 15 3	.....	52 12 9
830	Ganga Persad, pergunnah Malki.	588 3 0	.....	2a. 1c. 1k. 9r.	Reet Lal Singh and others	121 2 0	.....	61 5 3
1451	Bhowanandpur *alias* Ramdeari, pergunnah Malki.	1,166 13 0	.....	1a. 5g. 1c. 3d.	Shew Dyal Singh and others.	91 9 0	.....	21 14 0
1451	Ditto ...	1,166 13 0	.....	5g. 2c. 8d. 2k. 5l. ...	Mussamut Amrito Kumri and others.	20 15 0	.....	3 15 0
1451	Ditto ...	1,166 13 0	.....	16g. 2c. 6d.	Bhojraj Singh and others	60 12 0	.....	14 11 0
2305	Chuckangra, pergunnah Amerthu.	1,083 14 0	.....	1a. 15d. 11c. 2b. 4f. 8b.	Shah Mohamad Hossain and others.	120 7 0	.....	29 14 0
2317	Imamnagar, pergunnah Amerthu.	513 14 0	Whole ...	.....	Syed Tassaduk Hossain and others.	.....	0 13 6	.....
2746	Halsi, pergunnah Amerthu.	1,504 1 0	.....	13a. 10d. 5c. 2b. ...	Beni Singh and others ...	1,282 0 0	.....	220 14 0
2779	Mahuddinagar Karik, pergunnah Amerthu.	564 11 0	.....	3a.	Kokil Singh and others ...	95 8 0	.....	11 14 0
2779	Ditto ...	564 11 0	.....	2a.	Rohim Singh and others...	120 9 0	.....	0 14 0
5859	Mohamedpur Fatcha, asli and dakhil, pergunnah Emadpur.	708 0 0	.....	12a.	Moulvi Asrafuddin Ahmad and others.	531 0 0	.....	18 14 9
				II.—Temporarily-settled estates.				
1433	Akberpur Barari, pergunnah Malki.	783 13 0	.....	14a.	Kharag Singh and others	685 14 0	.....	60 8 8

Monghyr Collectorate, the 4th December 1889. T. E. COXHEAD, Officiating Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Chittagong, will be put up for sale at the Collector's Office of that district on the 31st January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
	Thanas Town and Ranzan—							
2 / 2	Taruf Ajoidha Ram, Fattiabad.	723 13 0	Yes: the whole estate is to be sold.	.....	Pran Kristo Das, Ram Shabak Das and others.	.....	49 8 8	.....
	Thanas Patya, Futtickcherry, Hathazari, and Satkania—							
25 / 51	Taruf Alcarkhan ...	1,606 0 9	No: only shares are to be sold.	Separate accounts having been opened under Act XI of 1859, share No. 1, Asad Ali Khan; share No. 11, Akber Ali Khan; share No. 111 of the remaining proprietors.	Share No. 1, proprietor Anwar Ali Khan.	468 7 5	.....	139 1 6
					Share No. 2, Asharaf Ali Khan and Jandah Bibi and others.	811 6 3	.....	240 14 2
					Share No. 3, Uzir Ali and Anwar Ali Khan.	326 3 1	.....	96 13 0
								476 12 8
	Thanas Futtickcherry, Hathazari, Patya, Ranzan, Town, and Zowargunge—							
28 / 54	Taruf Anandi Ram, Kanongoe.	849 6 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 10, Ram Joy Mohazan; share No. 11, Ram Joy Mohazan; share No. 13, Sudder Ali, and share No. 24, Bishambur.	Share No. 10, Kali Kumar, Durgakripa De.	12 11 0	.....	3 12 3
					Share No. 11, Kali Kumar, Durgakripa De.	14 14 0	.....	4 6 6
					Share No. 13, Asharaf Ali Aminolla, *alias* Gurun Meah.	11 0 0	.....	3 4 3
					Share No. 24, Kali Kumar and Durgakripa De.	53 15 5	.....	16 0 6
								27 7 6
	Thanas Hathazari, Ranzan, and Town—							
29 / 55	Taruf Aziz Nasarat ...	791 12 0	Yes: the whole estate is to be sold.	.....	Sheik Karam Ali Moah.	.....	255 0 1	.....
	Thana Futtickcherry—							
37 / 64	Taruf Annundy Manollah	1,160 0 3	Ditto ...	.....	Nemai Charan Nandi, Gunashila.	.....	59 1 6	.....
	Thana Ramzan—							
83 / 391	Taruf Basanta Ram, Fatcabad.	557 14 3	Ditto ...	.....	Anunda Mohon, Samad Ali and Sreemati Meherjan Bibi and others.	.....	31 1 0	.....
	Thanas Hathazari, Futtickcherry, Patya, Town, and Satkania—							
92 / 401	Kismut Balaram Sircar Baboit, taruf Sonoullah Khan.	1,063 11 3	Ditto ...	.....	Gris Chandra Rakhit and Guru Das Rakhi	.....	315 12 6	.....
	Thanas Bhatiari, Hathazari, Ramoo, Zorwargunge, Patya, and Satkania—							
116 / 522	Kismut Bissessari Baboit, taruf Gouri Sankur.	1,228 12 9	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 13 of the remaining proprietors.	Share No. 13, Mohabat Ali, Mahamed Hossen, Kali Charan and others.	404 13 11	.....	3 13 6
	Thanas Futtickcherry, Hathazari, Patya, Town, Satkania, and Ramoo—							
257 / 1282	Taruf Jubber Dust Khan...	6,538 11 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 1, Fazal Ahamud.	Share No. 1, Fazal Ahamud and Bazal Samad.	2,043 14 5	.....	299 13 5
	Thanas Futtickcherry, Hathazari, Patya, and Satkania—							
284 / 1467	Taruf Karim Khan ...	715 12 0	Yes: the whole estate will be sold.	.....	Anwar Ali Khan ...	.....	210 0 0	.....
	Thanas Patya and Satkania—							
286 / 1469	Taruf Komur Kulli ...	1,015 13 0	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 10, Dwarka Nath Kundo.	Dwarka Nath Kundo	68 10 5	.....	20 5
	Thana Ranzan—							
305 / 1552	Taruf Kanuz Fernandez...	1,040 5 3	Yes: the whole estate will be sold.	.....	Gris Chandra Roy Rakhit, Guru Das Roy Rakhit, and others.	.....	486 15 0	.....
	Thana Bhatiari—							
330 / 1751	Taruf Modun Chowdhury	688 6 5	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 4, Koshalya.	Shib Prosad Shukul	141 10 0	.....	42 0 9
	Thanas Hathazari and Ranzan—							
372 / 1889	Taruf Mohomad Shafi Nazir.	558 7 3	Yes: the whole estate will be sold.	.....	Susty Charan Sen, Bhairub Chandra Chowdhury and others.	.....	155 12 8	.....

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
383 / 1990	Thana Zorwargunza— Taruf Mohomed Monohur	686 15 6	Yes: the whole estate will be sold.	.....	Sreemati Raiso Nissa Chowdhurin.	.....	198 0 0	.....
	Thanas Hathazari, Patya, Ranzan and Town—							
480 / 2432	Kismut Pran Kristo, Gopi Mohun, Guru Das and Haridas Roy Baboit, taruf Jugul Kissor Chowdhury.	3,353 14 6	No: only shares will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2, Akhil Chandra Roy, share No. 6 of the remaining proprietors.	Share No. 2, Akhil Chandra Roy.	381 8 9	.....	113 4 4
					Share No. 6, Gris Chandra Roy, on behalf of minor Bhikon Chandra and Esof Ali and others.	1,329 2 8	.....	365 4 7
								478 8 11
	Thanas Fatickcherry, Patya, Hathazari, Ranjan and Town—							
	Taruf Pran Ballab ...	944 5 5	No: only a share will be sold.	Ditto, share No. 2, Mohesh Chandra Chowdhury.	Mohesh Chandra Chowdhury and Obhoy Charan Chowdhury and others.	118 0 8	.....	35 0 9
	Thana Ranzan—							
51 / 2538	Taruf Rughob Juggodish	515 0 3	Ditto ...	Ditto, share No. 12 of the remaining proprietors.	Ganga Das, Brejo Mohon and others.	132 2 1	.....	24 3 7
	Thanas Patya, Ranzan, Town, and Hathazari—							
51 / 2544	Taruf Ram Mohon Sen ...	884 11 3	Yes: the whole estate will be sold.	.....	Prasanna Kumar and Ali Meah.	.....	129 13 6	.....
	Thanas Chakaria, Patya, Ranzan, and Town—							
527 / 2554	Taruf Ram Sondur Kanongoo.	849 6 6	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2 of the remaining proprietors.	Srimoti Latifa Khatun.	681 6 6	.....	202 3 9
	Thanas Zorwargunge, Patya, Ranjan and Satkania—							
535 / 2565	Taruf Ram Kishore Kanongoo.	818 11 10	Ditto ...	Ditto, share No. 6, Ram Chandra Biswas and Rangshi Badon Biswas.	Mohesh Chandra Bhuttacharjee.	14 11 0	.....	4 5 9
	Thanas Patya and Town—							
560 / 2929	Taruf Sachi Roshun ...	752 11 0	No: shares will be sold.	Ditto, share No. 1, Sheek Sadak Ali; share No. 2, Keramut Ali.	Share No. 1, Sadut Ali Chowdhury.	82 5 3	.....	24 7 1
					Share No. 2, Anwar Ali Chowdhury.	188 2 9	.....	17 10 3
								42 1 4
	Thanas Bhatiari, Hathazari, Zowargunge, Patya, Ranzan, Town and Satkania—							
573 / 2933	Taruf Sachi Ram Kanongoe.	26 12 9	No: shares will be sold.	Separate account having been opened under Act XI of 1859, share No. 1, Lal Mohomed; share No. 16, Dwarka Nath Kanongoe; share No. 52, Ram Kumar Dey and others; share No. 63 of the remaining proprietors.	Share No. 1, Lal Mohamed.	4 14 3	.....	1 7 3
					Share No. 16, Dwarka Nath Kanongoe on behalf of Lakhi Naram Chackro.	4 4 6	.....	1 4 3
					Share No. 52, Ram Kumar Brejo Bashi.	0 10 6	.....	0 2 11
					Share No. 63 of the remaining proprietors Assamullah Chowdhury and others.	293 0 3	.....	83 8 9
								86 7 2
	Thanas Hathazarif Patya, Ranzan and Town—							
590 / 3054	Taruf Shib Durga Sharan...	2,042 8 9	No: only a share will be sold.	Ditto, share No. 8, Shoobal Chandra Das.	Shoobal Chandra Das.	25 14 5	.....	7 9 5
	Thana Chakaria—							
606 / 3113	Taruf Sheremast Khan Chowdhuri.	527 6 6	Ditto ...	Ditto, share No. 1, Fazal-ahamed.	Share No. 1, Fazal-ahamed, Razal Samad and others.	165 10 0	49 2 8	.....

N. B.—The amounts in columns 8 and 9 represent arrears, the latest day for payment of which was 25th September 1889.

Chittagong Collectorate, the 14th December 1889. G. H. ALLEN, for Offg. Collector

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Patna will be put up for sale at the Collector's Office of that district on 3rd February 1890, corresponding with 28th Magh 1297 F S. (Monday), for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue for the kist of 28th September 1889 :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
11	Berhna Lashkari-pur Buzurg, pergunnah Bhimpur.	1,038 0 0	Whole...	.....	Kesho Lal and Kissen Prosad and others.	... ..	0 5 0	.....
12	Berhna Lashkari-pur Buzurg Nisf, pergunnah Bhimpur.	2,129 0 0	.....	15*a.* 19*d.*	Kesho Lal and others, non-applicants.	2,122 5 6	.....	539 13 0
17	Indowt, pergunnah Shahjehanpur.	1,015 0 0	Whole...	.....	Syed Wajid Hosain and others.	.....	9 15 0	.....
20	Bani Hissa Nisf, pergunnah Biswak.	1,255 2 8	.....	1*a.* 5*d.* 7*k.* 17*b.* 6*ph.* 10*t.*	Mussamut Naziran and others, applicants for separation of accounts.	99 13 0	.....	14 4 8
20	Ditto ...	1,255 2 8	.....	1*a.* 11*d.* 13*k.* 6*r.* 8*ph.* 9*r.* 4*t.* ...	Mussamut Rohiman and others, applicants for separation of accounts.	124 2 11	.....	11 10 5
21	Bhadsara, pergunnah Masaudha.	1,314 5 6	.....	Gopepur 1*a.* 4*p.*	Hardeot Narain Singh, applicant for separation of accounts.	3 2 5	.....	6 4 10
28	Chainpur Shekhopur Barhampur, pergunnah Azimabad.	913 0 0	.....	Shekhopur 3*a.*	Rameshwar Singh and others, applicants for separation of accounts.	57 1 0	.....	11 1 8
28	Ditto ...	913 0	.....	Shekhopur 2*a.*	Rambollab Singh, applicant for separation of accounts.	38 0 8	.....	0 0 1
28	Ditto ...	913 0 0	.....	Shekhopur 13*a.* 1*d.* 11*k.* 19*b.* 14*ph.* 16*r.* 17*rot.* 10*katki.* Barhampur 6*a.* 18*d.* 6*k.* 13*b.* 7*ph.*	Gowri Shanker and Parkash Singh and others, non-applicants.	210 6 8	.....	3 0 6
40	Bazidpur Parthu, pergunnah Telladha.	533 5 4	.....	9*a.* 8*p.*	Mussamut Jharokha Koer and others, non-applicants.	322 3 8	.....	3 0 5
47	Hasah Chawanda, pergunnah Biswak.	906 10 8	.....	6*a.* 16*k.* 13*b.* 6*ph.* 13*r.*	Malik Zohurul Haq and others, non-applicants.	342 5 0	.....	9 11 3
65	Chak Rudarman, pergunnah Phulwari.	821 5 3	.....	Chak Rudarman 4*a.* 9*d.* 3*k.* 6*b.* 13*ph.* 7*r.*; Keshwarpur Digha 1*a.* 3*d.* 1*k.* 1*b.* 5*ph.*	Sheh Lal Mohommad and others, non-applicants.	113 13 0	.....	9 8 5
65	Sokhulpur, pergunnah Pilich.	745 11 2	.....	10*d.* 14*k.* 4*b.* 6*ph.* 5*t.*	Chowdhry Harbans Narain Singh, applicant for separation of accounts.	24 15 9	.....	1 8 9
65	Ditto ...	745 11 2	.....	6*a.* 12*d.* 1*k.* 15*b.* 13*ph.* 19*r.* 5*t.* 7*tilwari.*	Bidhi Chand and others, non-applicants.	306 4 3	.....	1 12 11
69	Poona Chharyari, pergunnah Pilich.	1,008 12 0	Whoe ...	.....	Baboo Dwarka Nath, Manager, Court of Wards, in charge of the estates of lunatic Debi Prasad.	.....	130 11 4	.....
70	Gobindpur Berhna, pergunnah Bhimpur.	624 0 0	Do. ...	.....	Durga Singh and others.	.....	12 3 0	.....
78	Deara Mohazee Kothi Shora, pergunnah Azimabad.	854 5 7	.....	4*a.*	Shoo Porsad Singh and others, applicants for separation of accounts.	213 9 5	.....	30 3 4
78	Ditto ...	854 5 7	.....	7*a.* 1*p.* 10*k.*	Mussamut Woluyti Jan and others, non-applicants	380 6 11	.....	14 8 1
98	Doiya, pergunnah Biswak.	1,169 11 6	Whole...	.....	Syed Ali Hossein and others.	.....	8 7 6	.....
101	Kapsiyawan, pergunnah Pilich.	1,813 6 1	.....	14*a.* 8*d.* 12*k.* 15*b.* 15*ph.*	Syed Majibor Rohuman, Manager of the estate of Debi Persad, lunatic, applicant for separation of accounts.	1,635 2 0	.....	74 12 10
102	Kaila, pergunnah Pilich.	854 6 5	Whole...	.....	Mussamat Sharfan and others.	.....	7 6 2	.....
102	Dowlatpur Deoria, pergunnah Balia.	871 7 6	Do. ...	.....	Mussamut Bibi Makhdooman and others.	.....	19 1 3	.....
104	Eksara, pergunnah Biswak.	1,338 2 2	Do. ...	.....	Mir Enayat Hossin and others.	.....	0 13 3	.....
113	Mohammadpur, pergunnah Pilich.	538 10 8	.....	Mohammadpur 11*a.* 11*d.* 10*k.*; Sekandarpur 16*a.* Yarpur Balwa 8*a.*	Babu Parsidh Narain Singh and others, non-applicants.	399 10 8	.....	2 9 5
126	Ghostawan, pergunnah Biswak.	659 8 11	.....	10*a.* 11*d.* 19*k.* 11*b.* 18*ph.* 14*r.* 2*t.* ...	Mussamut Fakhran Nissa *alias* Nanhi Begum and others, non-applicants.	436 13 6	.....	10 9 9
128	Norari, pergunnah Pilich.	1,174 6 5	Whole...	....	Babu Parandip Narain Singh and others.	.....	72 8 5	.....
129	Baruhi Khass, pergunnah Manair.	565 2 0	.....	11*a.* 19*p.*	Reta Singh and others, non-applicants.	415 0 3	.....	46 11 5
135	Mirzapur Berhna, pergunnah Bhimpur.	737 0 0	Whole ..	.....	Mussamut Soobanso Kuer and Ram Sahai Singh and others.	.....	60 0 9	.....
135	Khagura, pergunnah Shahjehanpur.	1,495 14 6	Do. ...	.....	Mussamut Bibi Khadaija and others.	.....	100 9 3	.....

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, the specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
143	Peer Barhawna, pergunnah Pilich.	520 2 8	.....	5a. 12d. 12k. 10b. 9ph. 2r. ...	Mussamut Sharfan and others, non-applicants.	204 3 3	.....	6 2 2
147	Qasbe Barhawna, pergunnah Pilich.	5,712 0 0	.....	Qasbe Barhowna 2a.; Korut 2a.; Barara 2a.; Arawan 2a.; Babhaniawan 2a.; Athbalpur Paithera 2a.	Mussamut Fasehan, applicant for separation of accounts.	714 0 6	.....	0 0 6
147	Ditto ...	5,712 0 0	.....	Qasbe Barhawna 12a. 5d. 2k. 10b. 1ph. 10r.; Korut 11a. 6d. 15k. 16b. 16ph. 10r.; Barara 12a. 17d. 10k. 2b. 7ph. 10r.; Arawan 12a. 17d. 10k. 2b. 7ph. 10r.; Babhaniawan 13a. 5d. 2k. 10b.; Athbalpur Paithera 12a. 5d. 10b.	Syed Ahmad Hossain, father and guardian of Syed Kefayat Hossain, and others, non-applicant.	4,480 10 10	.....	338 0 5
153	Bakawan, pergunnah Gyaspur.	724 4 3	Whole...	.....	Madiput Narain *alias* Munshi Mahto and others.	.....	4 9 0	.....
154	Kampur Imi, pergunnah Pilich.	563 7 6	Do. ...	.....	Mussamut Jagpati Kuer, mother and guardian of Ram Prasad Singh and others.	.....	0 7 6	.....
158	Raipur Astha, pergunnah Pilich.	1,442 2 3	...	8a. 3d. 17k. 13b. 2ph. 10r. ...	Lall Narain Singh, applicant for separation of accounts.	138 13 6	.....	8 8 6
158	Ditto ...	1,442 2 3	.....	Raipur Astha 1a. 15d. 11k. 4b. 10ph.; Astha 1a. 7d. 11k. 15b. 7ph. 2r. 10t.	Shaik Abdul Hamid and others, non-applicants.	126 4 5	.....	0 7 0
169	Rampur Berhna, gunnah Bhimpur.	998 8 0	Whole..	.....	Sham Lal Singh and others.	.....	54 15 0	.....
172	Darveshpura, &c., pergunnah Behar.	832 0 0	.....	Durveshpura 10d. 10k.; Akhtyarpur Bareli 6a.; Gobindpur Bhedi 8a.	Darshan Lal and others, non-applicants.	142 11 7	.....	14 4 10
180	Sernawan, pergunnah Pilich.	587 2 3	.....	5a. 18k. 8b. 5ph.	Permeshar Narain Singh and others, non-applicants.	184 9 3	.....	6 14 2
187	Shekh Mohammadpur, pergunnah Bhimpur.	592 14 0	.....	11a.	Mussamut Suliman and others, non-applicants.	407 9 6	.....	22 3 10
188	Shekh Mohammadpur Hayatpur, pergunnah Bhimpur.	704 10 11	.....	10a. 3d. 11k. 11b. 4ph.	Harakh Narain Singh and others, non-applicants.	448 2 11	.....	68 4 8
201	Parnawna, pergunnah Biswak.	1,706 10 0	.....	12a. 13d. 6k. 13b. 10ph.	Babu Luchmi Narain and others, non-applicants.	1,351 1 9	.....	0 4 3
225	Akoerpur Bhadwar, &c., pergunnah Masandha.	3,215 10 9	.....	Akhberpur Bhadwan 16a.; Darawan 4a.; Pansoohi 16a.; Shorampur 16a.; Sherpura 16a.; Mushanpur Lachaman 16a.; Mominpur Na Dawana 16a.; Masoompur Bindowli 16a.; Chak Shamsuddin 16a.; Korara 16a.; Katari Beliari 16a.; Rupapur 16a.; Paigamberpur 16a.; Shewdaspur Kurkuri 16a.; Jadupur 16a.; Moazzamabad Bali Pakur 16a; Durgapur Anant 16a.; Sekaria 16a.; Parsoorampur Heer 16a.; Jalalpur Ilahi 16a.; Rampur Misroli 16a.; Kishwarpur 16a.; Shahzadpur Mosi 16a.; Atapur Rukun 16a.; Kela Gobindpur 16a.; Alampur Jarkha 16a.; Raghunathpur Mera 16a.; Saidabad Bakram 16a.; Patanka 16a.; Ahmadabad Kiffoniyan 16a.; Pali Patowna 16a.; Patowna 16a.; Raghunathpur Jag Bandan 16a.; Kaurikosho 16a.; Kishopur 16a.; Masaurha Khas 16a.; Hadnagar 16a.; Nasirpur Begah 16a.; Bihta 16a.; Abdullapur Khan Qah 16a.; Ganga Chak Mai Nezampur 16a.; Dadoopur 16a.; Mohammadkhanpur Dara 16a.; Fazilpur Patan 16a.; Ibrahimpur Jurga 16a.; Rampur Gunga 16a. Parsoorampur Kanak 16a.; Bishunpur Malahalu 16a.; Sarawti 16a.; Karanpura 16a.	Mussamut Sharfan and others, non-applicants.	2,604 11 10	.....	41 0 6
227	Narendpur Kharownia, &c., pergunnah Azimabad.	5,885 5 6	.....	Hazratpur Akarya 17a. 15d. 11b. 2p.	Racheya Singh, applicant for separation of accounts.	6 4 4	.....	3 5 3
227	Ditto ...	5,885 5 6	.....	Narendapur Kharownia 2a. 8p. ...	Jagarnath Singh and Raghunath Singh, applicants for separation of accounts.	213 7 10	.....	0 0 9
229	Ditto ...	1,185 5 7	.....	Hiranandpur 16a.	Jagan Lal and others, applicants for separation of accounts.	57 9 8	.....	0 2 7
229	Ditto ...	1,185 5 7	.....	Janarjanpur 2a.; Hazratpur Akhariya 2a.	Ram Lall and others, applicants for separation of accounts.	17 1 8	.....	0 3 8
229	Ditto ...	1,185 5 7	.....	Janarjanpur 2a.; Hazratpur Akhariya 2a.	Surjoo Mahto, applicant for separation of accounts.	17 1 8	.....	1 13 6
251	Amari O, Sain, &c., pergunnah Behar.	737 0 9	.....	Akhtyarpur Pawa 5a. 2d. 10k. ..	Chirangir Singh and others, non-applicants.	267 11 6	.....	15 2 2
295	Mirzapur Gilani, pergunnah Telladha.	1,318 0 0	.....	7a. 10d.	Moulvi Jalaluddin and others, applicants for separation of accounts.	617 13 0	.....	12 12 3
315	Saidpur Gowhar Chak Madho, pergunnah Azimabad.	503 9 1	Whole...	.....	Syed Ali Ashraf *alias* Peyari Saheb.	.....	1 4 3	.....
317	Mandach Gyan Koer, pergunnah Tilladha.	1,087 0 0	.....	8a. 11d. 13k. 6b. 14p.	Shekh Feda Ali and others, non-applicants.	904 15 1	.....	5 4 2
347	Parthee, pergunnah Tilladha.	800 0 0	.....	6d. 7b. 12r.	Syed Khairat Ahmad, applicant for separation of accounts.	15 0 9	.....	0 15 0
347	Ditto ...	800 0 0	.....	3a. 17d. 7k. 5b. 5ph. 12r.	Mussamut Jharokha Koer and others, non-applicants.	190 13 3	.....	0 1 5
355	Khoda Bakhshpur, &c., pergunnah Azimabad.	3,236 0 7	.....	Pir Mohamadpur Diara 16a. ..	Jagen Lal Upadhia and others, non-applicants.	472 10 7	.....	87 13 11
363	Akbarpur Bhadwar, &c., pergunnah Masawdha.	1,120 4 1	.....	Saidabad 16a.; Kessenpur Baigam 16a.; Abdallapur Khan Quilli 16a.	Raja Ram Singh and others, applicants for separation of accounts.	10 2 3	.....	4 6 3
363	Ditto ...	1,120 4 1	.....	Azizabad Haldha 9a. 10d. 7k. 12b.; Shahzadpur Nuri 9a. 10d. 7k. 12b.; Ghowpur Bhadwar 3a. 3d. 9k. 4b.	Ram Kewal Singh and others, applicants for separation of accounts.	38 14 8	.....	2 10 6

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
363	Akbarpur Bhadwar, &c., pergunnah Masawdha.	1,120 4 1	.....	Dorawan 1*a.* 5*d.*; Saidabad Bekra 1*a.* 5*p.*; Showdaspur Kurkari 1*a.* 5*d.*; Sokaria 1*a.* 3*d.*; Daryapur Aunat 1*a.* 5*d.*	Ilaichi Kuer and others, non-applicants.	79 11 1	.....	26 13 5
379	Jaipur Hathea Kandh, pergunnah Manair.	811 1 6	.....	10*a.*	Gobind Persad and others, non-applicants.	506 14 11	.....	147 7 9
395	Rajapur Hassan Kurji Degha, pergunnah Phulwari.	838 0 2	.....	Kurji Digha 8*a.*	Pitambar Singh and others, non-applicants.	284 7 1	.....	3 6 11
402	Dehri, &c., pergunnah Gyaspur.	3,136 0 0	.....	Dehri Dhanrar Badal Singh 10*a.* 10*d.*; Parsawan 10*a.* 10*d.*; Sarajpura 10*a.* 10*d.*; Sarhan 10*a.* 10*d.*; Baddo Kesenpur 10*a.*; Chak Bamo Hiranand 10*a.* 10*d.*; Chak Bamo Sujar 10*a.* 10*d.*; Chak Hamed Sewdah 10*a.* 10*d.*; Chando Badal Singh Hiranand 10*a.* 10*d.*; Dhauraipur 10*a.* 10*d.*; Chak Bhudeo 10*a.* 10*d.*; Goasa 10*a.* 10*d.*; Sherpur Medhapur 16*a.*; Chatarbhojpur Kesenpur 16*a.*	Mussamut Fahman and others, non-applicants.	2,192 12 9	.....	10 11 5
410	Ophansepur O, Qasbe Helsa, pergunnah Pilich.	549 14 1	.....	6*a.* 10*p.* 5*k.* 14*m.* 5*d.* 15*b.*	Ambika Persad Singh and others, non-applicants.	235 10 6	.....	6 1 8
436	Lodipur Hathia Kandh, pergunnah Manair.	739 0 0	.....	6*a.* 8*p.*	Gobind Persad and others, non-applicants.	307 14 8	.....	30 0 0
476	Sartha Manpur Sartha, pergunnah Tiladha.	662 13 7	.....	7*a.* 15*d.* 10*k.*	Jugul Kiswar Singh and others, non-applicants.	322 1 6	....	1 15 5
478	Ditto ...	540 14 3	Whole.	.....	Mussamut Toola Kuer, mother and guardian of Chattor Singh, and others.	.....	33 12 11	.....
486	Panchitara, &c., pergunnah Behar.	1,160 9 0	.....	Panchitara 2*a.*; Mohcuddinpur Deokhali Khard and Buzurg 1*a.*; Bhagpur Owkali 6*a.*; Mozaffernur Pitowngia 2*a.*; Kaleyanpur Chistipur Azizullahpur Chistipur 10*d.*	Mohammad Sher and others, non-applicants.	70 9 10	.....	10 5 7
497	Poorah Nowsan Sepao, pergunnah Behar.	1,398 13 0	.....	12*a.* 19*d.* 0*k.* 2*b.* 10*p.*	Mussamut Moniawan and others, non-applicants.	1,134 2 5	.....	6 11 7
519	Oosap, pergunnah Sanda.	957 0 0	Whole.	.....	Nawab Syed Latif Ali Khan, C.I.E., and others.	.....	7 14 5	.....
556	Kishunpur Karawha, &c., pergunnah Gyaspur.	781 0 0	.....	14*a.* 10*k.*	Khajo Syed Hassan and others, non-applicants	035 6 5	.....	11 3 10
572	Sandh, &c., pergunnah Sandha.	790 12 10	.....	Sandh 15*a.*; Rahmatpur Pakri 14*a.* 2*d.* 10*k.*	Mussamut Sharfan and others, non-applicants.	727 11 9	.....	8 2 2
688	Anta Raghuram, pergunnah Gyaspur.	086 10 5	.....	6*d.* 8*k.* 18*b.* 17*ph.* 11*b.*	Haluman Singh *alias* Chhedi Singh, applicant for separation of accounts.	13 13 3	.....	8 9 3
688	Ditto ...	086 10 5	.....	3*a.* 8*b.* 15*ph.* 12*b.*	Shewnaram and others, non-applicants.	125 3 7	.....	26 7 7
724	Jahangirpur Magarpal, pergunnah Manair.	2,316 4 4	.....	1*a.*	Rai Monohar Lal and others, applicants for separation of accounts.	144 12 3	.....	0 4 8
724	Ditto ...	2,316 4 4	.....	15*d.*	Sitapat Sahai and others, applicants for separation of accounts.	108 10 0	.....	2 9 4
724	Ditto ...	2,316 4 4	.....	1*a.* 11*d.* 17*k.* 1*b.*	Mussamut Sriana Kuer and others, non-applicants.	230 7 1	.....	10 5 2
726	Yakubpur Toongi *alias* Fatteh Ali Chak, pergunnah Behar	651 0 0	.....	9*a.* 10*p.* 8*k.* 8*b.*	Syed Mohommad Ismail and others, non-applicants.	401 8 0	.....	40 9 7
				Second kind.				
738	Erazi Towfir Rampur Ghoghpur, pergunnah Manair.	1,236 5 11	Whole.	.....	Srikewal Singh ..	.....	2,085 15 4	.....
				First kind.				
743	Erazi Beshi Diarah Mahazi Jahangirpur Magarpal, pergunnah Manair.	1,561 8 4	.....	2*a.* 5*d.*	Kisendyal Lal and others, non-applicants.	219 11 6	.....	13 4 5
779	Saidpur Soniawan, pergunnah Gyaspur.	626 9 2	.....	7*a.* 8*d.* 5*k.* 5*b.* 14*ph.* 7*r.*	Ahmad Hosain and others, non-applicants.	290 4 4	.....	0 6 5
796	Saksohra, pergunnah Gyaspur.	2,134 6 5	.....	Luchmanpur 2*a.* 5*p.* 17*k.* 5*b.* 13*d.*	Mussamut Girja Kuer and others, applicants for separation of accounts.	57 9 11	.....	1 0 6

Patna Collectorate, the 6th January 1890. PEARY MOHAN BANERJEE, Dy. Collr., for Offg. Collector.

NOTICE is hereby given that or the undermentioned plots of the Nizamut lakhraj State lands situated in the district of Burdwan, Nos. 72 to 75 will be put up to sale on the spot by the Deputy Collector at the Burdwan Collectorate, and No. 89 by the Sub-divisional Officer of Culna, on Monday, the 27th January 1890, corresponding to 15th Magh 1296 B. S.

The purchasers will be subject to the following conditions of sale:—

Conditions of Sale.

1. The lands to be sold revenue-free to the highest bidder above the upset price, which will be fixed for each plot at the time of sale.

2. The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and the purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3. If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid down at once.

4. If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the lands to be again put up to sale at the risk of the defaulting purchasers, after issue of advertisement, as in the case of original sale.

5. The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mouzah.	Pergunnah.	Approximate area in bigahs.	Boundaries.	REMARKS
				B. K. CH.		
73	Jaigirdagra	Ukhari ...	Shamurshahi.	7 5 7	East of the Bhagar jote lands of Saroo Patan; south and west of jote lands of Budhu Mirdha; south of jote lands of Rassad Mirdha; east of a public road and of jote lands of Mohur Mirdha and of the Bhagar jote lands of Saroo Patan.	*Plot I.*—Jote of Sakir Mandal and of Nihar Bibi, wife of Edu Mandal of Narigram.
73	Ditto ...	Ditto ...	Ditto ...	10 9 15	North of jote lands of Pitambar Charal, Kedar Chowdhury, Shek Karoo, and Shek Tooraj; west of jote lands of Hara Mirdha, Dohar Mirdha, Kedar Chowdhury and Manik Mirdha; south of jote lands of Sova Mirdha, Haroo Mirdha, Sakauddin Mirdha, Jamman Mirdha, Tarku Shek; east of jote lands of Ulfoo Mandal, Tarku Shek, Karoo Shek, and of Bhagar jote lands of Saroo Shek; south and east of jote lands of Waz Shek.	*Plot II.*—Do do.
74	Ditto ...	Ditto ...	Ditto ...	13 11	North of jote lands of Manik Mirdha; east of jote lands of Sona Mirdha and Dolal Khan; south of jote lands of Alivardy Mirdha; west of jote lands of Aidu Chowdhury.	*Plot III.*—Jote of Takai Mandal of Narigram.
75	Ditto ...	Ditto ...	Ditto ...	4 13 14	North of the chowkidary chakran lands of Tincuri Hari; east of jote lands of Sakauddin Mirdha, Haru Mirdha, Sonaulla Mirdha, and Ronga Lal Charal; south of jote lands of Sonaullah Mirdha; west of the chowkidari chakran lands of Gourub Khan, Patan and Ramdhan Bagdi.	*Plot IV.*—Jote of Sakir Mandal of Narigram.
89	Dakadda	Shyambati	Karajpur...	5 15 12	South of the jote lands of Deb Nath Pal and Kunja Mandal; east of the lakhraj jote lands of Deb Nath Pal; north of the lakhraj jote lands and of the barren land of Deb Nath Pal; west of a public road.	Jote of Sita Nath Pal and Deb Nath Pal of Shyambati.

Burdwan Collectorate, the December 1889. KEDAR NATH DUTT, for Officiating Collector.

NOTICE is hereby given that the undermentioned plot of the Nizamut lakhraj State lands, situate in the district of 24-Pergunnahs, will be put up to sale at the Collectorate of the 24-Pergunnahs on Friday, the 28th March 1890—

The purchaser of the plot will be subject to the following conditions :—

I.—The plot will be sold revenue-free to the highest bidder above the upset price.

II.—The sale to be subject to existing leases, and to the rights conferred by the settlement proceedings and by the laws in force, and purchaser to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the plot to be again put up for sale at the risk of the defaulting purchaser after issue of advertisement as in the case of original sale.

V.—The purchaser shall be put in possession on receipt of the orders of the Collector approving of the sale, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Name of estate.	Mouzah.	Pergunnah.	Approximate area.	Annual assessment.	Upset price.	Boundaries.	REMARKS.
			B. K. CH.	RS. A. P.	RS. A. P.		
Dak Adda	Chitpore ...	Amirabad...	0 3 6	16 14 0	506 4 0	South of the dwelling house of Jitu Dhobi, east of the tank belonging to Zebunnissa Begum, north of the dwelling house of Talemun Jemadar, and west of a public road and the sepoy post.	Dwelling-house of Kudroo Dhobi of Chitpore.

K. N. ROY, Deputy Collector, for Collector on tour.

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1889.			
Dec. 30	25 Cases, D & Co. in a diamond	Order ...	S. S. "Rewa."
1890.			
Jan. 6	1 Case, 348 in a diamond, R C M B outside ...	Ditto ...	Ditto.
,, 6	1 Case, S S by 44 in a block...	Ditto ...	Ditto.
,, 6	8 Cases, L O C K E	Ditto ...	Ditto.
,, 7	1 Case, 360 in a diamond, A B & Co. outside ...	Ditto ...	Ditto.
,, 7	1 Case, 50 in a diamond, C & Co. top	Ditto ...	Ditto.
,, 7	3 Packages, D T & Co. in a triangle	Ditto ...	Ditto.
,, 7	6 Cases, G 387 in a diamond, W M & Co. below ...	Ditto ...	Ditto.
,, 7	1 Case, 10 in a diamond, G S below	Ditto ...	Ditto.
,, 7	1 Case, J M & Co. by H M	Ditto ...	Ditto.
,, 7	25 Cases, M J A G	Ditto ...	Ditto.
,, 7	1 Case, M S in a diamond, G below	Ditto ..	Ditto.
,, 7	2 Cases, O B E C in a diamond	Ditto ...	Ditto.
,, 7	2 Cases, 38 in a diamond, P top	Ditto ...	Ditto.
,, 7	5 Cases, R W P in a diamond	Ditto ...	Ditto.
,, 7	41 Cases, S C S & Co.	Ditto ...	Ditto.
,, 7	2 Cases, 438 in a diamond, W below	Ditto ...	Ditto.
,, 7	6 Packages, W L in a diamond, C below ...	Ditto ...	Ditto.
,, 7	3 Cases, 908 in a diamond, W N & Co. outside ...	Ditto ...	Ditto.
,, 7	4 Cases, 184 in a diamond, A B & Co. outside ...	Ditto ...	Ditto
,, 7	1 Case, B S by 136 in a diamond, L below ...	Ditto ...	Ditto.
,, 7	11 Crates, 9 by 1514 in a diamond, C B & Co outside	Ditto ...	Ditto.
,, 7	2 Case, E D by L in a diamond, A B & Co. outside	Ditto ...	Ditto.
,, 7	1 Case, J C in a diamond, L S & Co. outside ...	Ditto ...	Ditto.
,, 7	1 Case, 918 in a diamond, L B top	Ditto ...	Ditto.
,, 7	1 Case, P in a triangle, S C D below	Ditto ..	Ditto.
,, 7	2 Casks, 34 in a diamond, P G top	Ditto ...	Ditto.
,, 7	1 Case, 22540 in a triangle	Ditto ...	Ditto.
,, 7	2 Cases, 941 in a diamond, W N & Co. outside ..	Ditto ...	Ditto.
,, 7	2 Cases, 500 in a diamond, W L below	Ditto ...	Ditto.
,, 7	1 Parcel, Messrs. McLeod & Co., 5, Mangoe Lane...	Addressed ...	Ditto.
,, 7	1 Parcel, P S by 4431 in a diamond, B B C F top.	Order ...	Ditto.
,, 7	3 Packages, no mark	Ditto ...	Ditto.
,, 7	1 Bundle flat iron, G G S in a diamond ...	Ditto ...	Ditto.
,, 8	10 Cases, D in a diamond	Ditto ..	S. S. "Rohilla."
,, 11	16 Cases, A R & M O	Ditto ...	Ditto.
,, 11	4 Cases, 426 in a diamond, A B & Co. outside ...	Ditto ...	Ditto.
,, 11	2 Cases, B by 33 and 34 in a diamond	Ditto ...	Ditto.
,, 11	1 Keg, B C D or no mark	Ditto ...	Ditto.
,, 11	1 Case, B & Co. by 8 in a diamond, U H C outside	Ditto ...	Ditto.
,, 11	1 Case, B & Co. in a triangle	Ditto ...	Ditto.
,, 11	1 Case, Colonel Badcock	Addressed ...	Ditto.
,, 11	1 Package, C & Co. in a diamond	Order ...	Ditto.
,, 11	1 Case, C T C & S by 3966 in a diamond ...	Ditto ...	Ditto.
,, 11	1 Portmanteau, Castleberg	Ditto ...	Ditto.
,, 11	5 Bales, 259 in a diamond	Ditto ...	Ditto.
,, 11	1 Keg, D C	Ditto ...	Ditto.
,, 11	1 Portmanteau, E. E. D. Ezra, Esq	Addressed ...	Ditto.
,, 11	1 Case, H. A. Hawman, Esq., care of Messrs. King & Co.	Ditto ...	Ditto.
,, 11	1 Case, Messrs. A. E. Jessop & Co.	Ditto ...	Ditto.
,, 11	1 Case, 955 in a diamond, G S below	Order ...	Ditto.
,, 11	1 Case, G 393 in a diamond, W below	Ditto ...	Ditto.
,, 11	1 Case, H B & Co. in a diamond	Ditto ...	Ditto.
,, 11	1 Case, L N B N in a block, G A & Co. outside ...	Ditto ...	Ditto.
,, 11	2 Cases L N B N in a diamond, G A & Co. outside	Ditto ...	Ditto.
,, 11	1 Case, M I A G	Ditto ...	Ditto.
,, 11	1 Cask, M B E in a circle	Ditto ...	Ditto.
,, 11	2 Drums, M C K in a diamond	Ditto ...	Ditto.
,, 11	20 Cases, 176 in a diamond, N P & G outside ...	Ditto ...	Ditto.
,, 11	5 Packages, no mark	Ditto ..	Ditto.
,, 11	1 Case, no mark or M	Ditto ...	Ditto.
,, 11	1 Case, N D by 30 in a diamond	Ditto ...	Ditto.
,, 11	1 Case, O P Co., S in a cross, Rangoon below ...	Ditto ...	Ditto.
,, 11	10 Cases, R B M I in a diamond, G A & Co. outside	Ditto ...	Ditto.
,, 11	1 Case, R B M I	Ditto ...	Ditto,
,, 11	1 Case, R & F	Ditto ...	Ditto.
,, 11	1 Case, R in a diamond, Rangoon below ...	Ditto ...	Ditto.

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1890.			
Jan. 11	1 Case, S in a double triangle, K L D S outside ...	Order ...	S. S. "Rohilla."
,, 11	7 Cakes spelter, no mark or L	Ditto ...	Ditto.
,, 11	1 Case, Messrs. O Steel & Co.	Addressed ...	Ditto.
,, 11	2 Cases, 384 in a triangle, S S top	Order ...	Ditto.
,, 11	1 Case, S S by 504 in a block	Ditto ...	Ditto.
,, 11	1 Case, 1367 in a block within a triangle ...	Ditto ...	Ditto.
,, 11	1 Case, 146 by 716 in a diamond, T B & Co. outside	Ditto ...	Ditto.
,, 11	2 Cases, 63 in a block within a triangle ...	Ditto ...	Ditto.
,, 11	5 Cases, 146 by 702 in a diamond, T B & Co. outside	Ditto ...	Ditto.
,, 11	7 Cases, 273 in a diamond, W T H B below ...	Ditto ...	Ditto.
,, 11	1 Case, 17-9 in a diamond	Ditto ...	Ditto.
,, 11	1 Parcel, Messrs. Octavius Steel & Co. ...	Addressed ...	Ditto.
,, 11	1 Case, S S by 565 in a block	Order ...	Ditto.

Port Commrs'. Office, Calcutta, the 18th January 1890. (3458—1) G. H. SIMMONS, Vice-Chairman.

Statement of the Affairs of the Bank of Bengal for the week ending 14th January 1890.

LIABILITIES.

	Rs.	A.	P.
Capital paid up	2,00,00,000	0	0
Reserve Fund	58,00,000	0	0
Public Deposits at Head Office ... ... Rs. 83,00,744 8 0			
Ditto ditto at Branches ,, 89,18,761 2 8	1,72,19,505	10	8
Other Deposits at Head Office and Branches	3,16,74,702	10	7
Bank Post Bills, &c.	5,57,700	2	2
Sundries	11,41,328	14	8
Rupees ...	7,63,93,237	6	1

ASSETS.

	Rs.	A.	P.
Government Securities	21,11,518	0	0
Other authorized Investments	78,77,096	0	0
Loans on Government and other authorized Securities	1,61,15,281	3	3
Accounts of credit on ditto ditto	1,03,79,136	7	10
Bills discounted and purchased	2,18,96,433	4	9
Balances with other Banks	10,51,118	1	4
Bullion	4,23,010	12	7
Dead Stock	12,28,021	0	6
Stamps	13,190	2	0
Sundries	4,91,156	12	3
	6,15,35,961	12	6
Cash and Currency Notes at Head Office ... Rs. 48,47,658 13 1			
Cash and Currency Notes at Branches ... ... ,, 99,59,616 12 6	1,48,07,275	9	7
Rupees ...	7,63,93,237	6	1

By order of the Directors,

R. L. BIRD, Chief Accte. W. D. CRUICKSHANK,

BANK OF BENGAL, Rate for Demand Loans 9 per cent. Secy. and Treasurer.

Calcutta, 16th January 1890. Percentage 29·2. (3455—1)

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sál beams and scantlings supplied from this depôt will be as follows:—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 ,, ,, 2-12 ,,
23 ,, ,, 2-14 ,,
24 ,, ,, 3 ,,

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 ,, 2-4 ,,
Under 7 feet ,, 2 ,,

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates:—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates:—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

Notice.

AT a Special Meeting of the Gaya District Board, held on the 9th January 1890, the maximum rate of the road cess for the year 1890-91 has been fixed.

E. J. SHUTTLEWORTH, Secretary, for Chairman.
Gaya District Board's Office, the 9th January 1890.

Withdrawal of Power-of-Attorney.

HARAKALI CHATTERJEA, of Dakhin Baraset, am-mooktar of Rakhaldas Nayaratna and others of Bhatpara, ceases from the 18th January 1890 to be an am-mooktar. All his powers under the Deed registered on the 24th March 1885 are withdrawn.

RAKHALDAS NAYARATNA and others.
Bhatpara, the 17th January 1890. (3459—1)

SURVEY OF INDIA DEPARTMENT.

MAP RECORD AND ISSUE OFFICE.

Maps published at the Head-Quarters Offices, Calcutta and Dehra Dun, for the quarter ending 31st December 1889.

Agents for sale of Maps:

CALCUTTA.—No Agent. Maps can be obtained from the Office, 13, Wood Street.
ALLAHABAD.—Curator, Government Books, North-Western Provinces.
NAGPUR.—Curator, Government Books, Central Provinces.
LAHORE.—Munshi Gulab Sing, Government Publishers and Booksellers.
MADRAS.—Messrs. Higginbotham & Co.
POONA.—Supdt., Government Photo-zincographic Dept.
RANGOON.—Supdt., American Baptist Mission Press.
MANDALAY.—The Manager, Mandalay Herald Press.
RAJKOT.—Mr. Narainjee Sunderjee, for maps of Kathiawar only.
AHMEDABAD.—The Huzoor Deputy Collector, for maps of Gujarat only.
LONDON.—Mr. Edward Stanford, 55, Charing Cross.
SIMLA.—Mrs E. Corstorphan, Simla Fancy Repository.

All published maps are sold at the Survey of India Office, Calcutta, for cash prepaid.

Agents cannot issue maps on the *Public Service*.

N.B.—Maps are issued on the Public Service from the Calcutta Office, and their cost, as well as the cost of mounting and packing, adjusted by book-debit. The *cost of postage of parcels must be borne by applicants themselves*. Lists of newly-published maps are periodically notified in the Gazettes of India and of Local Governments.

DESCRIPTION AND NUMBER OF SHEETS.	Scale.	Size of sheet.	PRICE OF MAP UNMOUNTED.		REMARKS.
			Uncoloured.	Coloured.	
PROVINCIAL MAPS.			Rs. A.	Rs. A.	
Preliminary Map of Upper Burma (5th Edition)	1″ = 16M.	34″ × 20″	1 0	2 0	
Punjab (Skeleton), with additions and corrections to November 1889	1″ = 32M.	28″ × 25″	0 12	1 0	
DISTRICT MAPS.					
Hazaribaugh (with additions and corrections to September 1888)	1″ = 4M.	38″ × 27″	2 0	2 4	
Minbu (Preliminary Edition, 1888-89) ...	do.	28″ × 22″	1 8	1 12	
Agra, in 3 sections	1″ = 2M.	32″ × 53″	2 0	2 8	
STANDARD MAPS.					
ASSAM.					
Assam, Sheets Nos. 104, 105, 120 and 121 in one (2nd Edition)	1″ = 2M.	34″ × 20″	1 8	1 12	
LOWER BURMA.					
Sheets Nos. 180 N.E./2 and 227 S.E./2 (2nd Edition)	4″ = 1M.	do.	do.	do.	
UPPER BURMA.					
Sheet No. 1 (Preliminary Edition) ...	1″ = 8M.	do.	do.	do.	
„ No. 2 N.E. (4th Edition)... ...	1″ = 4M.	do.	do.	do.	
CENTRAL PROVINCES.					
Sheets Nos. 17 S.E./2, 18 N.E./3, N.W./4, S.E./4, S.W./2, S.W./4, and 25 S.W./1	4″ = 1M.	42″ × 28″	1 8	1 12	
NORTH-WEST PROVINCES AND OUDH.					
Sheets Nos. 180 (2nd Edition), 192, and 200	1″ = 1M.	34″ × 20″	1 8	1 12	
Sheet No. 185 N.E.	2″ = 1M.	42″ × 28″	do.	do.	

DESCRIPTION AND NUMBER OF SHEETS.	Scale.	Size of sheet.	PRICE OF MAP UNMOUNTED.		REMARKS.
			Uncoloured.	Coloured.	
			Rs. A.	Rs. A.	
STANDARD MAPS—*concluded.*					
PUNJAB.					
Sheets Nos. 161 N.E./4, S.E./1, 184 N.W./1, N.W./3 & 4, S.W./1 & 2, S.W./3 & 4, 185 N.W./1 & 2, N.W./3, and S.W./1	4″ = 1M.	32″ × 20″	1 8	1 12	
STATISTICAL MAPS.					
India, illustrating the Systems of Railways, corrected to 31st March 1889 ...	1″ = 96M.	31″ × 24″	1 0	2 0	
CHARTS.					
Chart of triangulation of the country adjoining the Chittagong Hill Tracts, Lushai Expedition, 1889	1″ = 4M.	18″ × 17″	0 8	0 8	
Preliminary Charts Nos. 61, 62, and 63 of the Burma Coast (between Cape Negrais and Sandoway, showing the positions of Beacons and other points fixed, Season 1888 89.	1″ = 2M.	34″ × 25″	1 0	Nil.	
Levels in the Punjab, Sheet No. 66 (2nd Edition).	do.	42″ × 28″	1 0	1 4	
MISCELLANEOUS.					
Panoramic Profile of the Hill Ranges seen from Landour at (No. 1 H.S.) 7,533 feet above sea level	Nil.	30″ × 20″	Nil.	1 8	
Parts of Lushai, Cachar, and Manipur ...	1″ = 8M.	18″ × 11″	0 8	Nil.	
Portion of the Daling Hills, Sheets Nos. 1 to 7.	8″ = 1M.	38″ × 23″	1 0	1 12	

SURVEY OF INDIA DEPARTMENT,
Calcutta, 2nd January 1890.

ST.G. C. GORE, *Major*, R.E.,
Assistant Surveyor-General,
In charge Map Record and Issue Office.

Notification.

TO be peremptorily sold pursuant to a decree and order of the Calcutta High Court in its Extraordinary Original Civil Jurisdiction, made in suit No. 1 of 1881 (wherein Chutterput Sing is plaintiff and Meer Mahomed Cazeem Johury and others are defendants), and dated, respectively, the 15th of August 1887 and the 17th of December 1888, by the Registrar of the said Court, in his sale-room in the Court-house on Saturday, the 8th of March next, at the hour of 12 o'clock at noon, the following properties:—

Lot No. 1.—Putnee lot Nawanankar, aslee with dakhilee, situate in pergunnah Sreepore in zillah Purneah, sub-registration district and thanna Arrareah, the annual sudder jumma of which is Rs. 3,525.

Lot No. 2.—Putnee lot Saifgungo, aslee with dakhilee, situate in pergunnah Havelli, zillah Purneah, sub-registration district Arrareah and thanna Matiari, the annual sudder jumma of which is Rs. 10,300.

Lot No. 3.—Lot Mirzapore, &c., aslee with dakhilee, situate in pergunnah Havolli, zillah Purneah, sub-registration district Arrareah and thanna Raneegunge, the annual sudder jumma of which is Rs. 14,306.

Lot No. 4.—An eight annas share of istemraree talook Ramai, &c., aslee with dakhilee, situate in pergunnah Sultanpore, zillah Purneah, sub-registration district Arrareah and thannas Arrareah and Matiari, the annual sudder jumma of which is Rs. 1,124.

The abstract of title and conditions of sale may be seen at the Office of the Registrar, High Court, Original Jurisdiction, and at the Office of Messrs. Beeby and Rutter, Attorneys for the plaintiff, any day before the sale and will be produced at the sale.

R. BELCHAMBERS, Registrar.

Beeby and Rutter, Plaintiff's Attorneys, Calcutta High Court, Original Jurisdiction, the 9th January 1890.

(3463—1)

Destroyed.

THE Government Promissory Note No. 029771 of the 4 per cent. loan of 1879 for Rs. 500, standing in the name of Baboo Sarbessur Mitra, the proprietor, by whom it was never endorsed to any other person. Payment of the above note and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, and application is to be made for accrued interest and for the issue of duplicates in favour of the proprietor after twoyears from date of last advertisement.

SARBESSUR MITRA, Asansol.

(2520—3)

Stolen.

THE Government Promissory Note No. 160426, of the 4 per cent. of 1865, for Rs. 1,000, and the Government Promissory Note No. 205964, of the 4 per cent. of 1865, for Rs. 1,000, the former originally standing in the name of the Bank of Bengal, last endorsed to Soorendra Nath Mookerji, who in January 1889 endorsed to his wife Shrimoti Khiroda Debya, the proprietor, by whom it was never endorsed to any other person; the latter originally standing in the name of the Comptroller-General, last endorsed to Soorendra Nath Mookerji, who in January 1889 endorsed to his wife Shrimoti Khiroda Debya, by whom it was never endorsed to any other person. Payment of the above Notes, and the interest thereupon, have been stopped at the Public Debt Office, Bank of Bengal, and application is about to be made for the issue of duplicates in favour of the proprietor.

SOORENDRA NATH MOOKERJI, Resident of Berijhatty under Serampore, zillah Hooghly, at present residing at Dholy *vid* Dholy P. O., zillah Mozufferpore.

(3425—3)

Lost.

INTEREST Warrants Nos. 229507 and 229506, dated 4th January 1890, for Rs 20, issued in satisfaction of 49½ years' interest on Government Promissory Notes, Nos. 238858 and 188252, aggregating Rs. 1,000 of the 4 per cent. loan of 1865 in the names of Russick Lal Dutt and Kheero Monee Dassee respectively.

(3449—3)

WANTED an Assessor of Income-tax for Chumparun district from 1st April 1890. Salary Rs 70 per mensem. Only those need apply who know English and have had some experience of office work.

Applications with copies of testimonials (which will not be returned) will be received by undersigned up to the 26th instant.

A. W. B. POWER, Collector of Chumparun.

Wanted.

A SUB-OVERSEER for the District Board of Noakholly on a salary of Rs. 35 and horse allowance of Rs. 10 per month, to be ordinarily stationed at Sundeep. Passed Sub Overseers of Public Works Department, with experience of road work, shall have preference Knowledge of surveying and levelling indispensable. Applications will be received by the undersigned up to the 30th January 1890.

BINODE BIHAREE PAL, District Engineer, Noakholly.
Noakholly, the 11th January 1890 (3446—2)

Notice.

WANTED a Second Clerk for the Sub-divisional Office, Nattore, District Rajshahye. Salary Rs 30 rising to Rs. 50 by a biennial increment of Rs. 2. None need apply who does not possess experience in Account Department. Applications with copies of testimonials to be sent to the undersigned before the 10th February 1890.

MOHIM CHANDRA GHOSH, Sub-divisional Officer.
Dated Nattore, the 11th January 1890.

APPLICATIONS are invited for the post of Serishtadar of this Office, which will probably be vacant on 1st February.

The pay is Rs. 120 to Rs. 200, rising by biennial increments. A knowledge of the Kaithi and Urdu character and of English is essential, and no one need apply who has not had at least 15 years' experience of work in a district office.

BEPIN BEHARY MOOKERJI, for Collector.
Bhagulpore Collectorate, the 11th January 1890.

JOGENDRA NATH SEN, M. A., B. L., intends to apply for enrolment as a Vakil of the High Court.

(3444-4.)

Notice.

THE public are hereby informed that a Fair will be held at Falakata, in the sub-division of Alipur, Western Dooars, district Julpigoree. The Fair will commence on 23rd January 1890 (A.D.) corresponding with 11th Magh 1296 (B.S.), and will continue up to 6th February 1890. Tradesmen, dealers, and others may buy and sell there during this time. Blankets, cloth of sorts, ivory, wool, rhinoceri horns, musk, honey, wax, lac, ponies, and various other articles from Bhootan and Thibet, as also rice, paddy, jute, cotton, tobacco, mustard seed, wheat and other crops, which are grown in the Western Dooars, will be available at the Fair. Falakata is on the left or east bank of the Mujnai river, and within easy reach of Julpigoree and Cooch Behar. A good cart and driving road exists all the way.

Tradesmen and others who may attend the Fair will receive every kindness and assistance from the local officers.

DONALD SUNDER, Sub-divisional Officer, Alipur Dooars.

Alipur, the 10th December 1889.

MR. S. S. COOPERS is authorized to sign our firm per procuration from this date.

CROFT, WELLS & Co.
1, Clive Row, 1st January 1890. (3418—3)

Lost.

INTEREST Warrant No. 225465, dated 6th November 1889, for Rs. 200, issued in satisfaction of 49½ years' interest on Government Promissory Notes Nos. 187095, 184231, B 140933, 251834, 223046, 228904, 232405, 238124 and 194586, aggregating Rs. 10,000 of the 4 per cent. loan of 1865 in the name of H. Hastings.

GILLANDERS, ARBUTHNOT & Co., Calcutta.
January 14th, 1890. (3450—3)

Notification.

A MONUMENT in the Faridpur cemetery, to a child of the name of Burt, needs repair. The friends of the deceased are therefore requested to inform the undersigned if they are willing to repair it.

PURNO CHANDRA RAI, Dy. Magistrate in charge, for Magistrate.

FARIDPUR MAGISTRATE'S OFFICE, the 3rd January 1890.

Uncovenanted Service Family Pension Fund.

NOTICE.

THE Fifty-second Annual General Meeting of Subscribers of the above Institution will be held in the DALHOUSIE INSTITUTE, on Wednesday, the 29th January 1890, at 4 P.M., to receive the report of the Directors and to consider such matters as may then be submitted.

By order of the Directors,
W. H. RYLAND, Secretary.

Calcutta, the 31st December 1889. (3415—3)

In the matter of the Indian Company's Act, 1882, and in the matter of the Orissa Coasting Steam Navigation Company, Limited, now in course of voluntary liquidation.

BY an order made by the High Court of Judicature at Fort William in Bengal in its Ordinary Original Civil Jurisdiction in the above matter, and dated the 9th day of January 1890, on the petition of Albert Birmingham Miller, the Liquidator of the abovenamed Company, it was *inter alia* ordered that the voluntary winding up of the said Company be continued, but subject to the supervision of the said Court, and any of the proceedings under the said voluntary winding up may be adopted as the said Court should think fit; and it was further ordered that the creditors, contributaries, and the Liquidator of the said Company, and all other persons interested, were to be at liberty to apply to the said Court as there might be occasion.

GREGORY & JONES, Attorneys for the said Albert
(3456—1) Birmingham Miller, Liquidator.

Road Cess Notification.

DISTRICT PUBNA.

IT is hereby notified that under section 38 of the Cess Act, as amended by the second schedule of the Local Self-Government Act III (B.C.) of 1885, the District Board of Pubna have determined that road cess in that district for the cess year 1890-91 shall be levied at the maximum rate, viz., one-half anna on each rupee of the annual value of lands, and of the annual net profits from mines, quarries, tramways, railways and other immoveable property as enumerated in section 6 of the Cess Act.

W. FIDDIAN, Chairman.

Road Cess Notification.

IT is hereby notified for general information that, under section 46 of the Bengal Local Self-Government Act No. III (B.C.) of 1885, the District Board of Shahabad have, by a resolution of their meeting held on the 13th of January 1890, determined to levy road cess for the year 1890-91 at the maximum rate of six pies in the rupee on the annual value of lands, mines, &c.

S. M. NASSIRUDDIN, Vice-Chairman, District Board, Shahabad.

Dated Arrah, the 18th January 1890.

Dinagepore District Board.

SIX PER CENT. LOAN.

THE Dinagepore District Board have resolved, with the permission of the Lieutenant-Governor of Bengal, to borrow Rs. 10,000 (out of two lakhs of rupees) during the current financial year (1889-90) for construction of permanent bridges in their district roads on security of the District Fund formed under Act III (B.C.) of 1885, detailed accounts of which for last two years were published in the *Calcutta Gazette*, Part IB, page 164, dated 7th August 1889.

2. Tenders for the whole or any part of the said amount of Rs. 10,000 will be received by the Vice-Chairman of the Board from this date to Friday, the 31st January 1890. Tenders must be in sums of Rs. 500) or multiples of Rs. 500.

3. Each tender must be addressed in the form annexed herewith to the Vice-Chairman, and enclosed in a closed and sealed cover superscribed "Tender for Loan." If the tenderer is not resident in India, he must name an agent resident in India, to whom a letter of allotment may be issued if any part of the loan is allotted to such tenderer.

4. Each tender must be accompanied by deposit money, at a rate of 5 per cent. on the amount tendered, to be sent by postal money-order, and the money-order receipt must be filed with the tender. Deposits will, in the case of accepted tenders, be credited proportionally in part payment of the allotment certificates issued in respect of the tender. If any allotment certificate is not fully taken up, the deposit will be forfeited.

5. The rate at which a tender is made must not contain a fraction of an anna: if a rate containing a fraction of an anna is inserted in any tender, such fraction will be struck out, and the tender treated as if the rate did not contain such fraction of an anna.

6. The rate at which each tender is made must be specified in rupees, or rupees and annas. A tender in which no rate is thus specified, but a subscription is offered in some other terms, *e.g.*, at the recorded minimum, or at some specified percentage in addition to the recorded minimum, or at the average of the accepted tenders, will be rejected as null and void.

7. Tenders will be opened publicly by the Vice-Chairman at the Dinagepore Magistracy on Saturday, the 1st February next, at noon (Calcutta time).

8. Tenders at the minimum rate will be accepted in the order of the rates tendered, beginning with the highest rate. The amount allotted at the lowest rate at which tenders are accepted will be divided amongst those who have tendered at this rate in proportion, as nearly as may be found convenient, to the amounts of their tenders, provided that no allotment will be issued if the amount distributable on any tender is less than Rs. 500.

9. To each tenderer (or to his agent) whose tender is accepted in whole or in part, such number of allotment certificates as may be necessary to make up the aggregate amount allotted to him will be issued by the Vice-Chairman as soon as possible after the tenders have been accepted, and a list of the names of those to whom such allotment certificates are issued will be posted for general information at the District Board's Office.

10. Payment of any allotment certificate is to be made in credit of the District Fund at the Dinagepore Treasury.

Form of Tender

I, A. B., hereby tender for Rs. (Rs.) of the six per cent. loan advertised in the *Calcutta Gazette*, dated , and agree to pay for the same subject to the condition mentioned in the advertisement, at the rate of Rs. As. for every hundred rupees allotted to me.

I enclose a money-order receipt for deposit money for Rs. sent to the address of the Vice-Chairman of the Dinagepore District Board.

Any allotment made to me may be communicated to at

NOTE.—A separate tender must be made at each rate tendered The rate tendered should be the whole amount per centum, not the premium or discount; thus "one hundred and two" or "one hundred," or "ninety-nine," not "two per cent. premium" or "par" or "one per cent. discount."

(3419—3) C. R. MARINDIN, Chairman.

In the Court of the District Judge, Sarun

EXECUTION CASE No. 13 OF 1889.

Lab Tirbhoean Sahai, decree-holder, *versus* Tej Lachhmi Debi, judgment-debtor.

NOTICE is hereby given that in the above case the undermentioned properties of the judgment-debtor will be sold by public auction on the 3rd March 1890, in the Court of the District Judge of Sarun, by the Nazir of the Court:—

1. Mouzah Turkowlia, tuppa Changwan, appertaining to mehal Ramgir Jamhowli, pergunnah Majhowa, bearing towji No. 729, and sudder jumma Rs. 3,883-8, estimated price Rs. 500, within the jurisdiction of thana Hardi and registry office Bettiah.

2. Mouzah Jamonia, tuppa Changwan, appertaining to mehal Ramgir Jamhowli, pergunnah Majhowa, bearing towji No. 729, estimated price Rs. 500, within the jurisdiction of thana Hardi and registry office Bettiah; sudder jumma Rs. 3,883-8.

H. W. GORDON, District Judge.

(3460—1)

In the Court of Baboo Saroda Prasad Chatterjea, Roy Bahadur, Subordinate Judge of Sarun.

EXECUTION CASE No. 221 OF 1889.

Baboos Moti Chand and Mahadeo Prasad, decree-holders, *versus* Baboo Fatteh Bahadur Singh, judgment-debtor.

TO be sold in the above case, by the Nazir of the District Judge's Court of Sarun, at 12 noon on the 3rd day of February 1890, for the satisfaction of the decree Rs. 17,333-8-3, the following tolahs of Narkatia appertaining to mehal Bhopatpore, tuppeh Bahas, pergunnah Majhowa, bearing towji No. 178, within the jurisdiction of thana Adapore, registration and munsifee Motihari; sudder jumma of entire mehal Rs. 9,736-0-10:—

		Rs.
1.	Sixteen annas of mouzah Narkatia, approximate value	6,000
2.	Sixteen annas of tolah Jamim Char, approximate value	1,000
3.	Sixteen annas of tolah Baikunthwa, approximate value	500
4.	Sixteen annas of tolah Bairia, approximate value	500
5.	Sixteen annas of tolah Belwa, approximate value	200
6.	Sixteen annas of tolah Belderwa, approximate value	200
7.	Sixteen annas of tolah Bariarpur, approximate value	200
8.	Sixteen annas of tolah Sirisia-kalan, approximate value	200
9.	Sixteen annas of tolah Adra, approximate value	200
10.	Sixteen annas of tolah Aurea, approximate value	200
11.	Sixteen annas of tolah Inderwa, approximate value	200
12.	Sixteen annas of tolah Bhawadri, approximate value	200

(3457—1) SARODA PROSAD CHATTERJEA, Sub-Judge.

Notice.

PATNA DISTRICT.

IT is hereby notified that, under section 46 of the Local Self-Government Act III (B.C.) of 1885, the District Board of Patna have, by a resolution passed at a meeting held on the 14th January 1890, determined to levy road cess for the year 1890-91 at the maximum rate, *i.e.* six pies in the rupee on the annual value of land.

C. FAULDER, Chairman, District Board, Patna.

Dated Bankipore, the 15th January 1890.

Notification.

IT is hereby notified that under section 46 of the Local Self-Government Act III (B.C.) of 1885, the District Board of Dacca have at their Special Meeting, held on the 11th January 1890, determined to levy the road cess in this district for the ensuing financial year 1890-91 at the maximum rate of one-half anna or six pies in the rupee on the annual value of lands.

L. HARE, Chairman.

Dacca District Board's Office, the 11th January 1890.

LETTERS of Administration (with copy Will annexed) of the property and credits of Edward James Jones, late of Calcutta, Deputy Superintendent of the Geological Survey of India, deceased, have been granted by the High Court, Calcutta, to G. W. F. Buckland, Esq., of No. 1, Esplanade, West, Calcutta, as the Attorney of the Executor named in the Will of the deceased All persons having claims against the deceased are requested to submit same to the Administrator before the 31st day of March next, after which date no claims will be admitted.

J. A. APCAR, Attorney.

Calcutta, 17th January 1890. (3461—3)

Soom Tea Company, "Limited."

NOTICE is hereby given that the Ordinary General Meeting of Shareholders of the above Company will be held at the Registered Office, No. 4, Mangoe Lane, Calcutta, on Saturday, the 22nd February next, at 10-30 o'clock A M., for the purpose of receiving the Directors' Report, passing the accounts for the year ending 31st December 1889, declaring a dividend and transacting such other business as may be brought before the Meeting.

By order of the Board.

WILLIAMSON, MAGOR & Co., Secretaries.

CALCUTTA, the 21st January 1890. (3462—2)

Notice.

IN THE COURT OF THE SUBORDINATE JUDGE OF MIDNAPUR.

EXECUTION CASE No. 159 OF 1889.

Kartik Chandra Mitra and another, decree-holders, *versus* Sridhar Charan Nandi and others, judgment-debtors.

THE undermentioned properties will be sold by public auction at the Court-house of the District Judge of Midnapur, on Saturday, the 15th February 1890, at 12 o'clock, in execution of the decree passed by the Subordinate Judge of Midnapur for the realization of Rs. 16,256-9-3, obtained by a mortgage decree due from the debtors to the decree-holders:—

Schedule of Property to be sold.

Lot I.—Sixteen annas share of mehal Papan, with its mouzahs, within the police-station of Debnah and sub-registry office of Gopalpur, pergunnah Shahapur, bearing towji No. 1150, present towji No. 1118; Government revenue payable is Rs. 671-1-7.

Lot III.—Eight annas share of mehal Douan, with its mouzahs, within the police-station of Shobang and sub-registry office of Pingla, pergunnah Kedar Kundu, bearing towji No 514, present towji No. 391; Government revenue payable is Rs. 1,135-8-3, and the Government revenue of which eight annas is Rs. 567-12-1½.

DWARKA NATH BHUTTACHARJEE, Sub-Judge.

(3470—1)

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

In the matter of HERAMBO CHUNDER BOSE, an insolvent.

Notice that an application for an *ad-interim* protection order has been this day made by the said insolvent, and that such application will be heard and disposed of by the Acting Commissioner of the Insolvent Court on Monday, the 27th day of January instant, at the hour of half past ten o'clock in the forenoon.

☞ "Any creditor of the said insolvent desirous of opposing such application must appear before the said Court at the time and place aforesaid."

Prannath Paul, Attorney. (3463—1)

In the matter of GREEDHAREE LALL SAD KHAN and another, insolvents.

On Saturday, the 11th day of January instant, it was ordered that the Assignee do pay and divide the sum of Rs. 564-14-6 to and amongst all the creditors upon the estate of the said insolvents as a dividend at the rate of Re. 1-12-0 per cent. upon such of the debts as are admitted in the schedule of the said insolvents, and such claims as shall be proved or substantiated to the satisfaction of the said Assignee in proportion to their several debts, with leave to the Official Assignee to apply to this Court from time to time for directions respecting any debts or any other matter or thing relating thereto.

A. B. Miller, Official Assignee. (3464—1)

In the matter of GEORGE COLE and another, insolvents.

On Saturday, the 11th day of January instant, it was ordered that the Assignee do pay and divide the sum of Rs. 226-14-1 to and amongst all the creditors upon the estate of the said insolvents as a dividend at the rate of Rs. 2-2-0 per cent. upon such of the debts as are admitted in the schedule of the said insolvents, and such claims as shall be proved or substantiated to the satisfaction of the said Assignee in proportion to their several debts, with leave to the Official Assignee to apply to this Court from time to time for directions respecting any debts or any other matter or thing relating thereto.

A. B. Miller, Official Assignee. (3465—1)

In the matter of CARAPIET MARTYROSE ARATHOON, an insolvent.

On Saturday, the 11th day of January instant, an account of the receipts and disbursements of the Official Assignee, from the 10th day of January 1889 to the 31st day of December last, was filed in the Office of the Chief Clerk, and it was ordered that Saturday, the 1st day of February next, be appointed for the further hearing of this matter for the purpose of making a dividend.

☞ Any creditor or other person interested who may intend to establish or oppose any claim upon the estate of the said insolvent may attend and be heard, having given notice to the Chief Clerk three clear days before the day of hearing.

A. B. Miller, Official Assignee. (3466—1)

In the matter of RAMBUX RATTEE, an insolvent.

On Saturday, the 11th day of January instant, it was ordered that the Assignee do pay and divide the sum of Rs. 3,204-5-4 to and amongst all the creditors upon the estate of the said insolvent as a dividend at the rate of Rs. 20 per cent. upon such of the debts as are admitted in the schedule of the said insolvent, and such claims as shall be proved or substantiated to the satisfaction of the said Assignee in proportion to their several debts, with leave to the Official Assignee to apply to this Court from time to time for directions respecting any debts or any other matter or thing relating thereto.

A. B. Miller, Official Assignee. (3467-1)

In the matter of EDWARD JOAKIM GRACIES, an insolvent

On Saturday, the 11th day of January instant, an account of the receipts and disbursements of the Official Assignee, from the 7th day of September last to the 31st day of December last, was filed in the Office of the Chief Clerk, and it was ordered that Saturday, the 1st day of February next, be appointed for the further hearing of this matter for the purpose of making a dividend.

☞ Any creditor or other person interested who may intend to establish or oppose any claim upon the estate of the said insolvent may attend and be heard, having given notice to the Chief Clerk three clear days before the day of hearing.

A. B. Miller, Official Assignee. (3468—1.)

In the matter of POORUN MULL and another, insolvents.

On Saturday, the 21st day of December last, it was on the petition of Ram Bux, Ram Chand, and Golap Chand, creditors of the said insolvents, adjudged that the said insolvents have committed an act of insolvency under the provisions of the Act XI Vic., Chapter XXI, and by another order of the same date the estate and effects of the said insolvents were vested in the Official Assignee.

H. C. Chick, Attorney. (3469—2)

Chief Clerk's Office, the 21st January 1890.

Insolvency Notice.

NOTICE is hereby given that the undermentioned dividend is lying unclaimed—

Estate JOHN THOMSON HORNETT, *an Insolvent.*

No.	NAME OF CREDITOR.	Amount of claim.	1st Dividend at Rs. 50 per cent.
		Rs. A. P.	Rs. A. P.
6	L. Gomez	156 0 0	78 0 0

Estate MANUK THEODORE MANUK, *2nd Insolvency, an Insolvent.*

			1st Dividend at Rs. 10 per cent.
		Rs. A. P.	Rs. A. P.
6	D. J. Bagram	730 8 5	116 14 2

Estate CONSTANTINE DEMENEXIS, *an Insolvent.*

			1st Dividend at Rs. 15 per cent.
		Rs. A. P.	Rs. A. P.
4	T. E. Thomson and Co.	574 1 3	86 1 9

(3454—1) A. B. MILLER, Official Assignee.

POSTAL NOTICES.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	28th Jan. ..	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets).	27th ,, ...	Ditto.
Mauritius, Mahé (Seychelles), Mayotte, Nossi Be and Réunion.	28th ,, ...	Ditto.
Zanzibar, Mozambique, Delagoa Bay, Natal and Cape Colonies.	28th ,, ...	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	27th ,, ...	Ditto.
Australia, New Zealand, and Tasmania.	27th ,, ...	Ditto.
Madras, Pondicherry, Ceylon, Batavia, Singapore and China.	23rd ,, ...	Per French steamer *Niemen*.
Straits, China and Japan ...	23rd ,, ...	Per str. *Japan*.
Rangoon and Moulmein ...	28th ,, ...	Ditto *Chanda*
Ditto ditto ...	24th ,, ...	Ditto *Nuddea*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	22nd ,, ...	Ditto *Coconada*.
Port Blair ...	29th ,, ...	*Vid Madras*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	29th ,, ...	Per st. *Packumba*.

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

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E. HUTTON, Presidency Postmaster.

General Post Office, the 21st January 1890.

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Frank, G.
Procton, T. E.

Letters marked Care of "Post Office."

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Bather, H. R.
Baxter, Mrs.
Belitski, R
Berkeley, C. M.
Boland, J.
Bolton, J. M. L.
Brown, W.
Burrows, C. J.
Carrapnett, Mr.
Charles, R.
Chatterton, J.
Comar, Mrs. A.
Cooper, H. J.
Cooper, W.
Courage, R.
Courtney, F. S.
Culbard, Mrs. C.
Davis, Mrs. G.
Dickson, Mrs. E.
Douglas, G. P. H.
Drakeford, A.
Duclore, G. P.
Dunlo, Viscount.
Dymond, G. F.
Elliott, K.
Filleid, Rev. S. E. V.
Fisk, F M.
Flaherty, O. H.
Fletcher, Neil.
Forshaw, H.
Fraiser, H. C.
Francis, A. M.
Franzini, Madame A.
Gellett, Cecil S.
Glover, W. E.
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Gow, J. F.
Greve, E. C.
Greon, W. W.
Hamilton, J. R.
Hardy, Mrs. M.
Hawksworth, Mrs.
Heming, Lt.-Col. D.
Henderson, W. H.
Hewett, A. B.
Hilton, R. W.
Horus, Miss M. L.
Jackson, T.
Johannessen, O. C.
Jones, R. H. W.
Keane, J. J.
Keith, Surgeon-Major J. F.
Kleine, Henri.
Lach, R.
Lamb, E. G.
Lambertini, Miss.
Langer, J. O.
Lerco, R.
Levinge, Sir William.
Livermore, H. A.
Lindeman, L. K.
Livewright, R.
Lloyd, Willis.
Long, W.
Lyons, G. B. C.
Major, A.
Mackenzie, J.
MacBrayne, L.
Manual, A. M.
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Mathewson, F.
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Morshead, L.
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Sevestre, J.
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Shrewsbury, Miss.
Shworth, T. K.
Sisam, Rev. W. B.
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Smith, M. O.
Soares, F. H.
Stebbing, Capt. Arthur.
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Sweet, L.
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Thompson, G.
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Ursite, Johan.
Valentyne, W. K. H.
Waddell, Alex.
Walter, F.
Walter, Amherst.
Webster, Mrs.
Westmacott, H. H.
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Woodhouse, G.

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Hogens, Charles.
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MacLeod, D. J.
Marsland, W.
Menzies, C.
Smith, M. Oswald.
Westmacott, F. H.
Zucker, Moses.

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Coulter, A.
Duff, G. G. K.
Ferguson, W.
Lindsay, W. C,
Mathuson, J.
Parker, C. F.
Peter, H.
Robertson, Jas.
Sells, J. H.
Simpson, Dr. R. J.
Thompson, Jas.
Thomson, T. E.
Wardell, Miss.
Wheeler, Sergeant.

E. HUTTON,
Presidency Postmaster, Calcutta.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 17th January 1890.

Name of river.	Reach of river.	Least depth of water soundings.	Remarks.
		Ft. In.	
Bhagirati.	Entrance from Ganges ...	1 6	At mouth entrance practically closed.
	Thence to Nurpur	1 3	Dhopipara.
	From Nurpur to Jungipur ...	2 0	Nurpore.
	,, Jungipur to Berhampur	1 3	Patanpara.
	,, Berhampur to Cutwa ...	2 0	Horinathpore.
	,, Cutwa to Nuddea ...	2 3	Patooly.
Bhyrub-Jelinghi.	Entrance from Ganges ...	7 6	
	Thence to Akriganj	6 0	
	Akriganj to junction of the Bhyrub and Jelinghi ...	4 6	Junction.
	Thence to Patkabari	6 0	Patkabari.
	Patkabari to Nuddea	3 9	Punditpore.
Matabanga.	Entrance from Ganges ...	2 3	
	Thence to Chnypara ...	1 2	Sircarpara.
	From Chnypara to Shikarpur	0 9	Pragpore.
	,, Shikarpur to Boalia ...	1 0	Shampore.
	,, Boalia to Chuadanga ...	2 6	Sinlumari.
	,, Chuadanga to Kissenganj and Hanskhali...	2 6	Bastupore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A. M.	Feet.	Feet.	
Ganges.	Sahebganj ...	18-1-90	6	0'42	67'58	Below zero.
	Rampore Boalia	18-1-90	12	1'58	43'58	
	Entrance of Bhagirati ...	18-1-90	7	2'85	48'16	
	Entrance of Bhyrub-Jelinghi ..	18-1-90	...	7'62	45'08	
	Entrance of Matabanga ...	18-1-90	..	1'06	.....	
Bhagirati...	Berhampur ...	20-1-90	12	2'88	36'67	
Jelinghi ...	Kishnaghur ...	17-1-90	...	4'46	13'35	
	Saroopgunge ...	18-1-90	6	3'54	7'04	
Matabanga	Hanskhali ...	17-1-90	...	3'08	13 93	

C. E. LIVESAY, C.E.
Exe. Engr., Nuddea Rivers Division.
Berhampore, the 20th January 1890.

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R. H. WILSON,
Offg. Secy. to the Govt. of Bengal.
The 24th February 1886.

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The Calcutta Gazette.

PUBLISHED BY AUTHORITY.

WEDNESDAY, JANUARY 22, 1890.

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PART VI.

Bills introduced into the Council of the Governor General for making Laws and Regulations, or published under Rule 22.

GOVERNMENT OF INDIA.

LEGISLATIVE DEPARTMENT.

The following Bill was introduced into the Council of the Governor General of India for the purpose of making Laws and Regulations on the 16th January, 1890:—

No. 2 OF 1890.

A Bill for the Prevention of Cruelty to Animals.

WHEREAS it is expedient to make further provision for the prevention of cruelty to animals; It is hereby enacted as follows:—

Title, extent and commencement, and supersession of other enactments.

1. (*1*) This Act may be called the Prevention of Cruelty to Animals Act, 1890.

[Act I, 1878, s. 1.] (*2*) This section extends to the whole of British India: the rest of this Act shall extend to such local areas as the Local Government, by notification in the official Gazette, directs, and shall come into force in each of those areas on such day as that Government, by such a notification, appoints.

[Cf. Act XII, 1886, s. 24.] (*3*) When this Act has been extended to a local area under this section, the Local Government may direct that the whole or any part of any other enactment in force in the local area for the prevention of cruelty to animals shall, [Act I, 1868, s. 6.] except as regards anything done or any offence committed or any fine or penalty incurred or any proceedings commenced, cease to have effect in that area, and such whole or part shall cease to have effect accordingly until the Local Government otherwise directs.

Definitions.

2. In this Act, unless there is something repugnant in the subject or context,—

(*1*) "animal" includes a bird: and

(*2*) "street" includes any way, road, lane, square, court, alley, passage or open space, whether a thoroughfare or not, to which the public have access, and includes also the road-way and foot-way over any public bridge or cause-way. [Act XI 1884, s.

Penalty for cruelty to animals in public places and for sale in such places of animals killed with unnecessary cruelty.

3. (*1*) If any person in any street or in any other place, whether open or closed, to which the public have access, or within sight of any person in any street or in any such other place,—

(*a*) cruelly and unnecessarily beats, overdrives, overloads or otherwise ill-treats any animal, or [Ben. 1869, s. and Ca 43 Vict s. 2.]

(*b*) binds or carries any animal in such a manner or position as to subject the animal to unnecessary pain or suffering, or [Canad Vict., s. 2, an lish 12 Vict., s. 12.]

(*c*) offers, exposes, or has in his possession, for sale any live animal which is suffering pain by reason of mutilation, starvation or other ill-treatment, or any dead animal which has been killed in an unnecessarily cruel manner,

he shall be punished with fine which may extend to one hundred rupees, or with imprisonment for a term which may extend to six months, or with both. [12 & Vict., s. 18.]

(*2*) Subject to any rules which the Local Government may make in this behalf, a police-officer may arrest without warrant any person who in his presence commits or is accused of having committed an offence against sub-section (*1*). [Ben. III, Y s. 1: 12 & 1 c. 92, Cf. Ac 1882, s

Penalty for killing animals with unnecessary cruelty anywhere.

4. If any person kills any animal in an unnecessarily cruel manner, he shall be punished with fine which may extend to one hundred rupees, or with imprisonment for [Cf. s (c).]

a term which may extend to six months, or with both.

ct I, 5.] **Penalty for employing anywhere animals unfit for labour.**

5. If any person employs in any work or labour any animal which by reason of any disease, infirmity, wound or sore is unfit to be so employed, he shall be punished with fine which may extend to one hundred rupees.

t I,]

Penalty for permitting diseased animals to go at large or to die in public places.

6. If any person wilfully permits any animal of which he is the owner to go at large in any street while the animal is affected with contagious or infectious disease, or without reasonable excuse permits any diseased or disabled animal of which he is the owner to die in any street, he shall be punished with fine which may extend to fifty rupees.

1882, nd Vict. 13.]

Search-warrants.

7. (*1*) If a District Magistrate, Subdivisional Magistrate, Presidency Magistrate or Magistrate of the first class, upon information and after such inquiry as he thinks necessary, has reason to believe that an offence against section 4 or section 5 is being or has been committed, he may by his warrant authorise any police-officer above the rank of a constable to enter and search any place specified in the warrant and to seize any animal, alive or dead, in respect of which such police-officer has reason to believe that the offence is being or has been committed.

(*2*) The provisions of the Code of Criminal Procedure, 1882, relating to searches under that Code shall, so far as those provisions can be made applicable, apply to a search in pursuance of a warrant issued under sub-section (*1*). X of 1882.

Limitation for prosecutions.

8. A prosecution for an offence against this Act shall not be instituted after the expiration of three months from the date of the commission of the offence. [Canadian 32 & 33 Vict. c. 27, s. 6, and English 12 & 13 Vict., c. 92, s. 14.]

STATEMENT OF OBJECTS AND REASONS.

IN different parts of British India there are more than twenty enactments in force relating to cruelty to animals, but the local extent of most of these enactments is very limited, while the necessity imposed by others of proving cruelty to an animal to have caused obstruction, inconvenience, annoyance, risk, danger or damage to the public renders it very difficult to maintain a prosecution.

The object of the present Bill is to provide an easily enforceable law which may be applied by any Local Government to any part of the territories under its administration, either in addition to, or to the exclusion of, any other enactment in force in such part for the suppression of cruelty to animals.

The 15th January, 1890.

PHIL. P. HUTCHINS.

S. HARVEY JAMES,
Secretary to the Government of India.

[REGISTERED No. 29.]

No. 4 of 1890.

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, JANUARY 22, 1890.

OFFICIAL PAPERS.

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Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 18th January, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.			
	Western Districts.		
Burdwan Divn. 1	Burdwan* Jan. 18, '90	Nil	Weather—rather warm. Harvesting of *amun* over. Prospects of *rubbi* not good everywhere. Prospects of potato and sugarcane good. Prices of common rice:— Srs. Burdwan ... . 15½ Culna ... ... 16 Cutwa ... ... 15¾ Ranegunge ... . 19 } per rupee.
Burdwan Divn. 2	Bankoora „ 18, '90	Nil	Weather seasonable. Threshing of *amun* rice going on. *Rubbi* prospects good. Pressing of sugarcane commenced in the Bishenpore subdivision; outturn nearly average. Common rice 21 seers per rupee at Sudder and 18 seers at Bishenpore.
Burdwan Divn. 3	Birbhum „ 18, '90	Nil	Prospects of crops excellent. Price of rice 16½ seers per rupee at Soory and 18 seers at Rampore Hât.
Burdwan Divn. 4	Midnapur „ 18, '90	Nil	Weather—seasonable. Rice harvest in the Sudder subdivision completed with 12 annas outturn, but still going on in Contai and Tamluk. Prices of rice:— Srs. Sudder ... ... 16 Contai ... ... 24 (new) Tamluk ... ... 18 Ghatal ... ... 18 } per rupee.
Burdwan Divn. 5	Hooghly „ 18, '90	Nil	Weather—cold in the morning, but close at other times. Harvesting of *amun* paddy completed. *Rubbi* very hopeful. Prices of common rice:— Srs. Ch. Sudder ... ... 12 0 Jehanabad ... ... 18 7 } per rupee.
Burdwan Divn.	Howrah „ 18, '90	Nil	Weather—warm for the season. State and prospects of crops good. *Amun* is still being harvested. Prices of common rice:— Srs. Howrah ... ... 12¼ Uluberya ... ... 15½ } per rupee.
	Central Districts.		
Presidency Divs. 6	24-Pargbs. Jan. 18, '90	Nil	Weather—good and seasonable, but sometimes foggy. The force of winter is gradually fading. Harvesting of *amun* crop nearly completed except on low lands. Outturn nearly 16 annas. Winter crops doing well. Price of common rice 15 to 16 seers a rupee.
Presidency Divs. 7	Nuddea „ 18, '90	Nil	Weather—seasonable. Prospects of winter crops on the whole fair. *Kalai* and *mung* are being harvested.
Presidency Divs. 8	Khoolna „ 18, '90	Nil	Weather- seasonable. *Amun* harvest still progressing; outturn good. Winter crops doing well.
Presidency Divs. 9	Jessore „ 18, '90	Nil	Weather—cool and foggy. *Amun* harvest coming to a close. Winter crops doing fairly well. Prices of rice stationary.
Presidency Divs. 10	Moorshedabad „ 17, '90	Nil	Weather—fine and cold with passing clouds. Wind generally north-west. *Amun* harvesting nearly over. *Rubbi* promises well.
Rajshahye Divn. 11	Dinagepur „ 18, '90	Nil	Weather—cloudy during early part of week. Fogs continue. Rice prospects favourable. The mustard crop in the subdivision is expected to be very poor. Harvesting and pressing of sugarcane continue.
Rajshahye Divn. 12	Rajshahye „ 18, '90	Nil	Weather—seasonable. Harvesting of *amun* crop still continues with a good outturn. Nowgong reports a bumper crop. *Rubbi* crops are tolerable. Ganja promising well at Nowgong. Rice sells at 16 seers 10 chittacks per rupee.
Rajshahye Divn. 13	Rungpur „ 18, '90	Nil	Weather—seasonable. Sugarcane is still being cut with good results. Mustard is ripe in some places. Land is being prepared for *aus* and jute sowings.
Rajshahye Divn. 14	Bogra „ 18, '90	Nil	Weather—nights cold, days hot, and mornings foggy. One-eighth of the whole *amun* crop still remains to be reaped. Other crops are in a fairly good state and are being reaped. Price of common rice 22 seers a rupee at head-quarters.
Rajshahye Divn. 15	Pubna „ 18, '90	Nil	Weather- seasonable. *Amun* below average in the Sudder subdivision: it is still being reaped. Sugarcane deficient. Mustard expected to be a 12-anna crop. Cold-weather crops doing well.
Rajshahye Divn. 16	Darjeeling „ 18, '90	Nil	Weather—very cold and foggy. Wheat and barley are progressing favourably; other winter crops are doing well.
Rajshahye Divn. 17	Julpigoree „ 18, '90	Nil	Weather—cold and fair. Cutting of *haimanti* paddy almost completed; outturn good. No change in prices.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded.*			
	Eastern Districts.		
Dacca Divn. 18	Dacca Jan. 18, '90	Nil	Weather—seasonable. Sowing of *boro* paddy continues. Winter crops doing well. *Mung*, *maskalai* and mustard are being gathered. Fodder is available. No special change in the prices of food-grains. Common rice sold at from 14 to 17 seers 12 chittacks per rupee.
19	Furreedpur „ 18, '90	Nil	Weather—seasonable. Mornings foggy. Prospects of *rubbi* crops fair. Outturn of sugarcane and date-tree juice not satisfactory. Ordinary rice selling at 15¼ seers per rupee in Sudder, 17 seers in Goalundo, and 15 seers in Madaripore.
20	Backergunge „ 18, '90	Nil	Weather—cool with foggy mornings. Prospects of crops good. Harvesting of *amun* nearly completed. Common (new) rice is selling at 16 seers a rupee.
21	Mymensingh „ 18, '90	Nil	Weather—mornings foggy, but cold and clear in the days. Harvesting of *amun* paddy nearly over. Mustard seeds are being gathered. *Rubbi* crops in good condition. *Boro dhan* is being transplanted. Common rice is selling at 12 seers 13 chittacks per rupee.
Chittagong Divn. 22	Chittagong „ 18, '90	Nil	Weather—seasonable. Outturn of *amun* fourteen annas. Prospects of winter crops good.
23	Noakholly „ 18, '90	Nil	Weather—seasonable. Harvesting of *amun* completed; outturn reported to be 16 annas, and in Chaguluaya police-station 12 annas. *Rubbi* crops doing well.
24	Tipperah „ 18, '90	Nil	Weather—seasonable. Winter crops thriving well. *Boro* paddy is being transplanted.
25	Chittagong Hill Tracts. „ 17, '90	Nil	Weather very cold. Foggy up to 10 a.m. in the morning. Tobacco, mustard, and chillies progressing. Outturn of cotton crop only four annas.
	Hill Tipperah Jan. 18, '90	Nil	Weather—rather a little warm for the season. Harvesting of *amun* paddy nearly over. Mustard is being gathered. Tobacco and chillies doing well.
BEHAR.			
Patna Divn. 26	Patna „ 18, '90	Nil	Weather—cold. *Rubbi* crops progressing well, but rain is wanted. Mustard promising. Prospects of poppy favourable. Prices of food-grains almost stationary.
27	Gya „ 18, '90	Nil	Weather—seasonable. Harvesting of paddy continues. *Rubbi* and poppy doing well, but rain is wanted in some places. Food-stocks sufficient.
28	Shahabad „ 18, '90	Nil	Weather inclined to be cloudy and uncertain. Prospects of all *rubbi* crops and poppy remain excellent. A little rain might do good. Prices stationary.
29	Durbhunga „ 18, '90	Nil	Weather—mornings foggy and occasionally cloudy. Rain has seemed probable for the last two days. Prospects of *rubbi* continue favourable, but rain would be of immense good to the crop. Poppy is reported to be good, but caterpillars have appeared in some places. Tobacco is approaching maturity: probably an average crop. Fields are being prepared for indigo. Price of common rice ranges from 19½ to 21 seers per rupee.
30	Mozufferpur „ 18, '90	Nil	Weather slightly cloudy during the week. All standing crops doing very well. Mustard very promising. Poppy slightly damaged by caterpillars, but prospects continue good in Sudder. Hajipur poppy report not received.
31	Sarun „ 18, '90	Nil	Weather—cold and clear, and occasionally cloudy. *Rubbi* crops are doing well. Prospects of poppy continue good. Sugarcane pressing is in full swing.
32	Chumparun „ 18, '90	Nil	Weather—cold. *Rubbi* growing well and promising a good harvest. Early sowings of poppy in blossom. Clouds keep hovering about now and then. A slight rainfall would do good to both the crops.
Bhagulpore Divn. 33	Monghyr „ 18, '90	Nil	Weather—seasonable. *Rubbi* crops progressing. Poppy doing well.
34	Bhagulpur „ 18, '90	Nil	Weather—too warm for the season. Late rice harvest over; outturn in the two northern subdivisions, after allowing for loss from floods, is estimated at 14 annas, and in the southern subdivision 11 annas. Area under wheat about up to average, but the crop wants rain, and prospects of other *rubbi* crops are going off also.
35	Purneah „ 18, '90	Nil	Weather—not cold enough for the time of the year. *Aghani* rice harvested; a good average crop. Tobacco prospects on the whole good; in some places want of rain has affected the crop. *Rubbi* crops doing well.
36	Maldah „ 18, '90	Nil	Weather—rather hot for the season. Harvesting of winter rice nearly over; outturn is expected to average about 12 annas. *Kalai* and mustard are being reaped and threshed. Transplantation of *boro* begun. Wheat thriving and coming into ear. Other standing crops doing well. Common rice selling at an average of 16¾ seers per rupee.
37	Santhal Perghs. „ 18, '90	Nil	Weather—bright and cool. Rice harvest may be considered over; outturn almost average. *Rubbi* crops doing well.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.			
Orissa Divn. 38	Cuttack Jan. 16, '90	Nil	Weather—seasonable. Reaping of *guru sarad* and early *rubbi* continues.
Orissa Divn. 39	Pooree „ 17, '90	Nil	Weather—seasonable. Harvesting of the winter crop (late *sarad*) still continues. *Mung* is being sown, and other miscellaneous crops of the season are doing well. Prices of common rice stationary.
Orissa Divn. 40	Balasore „ 18, '90	Nil	Weather—seasonable. Rice harvest now over. *Rubbi* yields an outturn of about 11 annas.
CHOTA NAGPORE.			
South-West Frontier Agency.			
Chota Nagpore Divn. 41	Hazaribagh Jan. 18, '90	Nil	Weather—seasonable. Prospects of crops generally good. Poppy crop in prime condition.
Chota Nagpore Divn. 42	Lohardugga „ 18, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops good, but some rain is wanted
Chota Nagpore Divn. 43	Singbhoom „ 18, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops favourable. Sugarcane outturn full.
Chota Nagpore Divn. 44	Manbhoom „ 18, '90	Nil	Weather—seasonable. *Rubbi* crops doing well, but rain is wanted.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 21st January, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

following Statement shows the Quantities of the Principal Staples of Traffic imported into Calcutta from the during the month of October, 1889.

IMPORTS INTO CALCUTTA.

nce imported.	FOOD-GRAINS.							FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.		T
	RICE AND PADDY.			Wheat.	Gram and pulses.	Other food-grains.	Total.	Jute, raw.	Gunny bags.†	Linseed.	Mustard seed.				Refined.	Unrefined.	Unmanufac-tured.
	Rice.	Paddy.	Total (in rice).														
BENGAL.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	M ds
iwan	72,017	41,759	98,116	2,202	9,086	36	1,09,440	272	10,115	6,229	714	144	.....	17	.....	.....	
hhoom... ...	43,008	6,848	47,393	.....	.....	19	47,302	.....	7,175	...	292	... ...	...	723	.....	.....	
ore	1,17,542	4,938	1,20,648	...	.....	... ...	1,20 648	1,711	1,750	1,580	...	... ...	13	290	...	135	19
ghly	34,103	22,914	47,921	5,731	12,499	713	66,864	53,761	56,790	10,307	5,932	... ...	228	129	302	8,240	5,91
rgunnahs ...	74,901	24,168	90,006	.....	... ...	... ...	90,006	1,14,538	57,515	8	.....	.....	746	... ...	2,857	9,949	2,51
den	1,188	...	1,188	4,894	41,679	663	48,114	1,08,243	1,386	3,448	... ...	.....	137	102	.....	.....	2,26
lna	1,700	7,650	6,481	.....	99	.....	6,571	74,781	.....	.....	... ...	... ...	... ...	.....	.....	3,100	
ore ...	2,263	950	2,857	.....	1,458	.....	4,315	54,172	560	134	1,250	..	33	... ...	440	5,501	1,78
rshedabad ...	2,195	.....	2,195	5,978	16,661	71	24,905	4,780	..	416	470	... ...	.....	910	.....	.....	
agepore	7,418	.....	7,418	... ...	200	.....	7,618	12,186	159,975	.....	81	.....	.....	...	.....	15	
hahye	.....	.....	.....	1,150	4,119	232	5,510	50,686	..	439	.....	...	.....	921	.....	.....	
gpore	8	... ...	8	1,006	... ...	.....	1,014	1,71,759	20,475	... ...	142	... ...	6	9	.....	.....	22,31
ia	438	.. 8...	438	.....	.....	.....	438	6,029	..	... ...	... ...	... ...	.....	.....	.....	.....	
na	.....	.....	... ...	.....	170	.....	170	4,43,990	617,845	2,705	6,540	... ...	.....	.....	.....	.....	1,06
seeling	.....	.....	... ...	... ...	144	.....	144	10,402	109,395	... ...	... ...	21,425	... ...	.....	.....	.....	
ogoree	.....	.....	.....	.....	... ...	.....	.....	71,814	153,336	... ...	... ...	23,969	... ...	.....	.....	.....	21
ee	225	... ...	225	... ...	610	.....	835	7,80,531	1,975	... ...	3,249	...	437	.....	.....	.....	
readpore ...	554	.....	554	104	3,112	212	3,982	6,63,663	.....	... ...	1,715	72	.....	48	.....	.....	6
dergunge ...	1,61,029	50	1,61,052	.....	... ...	.....	1,61,052	11,080	.....	.....	... ...	... ...	.....	.....	.....	.....	1,8
nensingh ...	... ...	.....	..	.....	740	.....	740	70,481	.....	.....	1,903	... ...	.....	.....	.....	.....	
serah ...	8,125	.....	8,125	.....	.....	.....	8,125	6,400	.....	... ...	.....	... ...	.....	.....	.....	.....	
tagong ...	150	... ..	950	.....	... ..	.....	350	1,851	.....	... ...	.....	3,036	1,098	... ..	.....	.....	
khelly ...	22,089	.....	22,089	.....	.....	.....	22,080	2,057	.....	... ...	... ...	... ...	600	.....	.....	.....	
tal of Bengal ...	5,50,419	1,08,377	6,18,154	20,774	90,568	1,936	7,31,432	27,14,019	1,196,420	25,056	22,288	47,746	3,209	2,858	3,689	20,930	37,1
BEHAR.																	
... ...	.....	.....	.....	1,124	26,117	2,561	29,802	.....	1,120	63,776	23,201	.....	9	2	270	2,428	9
... ...	.....	.....	.....	1	.....	.....	1	... ..	735	.....	... ...	.....	3	.....	.....	360	
habad	2	.....	2	3,376	11,401	1	14,780	.....	1,120	12,170	1,111	1	.....	.....	.....	3,437	
nfferpore ...	324	.....	324	.....	825	295	1,444	.....	70	396	938	... ..	1	.....	.....	.....	
bhunga ...	.....	.....	.....	1,100	5,735	908	7,823	.. ...	105	42,740	13,205	... ..	52	.....	.....	170	6
n	... ..	.....	.....	951	2,564	.....	3,515	.....	420	28,5 9	2,367	... ..	32	.....	.....	128	1
nparun ...	... ..	.....	.....	... ..	.. ...	... ..	.....	.....	280	21,881	3,071	.....	... ..	.....	.....	251	
ghyr	.....	.....	.....	2,541	14,852	441	17,834	.....	2,240	3,082	4,026	.....	145	.....	.....	.....	
gulpore ...	.....	.....	.....	13,198	13,338	6,291	32,827	333	16,300	11,585	16,015	.....	.....	3	.....	.....	1
neah	60	....	60	4,310	7,168	.....	11,538	11,149	1,120	3,714	14,372	.....	.....	.....	.....	.....	5,7
dah	151	... ..	151	4,569	5,185	1,327	11,232	9,526	.. .	1,112	640	.....	.....	.....	.....	.....	1
thal Pergun-hs.	336	.....	336	10,088	3,297	2,067	16,388	1,230	1,015	4,773	3,692	... ..	.....	160	.....	.....	
tal of Behar ...	873	.....	873	41,858	90,502	13,951	1,47,184	22,238	24,535	1,93,738	84,547	1	242	185	270	6,779	6,9
ORISSA.																	
asore	13,071	3,864	16,080	.....	2,563	253	18,902	1,806	3,550	1,851	242	.....	.....	.....	.....	.....	1
OTA NAGPORE.																	
aribagh ...	.....	.....	.....	.....	63	.....	63	.....	1,960	.....	99	350	.....	.....	.....	.....	
nbhoom ...	635	.....	635	.....	.....	.....	635	.....	280	.....	.....	.....	.....	.....	.....	.....	
al of Chota Nag-ore.	635	.....	635	.....	63	.....	698	.....	2,240	.....	99	350	.....	.....	.....	.....	
Total of ... from the ovinces under ... ieutenant-overnor of Ben-al.	5,65,598	1,12,241	6,35,748	62,632	1,83,696	16,140	8,98,216	27,38,063	1,226,745	2,20,655	1,07,176	48,097	3,451	3,045	3,959	33,709	46,1
HER PROVINCES.																	
am ...	143	100	205	.....	700	.....	905	4,379	.....	.....	58,204	1,48,537	36	355	.....	.....	
rth-Western Pro-inces and Oudh.	.....	.....	.....	84,205	62,530	5,196	1,51,930	.....	1,015	97,447	11,080	475	24,087	4	2,714	638	
ab	14	.....	14	30,324	20,709	7,514	76,561	.....	35	.....	28	1,230	437	.....	.....	.....	
ntral Provinces	.....	.....	.....	804	1,313	.....	2,117	.....	.....	668	.....	... ..	.....	13	.....	.....	
jputana and Cen-ral India ...	.....	.....	.....	.....	.....	15	15	.....	245	.....	.....	.....	... ..	.....	.....	1	
mbay	.....	.....	.....	.....	... ...	.....	.. ...	.....	.....	.....	.....	.....	4,730	.....	.....	.....	
dras	4	.....	4	.....	4,693	.....	4,697	.....	.....	.....	.....	.....	2,115	.....	2,040	.....	
ndicherry ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
rmah	3	.....	3	.....	1,113	743	1,856	.....	.....	.....	.....	.....	662	.....	.....	.....	
her places ...	5	.....	5	.....	20	998	1,023	.....	1,700	14	... ..	.....	1	.....	27,282	22,898	
and Total 1889	5,66,767	1,12,341	6,35,979	1,86,965	2,83,803	30,605	11,37,412	27,42,442	1,229,740	3,18,804	1,76,488	1,98,339	35,509	3,415	35,995	57,241	44,2
f Imports 1888	14,10,589	1,31,198	14,02,587	2,94,819	3,34,399	27,985	21,49,810	36,31,305	2,683,324	5,66,218	1,18,149	1,60,042	29,159	3,077	60,532	53,678	11,2

* One maund of paddy is equivalent to 25 seers of rice. | † Exclusive of bags obtained by local manufacture.

The Sea-borne Trade of Calcutta in these Staples during the month of October, 1889, *was as follows :—*

EXPORTED FROM CALCUTTA—																	
o Indian ports, viz.—																	
Bombay	33,012	.....	32,912	.....	566	.....	33,478	.....	913,450	.....	15,351	534	.....	.....	1,116	.....	
Madras	.....	.....	.....	.....	14,141	.....	14,141	.....	204,550	.....	.....	10	.....	308	181	.....	
Other ports in Madras ...	15,949	52	15,882	16	661	.....	16,559	15,600	107,650	.....	200	1	.....	18	70	.....	
Burmah	3,454	.....	3,454	543	3,939	1,722	9,658	70	30,400	.....	.....	57	105	6	414	1,009	16,6
Other Indian ports	1,056	... ..	1,056	206	1,060	.....	3,222	1	.....	.....	.....	2	.....	5	1,138	274	1,4
Pondicherry ...	.....	.....	.....	250	.....	.....	250	.....	26,500	.....	.....	.....	.....	.....	... ..	.....	
tal of Inter-ocial trade ...	53,471	52	53,304	1,015	21,367	1,722	77,408	15,680	1,281,550	.....	15,551	604	165	397	2,878	1,276	18,3
Foreign ports— United Kingdom	45,932	.....	45,932	73,391	13,236	.....	1,31,603	10,52,607	1,615,325	2,01,994	44,907	1,79,754	1,918	71	38	6	
Other Foreign ports	2,13,893	2,437	2,15,697	12,253	8,504	7,444	2,43,898	6,36,025	11,679,425	2,50,500	16,415	3,166	10,028	1,301	.....	.....	
tal of Foreign ade	2,59,754	2,437	2,61,629	85,644	21,089	7,444	3,75,501	16,90,632	13,494,750	4,52,544	61,322	1,82,920	12,446	1,372	38	6	
al Total 1889	3,13,225	2,539	3,15,333	86,659	42,456	9,166	4,53,514	17,06,312	14,776,300	4,68,044	76,873	1,83,524	12,611	1,769	2,916	1,282	18,3
Imports 1888	17,69,970	14,461	17,78,431	3,80,463	3,76,798	37,151	25,72,843	36,31,305	16,166,774	7,35,262	1,79,022	1,60,042	29,159	3,077	60,532	53,678	11,2

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of October, 1889.

IMPORTS INTO CALCUTTA.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.					FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.		TOBACCO	
	Rice.	Paddy.	Wheat.	Gram and pulses.	Other food-grains	Jute, raw.	Gunny-bags.	Linseed.	Mustard seed.				Druin-ed.	Un-drained.	Unmanu-factured.	Manu-
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	M
By country boats ...	3,07,088	95,647	37,293	1,07,972	8,042	5,70,815	103,940	62,888	62,271	..	2,291	300	4,796	21,892	14,025	1
„ river steamers ...	19,762	420	2,055	5,773		5,71,785	..	24,677	57,616	1,45,250	248	444	....	.. ..	159	..
„ rail { East Indian Railway.	1,09,768	59,739	1,15,577	1,45,2.2	20,559	49,973	30,100	2,25,7.3	53,489	2,200	24,439	1,607	968	7,413	687	
„ rail { Eastern Bengal State Railway.	2,101	..	480	16,518	.....	14,19,964	1,061,559	1,641	2,830	47,853	307	1,058	440	3,865	25,560	..
„ road	29,317	1,059	... ..	..	..	82,248	30,000	... .	.....	... ..	27	... ..	489	1,173	3,069	
„ sea	13,135	3,804	.....	8,388	1,994	3,057	4,150	1,865	242	3,036	8,207	... ..	29,322	22,898	123	
Grand total of Imports in October ... { 1889 ...	5,65,767	1,12,341	1,86,965	2,83,863	30,605	27,42,142	1,229,749	3,18,804	1,76,488	1,98,339	35,509	3,415	35,995	57,241	44,223	
Grand total of Imports in October ... { 1888 ...	14,10,588	1,31,198	2,96,839	3,31,390	27,985	36,31,305	2,583,324	5,66,218	1,18,149	1,60,642	29,159	3,077	60,532	53,678	11,839	2

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported Inland from Calcutta during the month of October, 1889.

EXPORTS FROM CALCUTTA.

Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian		
	Rs.	Rs.	Mds.	Mds.	Mds.	No.
BENGAL.						
Burdwan ...	1,93,599	6,710	441	1,230	24,249	78,369
Beerbhoom ...	58,590	5,280	43	762	15,738	55,545
Midnapore ...	1,81,217	..	2,415	...	22,115	11,439
Hooghly ...	70,822	1,870	859	4,091	1,277	63,410
24-Pergunnahs ...	91,223	3,159	488	100	10,478	4,246
Nuddea ...	2,65,144	.. ..	2,167	.....	15,994	16,863
Jessore ...	2,767	.....	60	....	5,425	..
Khulna ...	96,712	.....	779	.....	17,120	1,015
Moorshedabad ...	42,751	... ..	143	.....	7,548	7,689
Dinagepore ...	1,29,024	... ..	253	.....	2,908	4,515
Rajshahye ...	2,04,561	... .	65	.....	12,433	11,805
Rungpore ...	1,76,052	... ..	261	.....	7,910	3,045
Bogra ...	2,19,555	.....	72	.....	4,140	4,945
Pubna ...	62,612	.....	608	.....	17,065	900
Darjeeling ...	1,38,388	... ..	205	.....	7,432	560
Julpigoree ...	8,00,211	... ..	131	..	3,911	.....
Dacca ...	2,52,170	... ..	1,957	506	31,413	12,045
Furreedpore ...	2,87,041	.....	1,998	... ..	23,060	4,410
Backergunge ...	1,47,420	... ..	13	.....	30,450	2,730
Mymensingh ...	.....	.....	.....	... ..	16,960	.....
Tipperah ...	1,07,250	4,140	81	... .	5,585	.....
Chittagong ...	.....	.....	.....	.....	2,500	26,950
Noakholly ...						
Total of Bengal...	30,18,973	21,159	13,435	6,749	2,85,798	313,161
BEHAR.						
Patna ...	5,32,854	850	256	92	28,903	80,535
Gya ...	1,63,503	2,660	33	1,248	9,622	23,240
Shahabad ...	4,79,430	1,180	24	581	16,239	12,215
Mozufferpore ...	2,90,808	.....	12	68	9,035	8,155
Durbhunga ...	6,52,365	... ..	.....	597	47,195	30,040
Sarun ...	4,25,176	... .	12	68	21,033	36,260
Chumparun ...	5,27,121	1,540	20	131	18,906	17,255
Monghyr ...	1,96,497	... ..	12	574	10,108	14,900
Bhagulpore ...	2,68,254	11,550	144	544	19,360	43,575
Purneah ...	2,04,183	550	386	971	11,422	9,663
Maldah ...	.....	.....	.....	... ..	4,010	..
Southal Pergunnahs ...	1,80,432	.....	95	1,149	22,843	24,570
Total of Behar ...	39,26,853	18,810	993	6,013	2,18,866	305,298
ORISSA.						
Cuttack ...	20,280	.....	97	... .	..	....
Balasore ...	4,88,959	6	4,801	... ..	14,148	35,600
Total of Orissa ...	5,09,239	6	4,898	.....	14,148	35,600

Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-
	Euro-pean.	Indian.	Euro-pean.	Indian.		
	Rs.	Rs.	Mds.	Mds.	Mds	N
CHOTA NAGPORE.						
Hazaribagh	37,233	4,400	1	258	6,014	1
Manbhoom	1,12,266	13,640	45	1,980	9,623	
Total of Chota Nagpore ...	1,49,499	18,040	46	2,238	15,637	1
Grand total of supplies into the Provinces under the Lieutenant-Governor of Bengal ...	85,64,564	58,015	19,372	15,000	5,34,449	65
OTHER PROVINCES.						
Assam	5,14,017	.....	1,322	679	32,779	...
North-Western Provinces and Oudh	35,97,993	30,360	3,089	843	28,570	22
Punjab	16,87,541	3,196	1,018	18	.....	48
Central Provinces ...	30,114	1,760	100	.....	.....	
Rajputana and Central India	75,852	770	215	1	.....	2
Berar	501	110	.....	.....	.....	...
Bombay	630	6,441	...	.....	.....	91
Madras	55,500	4,800	1,095	276	.....	31
Pondicherry	750	..	... ..	... .	.....	2
Burmah	2,35,300	13,710	406	2,492	.....	3
Other places	7,023	5,350	10	4,172	.....	13,49
Grand Total of Exports in Oct. ... { 1889 ...	1,47,09,828	1,25,206	26,586	23,481	5,95,708	16,16
Grand Total of Exports in Oct. ... { 1888 ...	1,26,41,485	63,370	25,974	13,504	6,33,798	14,87

The Sea-borne Trade of Calcutta in these Staples during the month of O 1889, *was as follows:—*

IMPORTED INTO CALCUTTA—	Rs.*	Rs.	Mds.	Mds.	Mds.	I
From Foreign Ports—						
United Kingdom	1,08,80,042	.....	1,126	.....	4,65,891	..
Other Foreign ports ...	40,899	.....	597	.....	1,62,702	
Total of Foreign Trade ...	1,09,29,941	.....	1,723	.....	6,28,153	
From Indian Ports—						
Bombay	8,381	3,87,515	20	8,382	44,220	..
Madras	400	13,505	.....	180	.....	..
Other ports in Madras ..	.....	.....	.....	... ..	40	..
Burmah	5,184	415	10	15	.....	. ..
Other Indian ports ...	.....	400	.....	10	.....	
Total of Interportal Trade ...	13,965	4,01,835	30	8,587	44,260	
Grand Total of Imports in Oct. ... { 1889 ..	1,09,43,906	4,01,835	1,753	8,587	6,72,413	
Grand Total of Imports in Oct. ... { 1888 ..	1,26,84,337	1,92,996	14,319	8,578	6,25,130	

* As per tariff declaration value.

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported Calcutta during the month of October, 1889.

SPECIFICATION OF ROUTES.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Gunny-t
	European.	Indian.	European.	Indian.		
	Rs.	Rs.	Mds.	Mds.	Mds.	No
By country boats	1,48,410	.....	3,119	3,985	2,20,068	8
„ river steamers	6,88,338	.....	2,517	1,245	13,404	2
„ rail ... { East Indian Railway	97,34,697	80,650	5,945	11,215	3,01,693	1,16
„ rail ... { Eastern Bengal State Railway	31,01,175	... .	8,115	.....	43,540	5
„ road	1,90,808	3,159	460	96	3,945	
„ sea	9,10,400	32,557	6,430	6,940	13,148	14,63
Grand Total of Exports in October ... { 1889 ...	1,47,09,828	1,25,206	26,586	24,481	5,95,708	16,16
Grand Total of Exports in October ... { 1888 ...	1,26,41,485	63,370	25,974	13,504	6,33,978	14,87

STATISTICAL DEPARTMENT,
The 18th January, 1890.

P. NOLAN,
Secretary to the Govt. of Be

PRICES-CURRENT (*RETAIL*) OF FOOD-GRAINS, FIREWOOD AND SALT IN THE HEAD-QUARTER STATION BAZARS OF THE DISTRICTS OF BENGAL DURING THE FORTNIGHT ENDING THE

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

QUANTITIES PER RUPEE IN

Number.	DISTRICTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLUM. (*Sorghum Vulgare.*)		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
	BENGAL.															
	Western Districts.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
1	Burdwan	13 8	14 8	13 4	No sale.			New 15 0	12 0	16 8	New 16 5	15 12	18 12	...	...	...
2	Bankoora	14 8	14 8	12 4	14 0	14 0	14 8	17 0	15 0	16 4	21 0	19 0	20 8		...	...
3	Beerbhoom*	...	15 8	11 0	...	...	...	...	12 0	12 0	...	15 0	16 0	...	...	...
4	Midnapore	13 0	13 0	13 5	...	...	...	12 8 / New 14 0	12 8	14 0	16 8 / New 18 8	17 0	20 0	...	..	...
5	Hooghly	13 0	13 0	13 0	..	...	...	8 0	8 0	10 0	12 0	12 0	13 0	...	...	...
	Howrah	...	...		...	...	...	9 8	9 8	12 0	14 0	14 0	17 12	..	...	...
	Central Districts.															
	Calcutta	13 6	13 4	12 13	16 9	16 10	16 0	8 11	8 10	9 13	13 8	13 8	14 11	19 4	17 3	17 12
6	24-Pergunnahs	14 8	13 0	12 8	16 0	16 0	16 0	9 0	7 8	8 0	16 8	16 0	16 0	...	...	...
7	Nuddea	15 0	15 0	14 0	17 12	17 12	22 14	10 10½	10 10½	12 5	13 4	12 7	17 10	...	...	...
8	Khoolna	...		...				New 14 0	Old 11 8	16 0	16 0	16 0	18 0	...	...	...
9	Jessore	13 5	13 5	11 12	.	...		9 0	9 0	13 4	16 0	16 0	17 0	...		...
10	Moorshedabad	16 0	16 0	13 8	...		...	15 8	12 0	13 8	17 0	15 8	18 0	...	.	...
11	Dinagepore	17 4	17 8	12 0	16 0	14 8	12 0	15 8	15 8	16 0	19 0	19 0	19 3	...	..	...
12	Rajshahye	15 0	15 12	16 8	18 12	19 8	26 4	13 8	13 8	15 0	15 12	15 12	16 8	...	..	...
13	Rungpore	14 8	13 5	12 4	..	.	...	9 6	10 0	10 8	14 8	13 5	16 0	...	...	...
14	Bogra	Best. 13 5 / Common. 16 8	12 0 / 15 12	9 15	...	...	...	12 0	12 0	13 8	19 8	18 12	18 12	...	...	...
15	Pubna	13 8	12 0	15 0	..		.	7 4	7 8	8 0	15 14	16 8	17 4	..	...	...
16	Darjeeling	10 0	11 0	10 0	10 0	10 0	10 0	5 0	5 0	5 0	12 0	12 0	12 0	..	...	...
17	Julpigoree	13 0	13 0	10 0	16 0	16 0	16 0	8 0	8 0	8 0	17 0	16 0	19 0	..	..	...
	Eastern Districts.															
18	Dacca*	...	13 0	15 0	...	16 0	20 0		13 0	16 0	.	16 0	18 0	...	...	...
19	Furreedpore	12 0	12 0	8 0	12 0	12 0	18 0	10 0	11 0	10 0	14 0	15 0	16 0	...	...	...
20	Backergunge	.	...	..	...	...	...	13 5	14 4	13 5	16 0	16 0	15 9	...	...	...
21	Mymensingh	10 0	10 0	8 12	.	..	.	10 0	9 0	12 0	12 12	14 0	20 0	...	...	...

* Present return not received.

A In subdivisions retail prices of salt per rupee are:—Culna 10 seers, Cutwa 10 seers 6 chittacks, and Raneegunge 10 seers.
B In subdivisions retail prices of salt per rupee are:—Contai 9 seers, Tumlook 8 seers, and Ghattal 10½ seers.
C In subdivisions retail prices of salt per rupee are:—Serampore 10 seers and Jehanabad 10 seers.
C½ In subdivisions retail prices of salt per rupee are:—Baraset 9 seers, Basirhat 9 seers, Diamond Harbour (at Magrahat) 10 seers, Barrackpore 9 seers 2 chittacks, and Dum-Dum 10 seers.
D In subdivisions retail prices of salt per rupee are:—Kooshtea 10 seers, Meherpore 10½ seers, Chooadanga 9 seers, and Ranaghat 9 seers 2 chittacks.
E In subdivisions retail prices of salt per rupee are:—Bagirhat 8 seers and Satkhira 9 seers.
F In subdivisions retail prices of salt per rupee are:—Jhenida 9 seers, Magura 9¼ seers, Narail 9¾ seers, and Bongong 10 seers.

RS OF 80 TOLAHS.

the 15th January 1890.

RA OR CUMBU. (*Penicetum typhoideum.*)		MARUA OR RAGI. (*Eleusine Coracana.*)		KANGNI OR KAKUN, ITALIAN MILLET. (*Setaria italica.*)		GRAM, CHANA, CHHOLA, KADALAY OR SONAGA. (*Cicer arietinum.*)		:R MONTH.		DISTRICTS.
Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return	Present return.	Next preceding return.	Present return.	Next preceding return.	:SE- COMMON MASON, CARPENTER, OR BLACKSMITH.		
								Corresponding return of last year.	Present return.	
								Next preceding return.	Corresponding return of last year.	

BENGAL.

Western Districts.

S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A.	Rs. A.	Rs. A.	
...	...	...	...	...	...	..	.	18 0	18 0	17 0				10 0 to 15 0	10 0 to 15 0	10 0 to 15 0	Burdwan.
...	..	...	...	..	...	...	.	16 0	15 8	11 8				7 8 to 16 0	9 0 to 16 0	8 0 to 15 0	Bankoora.
.	...	.	...	..	...	...	...		16 0	14 4				7 8 to 10 0	13 8	12 0	Beerbhoom.
..	..	...	...	...	...	.	...	16 0	15 0 to 17 0	14 0				7 4 to 10 0	7 8 to 10 0	7 8 to 12 4	Midnapore.
.	...	...	...	..	...	..		16 0	16 0	13 0				8 0 to 30 0	10 0 to 30 0	8 0 to 30 0	Hooghly.
...	...	...	...	...	...	..	...	17 0	16 12	15 8				12 0 to 25 0	12 0 to 25 0	12 0 to 25 0	Howrah.

(Common mason). *Central Districts.*

13 0	13 5	...	...	..	16 0	15 11	14 8	16 4	16 2	11 15				15 0	15 0	15 0	Calcutta.
...	...	...	...	...	5 0	4 0	12 8	18 13	16 0	15 0				15 0 to 25 0	15 0 to 25 0	15 0 to 22 0	24-Pergunnahs
.	...	...	...	...	...	...	...	20 0	18 11	15 4				7 8 to 15 0	7 8 to 15 0	7 8 to 15 0	Nuddea.
...	.	...	...	...	...	...	..	13 0	12 0	16 0				12 0 to 25 0	12 0 to 30 0	15 0 to 30 0	Khoolna.
.	...	...	..	...	...	...	..	16 0	16 0	15 0				10 0 to 15 0	10 0 to 15 0	10 0 to 15 0	Jessore.
.	...	...	...	..	...	...	...	21 0	21 0	16 0				5 0 to 20 0	7 8 to 10 0	5 0 to 16 0	Moorshedabad.
..	...	...	..	..	..	...	..	15 0	14 8	11 0				10 0 to 15 0	10 0 to 15 0	10 0 to 15 0	Dinagepore.
...	...	...	.	...	...	...	...	18 0	18 0	15 0				8 0 to 16 0	8 0 to 16 0	8 0 to 16 0	Rajshahye.
...	...	...	.	...	.	...	..	11 8	13 5	10 0				10 0 to 15 0	8 0 to 20 0	12 0 to 15 0	Rungpore.
...	..	...	.	..	..	...	..	14 4	13 8	10 14				10 0 to 15 0	10 0 to 20 0	12 0 to 22 0	Bogra.
..	...	...	..	...	...	...	..	15 0	15 0	12 0				7 0 to 20 0	7 0 to 20 0	8 0 to 20 0	Pubna.
..	...	13 0	13 0	14 0	...	...	...	10 0	10 0	10 0				12 0 to 25 0	12 0 to 22 0	12 0 to 22 0	Darjeeling.
.	...	...	.	..		...	..	13 0	13 0	11 0				15 0 to 20 0	15 0 to 20 0	20 0	Julpigoree

Eastern Districts.

	...	...	...	...	...		..	...	13 0	13 0				8 0 to 20 0	8 0 to 20 0	8 0 to 20 0	Dacca.
.	...	...	...	.	...	...	..	11 0	11 0	12 0				15 0	15 0	10 0 to 15 0	Furreedpore
.	...	...	...	..	...	...	...	15 3	15 8	12 13				10 0 to 15 0	12 0 to 15 0	10 0 to 15 0	Backergunge.
.	..	...	..	..	...	...	..	13 0	13 0	12 4				12 0 to 30 0	12 0 to 30 0	12 0 to 30 0	Mymensingh.

) 10 seers, and Kandi 10½ and 10½ seers.

)ng 8 seers 11 chittacks.

J In subdivisions retail prices of salt per rupee are :—Nupnamari 9 seers, Gaibanda 8 seers.
K At Serajgunge retail price of salt 10 seers per rupee.
L At Siliguri retail price of salt 8 seers per rupee.
M At Fallacutta in Alipore subdivision retail price of salt 8 seers per rupee.
N In subdivisions retail prices of salt per rupee are :—Patuakhali 9 seers, Perozepore 9 seers, and Bhola 8 seers.
O In subdivisions retail prices of salt per rupee are :—Kishoregunge 8 seers, Jamalpore 10 seers, Sherepore 8 seers, and Netrokona 8 seers.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the Head-quarter

QUANTITIES PER RUPEE IN

Number.	DISTRICTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLUM. (*Sorghum Vulgare.*)		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
	***Eastern Districts*—concluded.**	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
22	Chittagong*	.	11 0	11 0	..	.	.	...	8 0	12 0	.	16 0	16 3	.	...	...
23	Noakholly*	...	...	...		...	.	.	15 0	18 0 Chaplash.	..	17 0	21 0	...	...	...
24	Tipperah	11 7	10 7	12 8				Gobindabhag. 10 0	10 0	16 0	16 0	16 0	20 0		..	...
25	Chittagong Hill Tracts	.			...			10 0	10 0	11 6¾	11 6	11 6	13 5½	..	..	...
	Hill Tipperah	6 0	6 0	6 0				8 0	8 0	9 0	14 0	16 0	18 0	...	..	...
	BEHAR.															
26	Patna	17 6 Red. / 15 8 White.	17 4 / 15 8	... / 16 0	24 0	24 0	20 8	10 8	10 8	11 0	18 0	18 0	15 8	22 0	22 0	21 0
27	Gya	16 8	16 8	13 8	23 0	20 0	16 0	10 0	10 0	9 8	17 0	17 0	15 8	...	...	...
28	Shahabad	16 0	16 0	14 8	22 0	22 0	18 0	9 8	9 0	10 0	17 0	17 0	15 4	21 0	21 0	18 8
29	Durbhunga	15 6	17 0	15 4	20 12	19 0	17 8	17 9	14 8	13 8	20 4	19 8	13 8	...	...	...
30	Mozufferpore	14 0	14 0	12 0	20 0	20 0	18 0	12 0	10 0	9 0	18 0	18 0	12 0	...	...	...
31	Sarun	16 0	16 4	15 0	20 0	22 0	20 8	8 8	8 8	8 8	15 8	15 10	13 10	...	...	...
32	Chumparun	13 0	13 0	13 0	..	20 0	20 0	9 0	9 0	7 8	18 8	18 0	13 0	.	...	...
33	Monghyr	18 10	17 5	14 11	21 0	21 0	..	13 2	12 1	12 9	16 13	16 4	15 4	...	...	...
34	Bhagulpore	14 11	16 6	15 2	20 3	20 3	12 10	12 0	13 0	11 0	17 10	17 11	Old. 15 2 / New. 16 6	...	..	...
35	Purneah	20 0	20 0	13 0	...	...	...	18 0	17 0	16 0	19 0	19 0	17 0	...	...	...
36	Maldah	18 0	18 0	13 8	...	...	...	12 0	9 0	12 8	17 0	16 0	17 5	...	...	...
37	Sonthal Porghs.	13 4	14 0	11 8	...	...	..	12 0	12 0	12 8	17 0	18 0	18 0	...	...	...
	ORISSA.															
38	Cuttack	11 13	13 2	11 13	...	.	...	10 8	10 8	11 13	19 11†	19 11	19 11	...	...	...
39	Pooree	11 13	13 2	11 13	...	...	...	15 12	14 7	13 2	22 10	22 10	21 0	...	...	...
40	Balasore	15 0	15 0	12 0	13 0	13 0	13 0	13 0	12 0	12 0	19 0	18 0	22 0	...	...	...
	CHOTA NAGPORE.															
	South-West Frontier Agency.															
41	Hazaribagh	13 0	14 0	12 0	12 0	12 0	9 0	10 0	10 0	8 0	18 0	20 0	15 0	...	...	...
42	Lohardugga	12 8	Red. 11 12	10 8	13 0	12 0	...	17 0	18 0	12 0	Ordinary. 19 8 / Coars.e 22 0	20 0 / 22	16 0	...	...	...
43	Singbhoom	10 0	10 0	10 0	20 0	20 0	14 0	16 0	16 0	16 0	20 0	20 0	20 0	...	...	...
44	Manbhoom	13 5	13 5	11 14	...	..	...	15 0	13 0	12 8	22 0	22 0	21 0	...	...	...

* Present return not received.

† Common rice at Jajpore 23 seers 10 chittacks per rupee, and at Kendrapara 26 seers 4 chittacks.

P In subdivisions retail prices of salt per rupee are:—Sasseram 10¼ seers, Buxar 10 seers, and Bhabuah 9½ seers.

Q In subdivisions retail prices of salt per rupee are:—Tajpore 11 seers and Madhubani 10 seers.

R In subdivisions retail prices of salt per rupee are:—Hajipore 9½ seers and Sitamarhi 10 seers.

S At Bettiah retail price of salt 9¼ seers per rupee.

CALCUTTA,
The 21st January, 1890.

EERS OF 80 TOLAHS.

Bajra or Cumbu. (*Pennisetum typhoideum.*)			Marua or Ragi. (*Eleusine Coracana.*)			Kangni or Kakun. Italian millet. (*Setaria italica.*)			Gram, Chana, Chhola, Kadalay or Sunaga. (*Cicer aristinum.*)		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
...	...	...	...	...	...	...	...	...	12 0	11 10	
...	...	...	...	...	...	...	...	...	10 0	12 0	
...	...	...	...	...	...	...	...	...	13 14½	13 14½	16 0
...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	12 0	12 0	10 0
...	...	...	27 0	24 0	...	19 0	19 8	16 0	23 0	22 8	19 0
...	...	...	...	...	..	15 0	15 0	15 0	20 0	19 0	17 0
...	...	...	...	...	...	...	...	...	20 8	22 0	18 0
...	...	...	28 8	29 8	19 12	...	18 4	17 8	23 0	26 0	17 8
...	...	...	...	...	...	...	...	...	18 8	19 0	16 0
...	...	...	23 0	23 8	20 0	13 0	11 8	15 0	20 8	21 3	17 8
...	...	...	...	28 8	20 0	...	...	...	22 0	22 0	14 0
...	...	...	...	...	...	...	15 3	10 8	23 1	22 5	17 13
...	...	...	...	...	...	...	...	...	20 3	20 3	16 6
...	...	...	...	...	...	...	...	...	16 0	16 0	13 0
..	...	...	...	...	...	...	...	...	18 0	16 0	13 8
...	...	...	...	...	...	...	...	...	16 0	16 0	14 0
...	...	...	...	...	...	...	...	...	14 7	15 2	18 6
...	...	...	...	...	...	...	...	...	15 12	17 1	13 2
...	...	...	...	...	...	...	...	...	14 0	14 0	13 0
..	...	..	27 0	30 0	20 0	...	...	...	16 0	16 0	15 0
...	...	..	38 0	40 0	27 0	...	...	...	14 0	13 8	14 0
...	...	...	...	...	...	...	...	...	10 0	10 0	12 0
...	...	...	...	...	...	...	...	...	16 0	15 8	13 5

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ary 1890—(concluded).

ER MONTH.				
ason-	Common Mason, Carpenter, or Blacksmith.			DISTRICTS.
Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
. A.	Rs. A.	Rs. A.	Rs. A.	
				Eastern Districts—concluded.
0	9 8 to 12 0	9 4 to 12 0	9 0 to 11 0	Chittagong.
0 to 0	8 0 to 16 0	8 0 to 14 0	7 0 to 20 0	Noakholly.
8 0	8 0 to 15 0	8 0 to 15 0	12 0 to 15 0	Tipperah.
...	...	..	...	Chittagong Hill Tracts.
0	15 0	15 0	15 0	Hill Tipperah.
				BEHAR.
1 8 to 3 0	7 0 to 8 0	7 0 to 8 0	6 0 to 8 0	Patna.
3 0 to 3 0	6 0 to 8 0	6 0 to 8 0	6 0 to 8 0	Gya.
3 0 to 3 0	6 0 to 7 8	6 0 to 7 8	6 0 to 7 8	Shahabad.
3 0 to 3 0	3 12 to 9 0	3 12 to 9 8	3 12 to 9 8	Durbhunga.
0 to 0	7 8 to 9 6	5 0 to 8 0	5 0 to 8 0	Mozufforpore.
3 0 to 3 0	6 9 to 10 0	6 9 to 10 0	6 9 to 10 0	Sarun.
0 to 3 0	5 10 to 9 6	5 10 to 9 6	5 10 to 9 6	Chumparun.
3 0 to 3 0	6 0 to 8 0	5 0 to 8 0	6 0 to 8 0	Monghyr.
3 0 to 3 0	7 8 to 11 4	7 8 to 11 4	6 9 to 11 4	Bhagulpore.
3 0 to 3 0	7 0 to 16 0	7 0 to 16 0	7 0 to 16 0	Purneah.
5 0	8 0 to 12 0	10 0 to 15 0	8 0 to 10 0	Maldah.
	7 8 to 9 6	7 8 to 9 6	7 8 to 9 6	Sonthal Pergha.
				ORISSA.
1 0	6 0 to 7 8	6 0 to 7 8	7 8 to 10 0	Cuttack.
5 0	8 0 to 10 0	8 0 to 10 0	8 0 to 10 0	Pooree.
1 0 to 3 0	7 0 to 10 0	7 0 to 10 0	7 8 to 12 3	Balasore.
				CHOTA NAGPORE.
				South-West Frontier Agency
4 0 to 5 0	7 8	8 0	7 8	Hazaribagh.
3 0 to 3 8	4 11 to 11 1	4 11 to 11 1	6 0 to 12 0	Lohardugga.
...	...	...	...	Singbhoom.
3 0	13 2 to 15 0	13 2 to 15 0	3 2 to 15 0	Manbhoom.

aui 9 seers.

W In Palamow subdivision retail price of salt 8·43 seers per rupee.
X At Govindpore retail price of salt 9 seers per rupee.

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt

Number.	MARTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta ...	2 11 8	2 12 2	2 13 10	2 2 7	2 2 6	2 4 3	4 5 9	4 6 5	3 14 4	2 11 5	2 11 4	2 7 8
2	Sorajgunge ...	2 0 0	2 4 0	2 4 0	...	...	...	5 4 0	5 8 0	3 8 0	2 10 0	2 12 0	2 6 0
3	Dacca* ...	...	3 0 0	2 10 0	...	2 7 0	2 0 0	...	3 0 0	2 7 0	...	2 7 0	2 4 0
4	Naraingunge*	...	...	...	...	...	...	...	3 0 0	2 6 0	...	2 12 0	2 4 0
5	Chittagong*...	...	3 8 0	3 9 0	...	...	...	...	4 8 0	3 4 0	...	2 8 0	2 7 0
6	Patna ...	2 4 6 Rod. 2 8 0 White.	2 4 6 2 9 0	... 2 7 0	1 10 0	1 10 0	1 14 6	3 12 0	3 12 0	3 8 0	2 3 0	2 2 6	2 7 0
7	Balasore ...	2 8 0	2 8 0	3 8 0	3 0 0	3 0 0	3 0 0	3 0 0	3 4 0	3 4 0	2 0 0	2 4 0	1 10 0
8	Pooree ...	..	.	...	...	.	.	...	...	...	1 15 0	1 15 0	1 14 0
9	Cuttack ...	3 4 0	3 0 0	3 4 0	.	.	...	3 0 0	3 0 0	3 4 0	2 0 0	2 0 0	2 0 0

* Present returns not received.

CALCUTTA,
The 21st January, 1890.

in the undermentioned Marts of Bengal on the 15th January 1890.

PRICES PER MAUND

Gram or Chana. Chhola.			Indian-corn or Maize.			Arhar or Thur. Cadjan Pea. (*Cajanus indicus.*)			Firewood.			Salt.			Marts.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
1 13 0	2 1 7	2 0 0	2 9 7	2 13 7	2 12 0	3 0 0	2 2 9	2 2 11	2 3 1	0 5 6	0 5 6	0 0 6 0	3 11 6	3 11 11	3 10 0	Calcutta.
..	...	...	...	...	...	...	...	...	...	...	...	...	4 0 0	4 2 0	3 10 0	Serajgunge
...	...	...	...	...	...	...	...	2 12 0	2 8 0	...	0 4 0	0 5 0	...	4 4 0	4 4 0	Dacca.
...	...	...	...	...	...	...	...	3 4 0	3 2 0	...	0 8 0	0 10 0	...	4 0 0	3 12 0	Naraingunge
...	...	...	...	...	...	...	...	...	...	...	0 7 0	0 5 3	...	4 0 0	4 4 0	Chittagong.
...	...	...	...	...	...	1 14 6	1 14 0	1 14 0	1 12 0	0 5 0	0 5 0	0 5 0	3 14 0	3 14 0	3 13 3	Patna.
...	...	...	...	...	...	...	...	...	...	0 4 6	0 5 0	0 4 6	3 14 0	3 15 0	3 13 6	Balasore.
...	...	...	...	...	..	..	...	...	...	...	...	...	3 6 0	3 6 0	3 6 0	Pooree.
1 12 0	1 12 0	1 14 0	...	...	...	...	2 12 0	2 12 0	2 2 0	0 8 0	0 8 0	0 8 0	3 12 0	3 12 0	3 12 0	Cuttack.
..	...	...	...	...	...											
...	...	...	...	...	...											
...	...	..	...	...	...											

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of Bengal

District.	Representative station.	STATION OBSERVATIONS.														
		Air pressure.			Wind.		Temperature.									
		Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean, 8 A.M., temperature.
Pooree	Pooree ...	30·016	30·029	—	Calm & N	62	?	?	59·4	13,15,17 Jan.	?	60·8	?	?	65·1
	Gopalpore ..	30·006	30·056	—·041	NNW	213	80·2	15, 16 Jan.	61·9	13th ,,	79·4	61·0	71·3	+0·7	67·3
	False Point ...	30 009	30·031	—·067	NWly.	130	82·9	15th ,,	55 5	16th ,,	79·7	59·0	69·4	+0·6	64·3
Cuttack	Cuttack ...	29·905	30·051	—·044	Calm	15	85·8	15th ,,	58·8	12th, 13th Jan.	84·2	59·4	71·8	—0·5	63·2
Balasore	Balasore ..	29·990	30·052	—·054	NNW	81·7	82·4	15th, 17th Jan.	53·5	16th ,,	81·2	55·0	68·5	+0·9	61·2
South-West Midnapore / South 24-Pergunnahs	Sangor Island	30·006	30·033	—·062	NNE	171	77 7	15th, 16th Jan.	57·9	17th ,,	76·4	61·8	69·1	+1·5	64·9
Midnapore	Midnapore ..	29·882	30·041	—·075	N	21·8	85·3	14th ,,	54·2	16th, 17th Jan.	82·6	55·9	69·3	+2·8	61·3
24-Pergunnahs ... / Howrah ... / Hooghly ...	Calcutta .	30·011	30·034	—·070	Calm	48	79·5	15th ,,	54·8	16th ,,	78·0	56·9	67·5	+1·3	61·3
Burdwan	Burdwan	29·924	30·030	—·080	Calm	21·8	82·1	14th ,,	53·8	16th ,,	80·6	55·9	68·3	+1·6	59·2
Bankoora	Bankoora ...	29·701	30·021	—·077	W	34	81·9	14th ,,	53·5	16th ,,	80·4	55·2	67 8	+1·6	58·8
Beerbhoom ... / West Burdwan ...	Raneegunge	29·700	30·053	—·066	WNW	20·9	82·5	14th ,,	54·2	16th ,,	80·5	55·6	68·1	+1·9	59·4
Moorshedabad	Berhampore...	29·956	30·027	—·083	North-westerly.	33·5	79·1	14th & 15th Jan.	54·7	13th, 17th Jan.	78·2	56·2	67·2	+1·9	58·5
Nuddea	Krishnaghur...	29·987	30·057	—·046	WNW	53·7	81·5	14th ,,	53·1	17th ,,	79·7	54·5	67·1	+2·5	60·7
Jessore ... / Khoolna ...	Jessore ...	29·990	30·025	—·069	Calm	17·7	70·7	13th & 14th Jan.	56·5	16th & 17th Jan.	79·0	58·1	68·6	+3·0	60·7
Chittagong	Chittagong	29·934	30·028	—·065	Calm	42·1	81·1	11th ,,	57·1	16th, 17th Jan.	79 7	58·1	68·9	+2·6	61·7
Chittagong Hill Tracts	Demagiri ..	Observations not received.													
Backergunge	Barrisal ...	30·011	30·024	—·053	Calm	21·9	79·3	11th Jan.	56·1	15th, 17th Jan.	77·9	57·9	67·9	+3·5	64·4
Noakholly	Noakholly ...	29·982	30·028	—	Calm	50·0	79·3	15th ,,	54·9	15th ,,	78·7	55·8	67·2	—	63·3
Furreedpore	Furreedpore...	29 983	30 025	—·059	Calm	23	74·7	14th ,,	55·0	16th & 17th Jan.	73·8	56·4	65·1	+1·1	60·0
Dacca	Dacca ...	29 990	30·014	—·080	Westerly	40·7	80 1	13th—15th Jan.	56·3	16th, 17th Jan.	79·3	57 6	68·5	+1·9	62·7
Tipperah	Commillah ..	29·999	30·036	—·048	SE & NE	10·8	79·4	14th & 15th Jan.	55·5	16th, 17th Jan.	78·7	57·3	67·9	+3·1	63·3
Mymensingh	Mymensingh .	29·965	30·026	—·061	North-easterly.	30·7	77·3	11th ,,	58·1	18th ,,	75·1	59·2	67·2	+3·8	60·5
Bogra	Bogra ..	29·938	30·003	—·066	Calm	19·4	79·8	14th ,,	54·1	14th ,,	77·9	54·9	66 4	+0·8	58·4
Pubna	Serajgunge ..	29·970	30·019	—·055	Variable	6·0	78·9	14th ,,	53·3	16th ,,	77·6	54·3	66·0	+2·5	58·8
Rajshahye	Rampore Boauleah.	29·948	30·022	—·060	N	60·7	78·9	13th ,,	54·7	17th ,,	77·6	55·4	66·5	+4·0	60·0
Maldah	Maldah ...	29·959	30·045	—	NW	65·9	79·8	12th ,,	52·5	14th & 17th Jan.	78·4	53·4	65·9	—	62·0
Dinagepore	Dinagepore ..	29·978*	30·050*	—·017	Northerly	37	79·1	13th ,,	51·7	14th ,,	77·1	53·2	65 2	+2·1	60·8
Rungpore	Rungpore .	29·992	30 035	—·071	ENE	22	78·0	12th ,,	52·0	16th ,,	77·0	52·9	65·0	+3·5	56·5
Julpigoree ... ... / Cooch Behar	Julpigoree ...	29·733	30·036	—·066	North-easterly.	18·7	?	?	51 9	13th ,,	?	56·2	?	?	60·6
Darjeeling Hill Tracts ...	Darjeeling ..	22·948	—	—	WSW	91·4	53·4	15th, 16th Jan.	35·0	12th ,,	53·3	36·7	45·0	+4·6	37·9
Purneah ... ... / North Bhagulpore ...	Purneah ..	29·894	30·030	—·078	Calm	22·0	76·2	12th & 13th Jan.	49·5	16th ,,	75·3	51·4	63·3	+1·6	54·7
Mozufferpore	Mozufferpore	Observations suspended.													
Durbhunga	Durbhunga ..	29·856	30·035	—·080	SW	36	77·9	11th Jan.	52·6	15th ,,	76·6	55·7	66·2	+4·0	58·0
Chumparun .. .	Motihari ...	29·860	30·044	—·051	Westerly	80·0	77·2	15th ,,	47·9	17th ,,	74·5†	50·2†	62·4†	+2·7	54·3
Saran	Chupra ..	29·835	30·031	—·058	SW	25·0	77·3	17th ,,	53·0	11, 12, 13, 16 Jan.	76·3	53·6	64·9	+4·0	57·6
Shahabad	Dehree .	29·675	30·055	—·070	SW	124·1	80·8	14th ,,	52·0	11th ,,	77·9	54·2	66·0	+4·6	56·0
	Buxar ..	29·788	30·048	—·068	W	59·9	78·4	14th, 15th ,,	49·1	15th ,,	76·4	51·3	63·8	+2·1	55·9
	Arrah ...	29·828	30 038	—·061	Calm	45·6	78·8	15th ,,	49·3	15th ,,	76 6	51·4	64·0	+3·4	55·5
Gya	Gya ..	29·645	30·048	—·073	South-westerly.	101·4	80·0	14th ,,	52·6	17th ,,	78·5	53·3	65·9	+2·8	58·7
Patna	Bankipore ..	29·855	30·051	—·076	SW	22·4	78·1	15th ,,	50·4	15th ,,	75·0	53·2	64·5	+3·2	57·1
South Bhagulpore ... / Monghyr	Bhagulpore ...	29·856	30·028	—·074	Calm	30	78·3	13th ,,	51·0	16th ,,	77·4	53·2	65·3	+3·2	57·2
Sonthal Pergunnah ...	Deoomka ...	29·508	30·042	—	North-westerly.	28·6	80·6	14th ,,	51·1	16th ,,	78·3	53·2	65·7	—	57·8
Hazaribagh	Hazaribagh .	27·973	30·065	—·052	SW	101·8	78·4	14th ,,	51·4	16th, 17th Jan.	75 9	52·8	64·3	+2·7	60·1
Lohardugga ... ... / Manbhoom	Ranchee ...	27·841	30·056	—·055	Calm	91·0	80·0	14th ,,	47·9	16th ,,	76·6	51·5	64·1	+2·5	59·0
Singbhoom	Chyebassa ...	29·267	30·074	—	Calm & WSW	17·6	84·5	14th ,,	51·2	11th ,,	81·4	52·0	66·7	—	59·5

* Means of five days. † Means of six days.

Station.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the last *Humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the past in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

the week ending Friday, the 17th of January 1890.

at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	DISTRICT OBSERVATIONS. RAINFALL. Of week. Mean for district.	Of week. Normal mean.	Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since 15th May 1889. Mean for district.	Since 15th May 1889. Normal mean.	Since 15th May 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
9	0·3	Nil	Nil	0·05	Nil	0·07	−0·07	74·88	55·24	+19·64	0·0	0·2	Pooree	Pooree	Orissa.
3	0	Nil											Gopalpore		
8	0·1	Nil											False Point		
9	1·7	Nil	Nil	0·06	Nil	0·10	−0·10	66·24	51·65	+14·59	0·0	0·2	Cuttack	Cuttack	
8	0	Nil	Nil	0·05	Nil	0·15	−0·15	49·89	52·75	−2·86	0·0	0·1	Balasore	Balasore	
3	0·1	Nil	Nil	0·07	Nil	0·16	−0·16	58·43	62·17	−3·74	0·0	0·2	Saugor Island	South-West Midnapore	South-West Bengal.
7	0	Nil	Nil	0·09	Nil	0·25	−0·25	46·29	51·32	−5·03	0·0	0·3	Midnapore	Midnapore	
.	0	Nil	Nil	0·08	Nil	0·23	−0·23	53·38	51·41	+1·97	0·0	0·3	Calcutta	24-Pergunnahs	
5	.0	Nil	Nil	0·04	Nil	0·11	−0·11	43·83	46·42	−2·59	0·0	0·1	Burdwan	Burdwan	
1	0	Nil	Nil	0·01	Nil	0·08	−0·08	55·88	52·37	+3·51	0·0	0·1	Bankoora	Bankoora	
1	:0	Nil	Nil	0·12	Nil	0·22	−0·22	52·44	51·40	+1·04	0·0	0·3	Ranegunge	Beerbhoom	
•	0·9	Nil	Nil	0·14	Nil	0·24	−0·24	51·15	50·26	+0·89	0·0	0·3	Berhampore	West Burdwan	
	0·1	Nil	Nil	0·05	Nil	0·13	−0·13	51·49	49·02	+2·47	0·0	0·2	Krishnaghur	Moorshedabad	
	0·6	Nil	Nil	0·08	Nil	0·19	−0·19	53·39	52·86	+0·53	0·0	0·2	Jessore	Nuddea	
	0·1	Nil	Nil	0·09	Nil	0·17	−0·17	100·02	113·19	−13·17	0·0	0·3	Chittagong	Jessore	
			Nil	0·03	Nil	0·18	−0·18	65·13	80·81	−15·68	0·0	0·1	Demagiri	Khoolna	
	0·4	Nil	Nil	0·05	Nil	0·29	−0·29	77·82	76·61	+1·21	0·0	0·2	Barrisal	Chittagong	
	0	Nil	Nil	0·06	Nil	0·43	−0·43	90·29	106·26	−15·97	0·0	0·2	Noakholly	Chittagong Hill Tracts	East Bengal.
	0	Nil	Nil	0·03	Nil	0·13	−0·13	60·32	55·54	+4·78	0·0	0·1	Furreedpore	Backergunge	
	0	Nil	Nil	0·04	Nil	0·14	−0·14	74·59	59·37	+15·22	0·0	0·1	Dacca	Noakholly	
	0·3	Nil	Nil	0·09	Nil	0·30	−0·30	55·45	69·12	−13·67	0·0	0·2	Commillah	Furreedpore	
	0·4	Nil	Nil	0·08	Nil	0·17	−0·17	87·63	67·38	+20·25	0·0	0·2	Mymensingh	Dacca	
	0	Nil	Nil	0·11	Nil	0·17	−0·17	64·81	57·10	+7·71	0·0	0·3	Bogra	Tipperah	
	0	Nil	Nil	0·12	Nil	0·19	−0·19	55·07	53·08	+1·99	0·0	0·3	Serajgunge	Mymensingh	
	0·1	Nil	Nil	0·12	Nil	0·28	−0·28	54·30	53·60	+0·70	0·0	0·3	Rampore Beauleah	Bogra	
	0	Nil	Nil	0·14	Nil	0·23	−0·23	39·76	53·98	−14·22	0·0	0·3	Maldah	Pubna	North Bengal.
	0·9	Nil	Nil	0·06	Nil	0·11	−0·11	57·37	56·71	+0·66	0·0	0·2	Dinagepore	Rajshahye	
	0	Nil	Nil	0·08	0·02	0·17	−0·15	85·18	73·89	+11·29	0·0	0·2	Rungpore	Maldah	
	1·4	Nil	Nil	0·04	0·06	0·06	0	117·19	111·26	+5·93	0·0	0·1	Julpigoree	Dinagepore	
	5·9	Nil	0·10	0·12	0·32	0·21	+0·11	133·07	120·49	+12·58	0·8	0·3	Darjeeling	Rungpore	
	0·3	Nil	Nil	0·09	Nil	0·16	−0·16	74·71	58·30	+16·41	0·0	0·2	Purneah	Julpigoree	
			Nil	0·16	Nil	0·28	−0·28	48·66	42 89	+5·77	0·0	0·3	Mozufferpore	Cooch Behar	
	0·7	Nil	Nil	0·15	Nil	0·27	−0·27	51·84	44 31	+7·53	0·0	0·3	Durbhunga	Darjeeling Hill Tracts	
	3·1	Nil	Nil	0·21	Nil	0·27	−0·27	63·55	46·40	+17·15	0·0	0·3	Motihari	Purneah	North Bengal.
	1·9	Nil	Nil	0·16	Nil	0·23	−0·22	40·13	42·43	−2·30	0·0	0·3	Chupra	North Bhagulpore	
	0	Nil											Dehree	Mozufferpore	
	1·6	Nil	Nil	0·24	Nil	0·33	−0·32	40·07	39·92	+0·15	0·0	0·4	Buxar	Durbhunga	
	1·9	Nil											Arrah	Chumparun	
	2·0	Nil	Nil	0·21	Nil	0·31	−0·31	37·07	41·20	−4·13	0·0	0·3	Gya	Sarun	
	0·8	Nil	Nil	0·15	Nil	0·25	−0·25	43·49	41 03	+2·46	0·0	0·3	Bankipore	Shahabad	
	0·6	Nil	Nil	0·13	Nil	0·19	−0·19	42·43	43·27	−0·84	0·0	0·3	Bhagulpore	Gya	South Behar.
	0	Nil	Nil	0 07	Nil	0·16	−0·16	54·15	50·50	+3·65	0·0	0·3	Doomka	Patna	
	0·4	Nil	Nil	0·09	Nil	0·28	−0·28	43·03	50·39	−7·36	0·0	0·2	Hazaribagh	South Bhagulpore	
	0	Nil	Nil	0·19	Nil	0·39	−0·39	44·34	40·03	−4·69	0·0	0·3	Lohardugga	Monghyr	
			Nil	0·12	Nil	0·21	−0·21	38·33	46·66	−8·33	0·0	0·3	Manbhoom	Sonthal Pergunnahs	
	0	Nil	Nil	0·13	Nil	0·25	−0·25	48·76	51·03	−2·27	0·0	0·4	Chyebassa	Hazaribagh	Chutia Nagpur.
														Ranchi	
														Singbhoom	

a. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
b. Cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
c. The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at the subdivisional

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STATION OBSERVATIONS.

Meteorological Division.	District.	Representative station.	Air pressure. Mean barometric height, 8 A.M.	Air pressure. Mean reduced to sea-level.	Air pressure. Variation from mean.	Wind. Prevailing direction.	Wind. Mean wind velocity.	Temperature. Highest during week.	Temperature. Date.	Temperature. Lowest during week.	Temperature. Date.	Temperature. Mean maximum temperature.	Temperature. Mean minimum temperature of week.	Temperature. Mean daily temperature of week.	Temperature. Variation from normal mean of week.	Temperature. Mean, 8 A. M., temperature.
Orissa.	Pooree	Pooree ...	30·016	30·029	—	Calm & N	02	?	?	59·4	13, 15, 17 Jan.	‡	60·8	?	?	68·1
		Gopalpore ...	30·066	30·056	—·011	NNW	213	80·2	15, 16 Jan.	61·9	13th ,,	79·4	63·0	71·3	+0·7	67·3
		False Point ...	30·009	30·031	—·067	NWly.	130	82·9	15th ,,	55·5	16th ,,	79·7	59·0	69·4	+0·6	64·3
	Cuttack	Cuttack ...	29·966	30·051	—·044	Calm	15	85·8	15th ,,	58·8	12th, 13th Jan.	84·2	59·4	71·8	—0·5	63·2
	Balasore	Balasore ,,	29·990	30·052	—·054	NNW	81·7	82·4	15th, 17th Jan.	53·5	16th ,,	81·2	55·9	68·5	+0·9	61·2
South-West Bengal.	South-West Midnapore / South 24-Pergunnahs	Saugor Island	30·006	30·033	—·062	NNE	171	77·7	15th, 16th Jan.	57·9	17th ,,	76·4	61·8	69·1	+1·5	64·9
	Midnapore	Midnapore ,,	29·882	30·041	—·075	N	21·8	85·3	14th ,,	54·2	16th, 17th Jan.	82·6	55·9	69·3	+2·8	61·3
	24-Pergunnahs ... ... / Howrah ... ... / Hooghly	Calcutta	30·011	30·034	—·070	Calm	48	70·5	15th ,,	54·8	16th ,,	78·0	56·9	67·5	+1·3	61·3
	Burdwan	Burdwan ,,	29·924	30·030	—·080	Calm	21·8	82·1	14th ,,	53·8	16th ,,	80·6	55·9	68·3	+1·6	59·2
	Bankoora ... ,,	Bankoora ...	29·701	30·021	—·077	W	34	81·9	14th ,,	53·5	16th ,,	80·4	55·2	67·8	+1·6	58·8
	Beerbhoom ... ... / West Burdwan	Raneegunge	29·700	30·053	—·066	WNW	29·9	82·5	14th ,,	54·2	16th ,,	80·5	55·6	68·1	+1·9	59·4
	Moorshedabad	Berhampore...	29·956	30·027	—·083	North-westerly.	33·5	70·1	14th & 15th Jan.	54·7	13th, 17th Jan.	78·2	56·2	67·2	+1·9	58·5
	Nuddea	Krishnaghur...	29·987	30·057	—·046	WNW	53·7	81·5	14th ,,	53·1	17th ,,	79·7	54·5	67·1	+2·5	60·7
	Jessore ... ... / Khoolna	Jessore ...	29·990	30·025	—·069	Calm	17·7	79·7	13th & 14th Jan.	56·5	16th & 17th Jan.	79·0	58·1	68·6	+3·0	60·7
East Bengal.	Chittagong	Chittagong	29·934	30·028	—·065	Calm	42·1	81·1	11th ,,	57·1	16th, 17th Jan.	79·7	58·1	68·9	+2·6	61·7
	Chittagong Hill Tracts	Demagiri ,,	Observations not received.													
	Backergunge	Barrisal ...	30·011	30·024	—·053	Calm	21·9	79·3	11th Jan.	56·1	15th, 17th Jan.	77·9	57·9	67·9	+3·5	64·4
	Noakholly ... ,,	Noakholly ...	29·982	30·028	—	Calm	50·0	79·3	15th ,,	54·9	15th ,,	78·7	55·8	67·2	—	63·3
	Furreedpore	Furreedpore...	29·983	30·025	—·059	Calm	23	74·7	14th ,,	55·0	16th & 17th Jan.	73·8	56·4	65·1	+1·1	60·0
	Dacca	Dacca ...	29·990	30·014	—·080	Westerly	40·7	80·1	13th—15th Jan.	56·3	16th, 17th Jan.	79·3	57·6	68·5	+1·9	62·7
	Tipperah	Commillah ,,	29·999	30·036	—·048	SE & NE	10·8	79·4	14th & 15th Jan.	55·5	16th, 17th Jan.	78·7	57·3	67·9	+3·1	63·3
	Mymensingh	Mymensingh.	29·965	30·026	—·061	North-easterly.	30·7	77·3	11th ,,	58·1	18th ,,	75·1	59·2	67·2	+3·8	60·5
North Bengal.	Bogra	Bogra ,,	29·938	30·005	—·066	Calm	19·4	79·8	14th ,,	54·1	14th ,,	77·9	54·9	66·4	+0·8	58·4
	Pubna	Serajgunge ...	29·970	30·019	—·055	Variable	6·0	78·9	14th ,,	53·3	16th ,,	77·6	54·3	66·0	+2·5	58·8
	Rajshahye	Rampore Beauleah.	29·948	30·022	—·060	N	60·7	78·9	13th ,,	54·7	17th ,,	77·6	55·4	66·5	+4·0	60·0
	Maldah	Maldah ...	29·959	30·045	—	NW	65·9	79·8	12th ,,	52·5	15th & 17th Jan.	78·4	53·4	65·9	—	62·0
	Dinagepore ... ,,	Dinagepore ,,	29·928*	30·05c*	—·017	Northerly	37	79·1	13th ,,	51·7	14th ,,	77·1	53·2	65·2	+2·1	60·8
	Rungpore ... ,,	Rungpore ,,	29·902	30·035	—·071	ENE	22	78·0	12th ,,	52·0	16th ,,	77·0	52·9	65·0	+3·5	56·5
	Julpigoree ... ... / Cooch Behar	Julpigoree ...	29·733	30·036	—·066	North-easterly.	18·7	?	?	51·9	13th ,,	?	56·2	?	?	60·6
	Darjeeling Hill Tracts ...	Darjeeling ,,	22·948	—	—	WSW	91·4	53·4	15th, 16th Jan.	35·0	12th ,,	53·3	30·7	45·0	+4·6	37·9
	Purneah ... ... / North Bhagulpore ...	Purneah ,,	29·894	30·030	—·078	Calm	22·0	76·2	12th & 13th Jan.	40·5	16th ,,	75·3	51·4	63·3	+1·6	54·7
	Mozufferpore ... ,,	Mozufferpore	Observations suspended.													
	Durbhunga ... ,,	Durbhunga ,,	29·856	30·035	—·080	SW	36	77·9	11th Jan.	52·6	15th ,,	76·6	55·7	66·2	+4·0	58·0
	Chumparun ... ,,	Motihari ,,	29·860	30·044	—·051	Westerly	80·0	77·2	15th ,,	47·9	17th ,,	74·5†	50·2†	62·4†	+2·7	54·3
	Sarun	Chupra ,,	29·825	30·031	—·058	SW	25·0	77·3	17th ,,	53·0	11, 12, 13, 16 Jan.	76·3	53·6	64·9	+4·0	57·6
	Shahabad	Dehree ,,	29·675	30·055	—·070	SW	124·1	80·8	14th ,,	52·0	11th ,,	77·9	54·2	66·0	+4·6	56·9
		Buxar ,,	29·788	30·048	—·068	W	59·9	78·4	14th, 15th ,,	49·4	15th ,,	76·4	51·3	63·8	+2·1	55·9
		Arrah ,,	29·828	30·038	—·061	Calm	45·6	78·8	15th ,,	49·3	16th ,,	76·6	51·4	64·0	+3·4	55·5
	Gya	Gya ,,	29·645	30·048	—·073	South-westerly.	101·4	80·0	14th ,,	52·6	17th ,,	78·5	53·3	65·9	+3·8	58·7
	Patna ... ,,	Bankipore ,,	29·855	30·051	—·076	SW	22·4	78·1	15th ,,	50·4	16th ,,	75·0	53·2	64·5	+3·2	57·1
	South Bhagulpore ... / Monghyr	Bhagulpore ...	29·856	30·028	—·074	Calm	30	78·3	13th ,,	51·0	16th ,,	77·4	53·2	65·3	+3·2	57·2
	Sonthal Pergunnah ...	Doomka ...	29·508	30·042	—	North-westerly.	28·6	80·6	14th ,,	51·1	16th ,,	78·3	53·2	65·7	—	57·8
	Hazaribagh	Hazaribagh ,,	27·973	30·005	—·052	SW	101·8	78·4	14th ,,	51·4	16th, 17th Jan.	75·9	52·8	64·3	+2·7	60·1
	Lohardugga ... ... / Manbhoom	Ranchee ...	27·841	30·056	—·055	Calm	91·0	80·0	14th ,,	47·9	16th ,,	76·6	51·5	64·1	+2·5	59·0
	Singbhoom	Chyebassa ...	29·267	30·074	—	Calm & WSW	17·6	84·5	14th ,,	51·2	11th ,,	81·4	52·0	66·7	—	59·5

* Means of five days. † Means of six days.

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the last The *humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the past tions in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

the week ending Friday, the 17th of January 1890.

Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	On week. Mean for district.	On week. Normal mean.	District observations. Rainfall. Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since 15th May 1889. Mean for district.	Since 15th May 1889. Normal mean.	Since 15th May 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
0·3	Nil	Nil	0·05	Nil	0·07	−0·07	74·88	55·24	+19·64	0·0	0·2	Pooree	Pooree	Orissa.
0	Nil											Gopalpore		
0·1	Nil											False Point		
1·7	Nil	Nil	0·06	Nil	0·10	−0·10	66·24	51·65	+14·59	0·0	0·2	Cuttack	Cuttack	
0	Nil	Nil	0·05	Nil	0·15	−0·15	49·89	52·75	−2·86	0·0	0·1	Balasore	Balasore	
0·1	Nil	Nil	0·07	Nil	0·16	−0·16	58·43	62·17	−3·74	0·0	0·2	Saugor Island	South-West Midnapore	South-West Bengal.
													South 24-Pergunnahs	
0	Nil	Nil	0·09	Nil	0·25	−0·25	46·29	51·32	−5·03	0·0	0·3	Midnapore	Midnapore	
0	Nil	Nil	0·08	Nil	0·23	−0·23	53·38	51·41	+1·97	0·0	0·3	Calcutta	24-Pergunnahs	
													Howrah	
													Hooghly	
0	Nil	Nil	0·04	Nil	0·11	−0·11	43·83	46·42	−2·59	0·0	0·1	Burdwan	Burdwan	
0	Nil	Nil	0·01	Nil	0·08	−0·08	55·88	52·37	+3·51	0·0	0·1	Bankoora	Bankoora	
0	Nil	Nil	0·12	Nil	0·22	−0·22	52·44	51·40	+1·04	0·0	0·3	Raneegunge	Beerbhoom	
													West Burdwan	
0·9	Nil	Nil	0·14	Nil	0·24	−0·24	51·15	50·26	+0·89	0·0	0·3	Berhampore	Moorshedabad	
0·1	Nil	Nil	0·05	Nil	0·13	−0·13	51·49	49·02	+2·47	0·0	0·2	Krishnaghur	Nuddea	
0·6	Nil	Nil	0·08	Nil	0·19	−0·19	53·30	52·86	+0·53	0·0	0·2	Jessore	Jessore	
													Khoolna	
0·1	Nil	Nil	0·09	Nil	0·17	−0·17	100·02	113·19	−13·17	0·0	0·3	Chittagong	Chittagong	East Bengal.
		Nil	0·03	Nil	0·18	−0·18	65·13	80·81	−15·68	0·0	0·1	Domagiri	Chittagong Hill Tracts	
0·4	Nil	Nil	0·05	Nil	0·29	−0·29	77·32	76·61	+1·21	0·0	0·2	Barrisal	Backergunge	
0	Nil	Nil	0·06	Nil	0·43	−0·43	90·29	106·26	−15·97	0·0	0·2	Noakholly	Noakholly	
0	Nil	Nil	0·03	Nil	0·13	−0·13	60·32	55·54	+4·78	0·0	0·1	Furreedpore	Furreedpore	
0	Nil	Nil	0·04	Nil	0·14	−0·14	74·59	59·37	+15·22	0·0	0·1	Dacca	Dacca	
0·3	Nil	Nil	0·09	Nil	0·30	−0·30	55·45	69·12	−13·67	0·0	0·2	Commillah	Tipperah	
0·4	Nil	Nil	0·08	Nil	0·17	−0·17	87·63	67·38	+20·25	0·0	0·2	Mymensingh	Mymensingh	
0	Nil	Nil	0·11	Nil	0·17	−0·17	64·81	57·10	+7·71	0·0	0·3	Bogra	Bogra	North Bengal.
0	Nil	Nil	0·12	Nil	0·19	−0·19	55·07	53·08	+1·99	0·0	0·3	Serajgunge	Pubna	
0·1	Nil	Nil	0·12	Nil	0·28	−0·28	54·30	53·60	+0·70	0·0	0·3	Rampore Beauleah	Rajshahye	
0	Nil	Nil	0·14	Nil	0·23	−0·23	39·76	53·98	−14·22	0·0	0·3	Maldah	Maldah	
0·9	Nil	Nil	0·06	Nil	0·11	−0·11	57·37	56·71	+0·66	0·0	0·2	Dinagepore	Dinagepore	
0	Nil	Nil	0·08	0·02	0·17	−0·15	85·18	73·89	+11·29	0·0	0·2	Rungpore	Rungpore	
1·4	Nil	Nil	0·04	0·06	0·06	0	117·19	111·26	+5·93	0·0	0·1	Julpigoree	Julpigoree	
													Cooch Behar	
5·9	Nil	0·10	0·12	0·32	0·21	+0·11	133·07	120·49	+12·58	0·8	0·3	Darjeeling	Darjeeling Hill Tracts	
0·3	Nil	Nil	0·09	Nil	0·16	−0·16	74·71	58·30	+16·41	0·0	0·2	Purneah	Purneah	North Bengal.
		Nil	0·16	Nil	0·28	−0·28	48·06	42·89	+5·77	0·0	0·3	Mozufferpore	North Bhagulpore	
0·7	Nil	Nil	0·15	Nil	0·27	−0·27	51·84	44·31	+7·53	0·0	0·3	Durbhunga	Mozufferpore	
3·1	Nil	Nil	0·21	Nil	0·27	−0·27	63·55	46·40	+17·15	0·0	0·3	Motiharı	Durbhunga	
1·9	Nil	Nil	0·16	Nil	0·22	−0·22	40·13	42·43	−2·30	0·0	0·3	Chupra	Chumparun	
0	Nil												Sarun	
1·6	Nil	Nil	0·24	Nil	0·32	−0·32	40·07	39·92	+0·15	0·0	0·4	Dehree	Shahabad	South Behar.
1·9	Nil											Buxar		
												Arrah		
2·0	Nil	Nil	0·21	Nil	0·31	−0·31	37·07	41·20	−4·13	0·0	0·3	Gya	Gya	
0·6	Nil	Nil	0·15	Nil	0·25	−0·25	43·49	41·03	+2·46	0·0	0·3	Bankipore	Patna	
0·6	Nil	Nil	0·13	Nil	0·19	−0·19	42·43	43·27	−0·84	0·0	0·3	Bhagulpore	South Bhagulpore	
													Monghyr	
0	Nil	Nil	0·07	Nil	0·16	−0·16	54·15	50·50	+3·65	0·0	0·2	Doomka	Sonthal Pergunnahs	
0·4	Nil	Nil	0·09	Nil	0·28	−0·28	43·03	50·39	−7·36	0·0	0·2	Hazaribagh	Hazaribagh	Chutia Nagpur.
0	Nil	Nil	0·19	Nil	0·30	−0·30	44·34	49·03	−4·69	0·0	0·3	Ranchi	Lohardugga	
		Nil	0·12	Nil	0·21	−0·21	38·33	46·66	−8·33	0·0	0·3		Manbhoom	
0	Nil	Nil	0·13	Nil	0·25	−0·25	48·76	51·03	−2·27	0·0	0·4	Chyebassa	Singbhoom	

1. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at the subdivisional

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 17th of January 1890.

Meteorological division.	District.	Station.	Rainfall. Saturday, 11th January 1890.	Sunday, 12th January.	Monday, 13th January.	Tuesday, 14th January.	Wednesday, 15th January.	Thursday, 16th January.	Friday, 17th January.	Total Number of rainy days.	Total Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
Orissa ...	Pooree ...	Pooree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	80·63	51·08
		Khurdah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	70·57	56·34
		Banpur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	65·50	46·95
		False Point ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	70·80	63·37
		Gop ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Pipli ...											?		?
	Cuttack ...	Jagatsingapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	73·97	46·81
		Banki ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	52·43	49·33
		Cuttack ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	75·18	56·05
		Kendrapara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	72·03	52·22
		Jajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	57·64	53·21
		Dharmsala ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·25	?
		Salipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	?
	Balasore ...	Chandbali ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	54·04	52·08
		Bhuddruck ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	57·60	51·37
		Sorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	46·05	50·91
		Balasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	46·61	57·35
		Jellasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	30·59	53·51
		Baripodah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	54·79	53·68
South-West Bengal.	Midnapore ...	Contai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	55·13	61·12
		Saugor Island	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	56·74	66·86
		Tumlook ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	49·10	50·19
		Midnapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	46·26	48·56
		Ghattal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	43·19	54·37
		Kukrahaty ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·65	?
		Heria ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	65·08	?
		Bhagwanpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·72	?
		Garbetta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	?
	24-Pergunnahs	Diamond Harbour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	63·41	58·1
		Canning Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·80	?
		Alipore Jail ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	51·80	55·5
		Barrackpore...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	51·79	49·5
		Dum-Dum ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	61·58	51·4
		Baraset ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	57·61	49·6
		Buseerhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	60·02	54·3
	Howrah ...	Howrah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	59·12	51·5
		Mohesreka ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	54·64	51·3
		(*Ooloberiah.*)													
	Hooghly ...	Serampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	55·27	49·8
		Hooghly ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	36·92	47·8
		Jehanabad ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	41·16	54·7
	Burdwan ...	Culna ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	41·32	44·0
		Burdwan ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	47·07	47·5
		Cutwa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	43·11	47·5
		Raneegunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	55·83	48·8
		Mankur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·71	?
	Bankoora ...	Bankoora ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	50·79	51·2
		Bishonpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	57·49	51·6
		Malara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·00		51·0
		Khatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	65·91	53·3
		Indas ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	?
		Kotalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	?
		Anda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·44	?
		Gangajalghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·17	?
		Kaipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	?
		Sonamukhi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·33	?
	Beerbhoom ...	Bh. Soory ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	50·06	53·1
		Hetampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	47·07	54·1
		Rampore Haut	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	47·78	51·1
		Bolpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·97	
		Murarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	
	Nuddea ...	Ranaghat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	55·80	46·
		Kishnaghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	42·95	45·
		Chooadanga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	49·81	50·
		Meherpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	53·05	47·
		Kooshtea ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	55·91	54·
	Khoolna ...	Satkhira ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	52·51	55·
		Bagirhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	54·00	61·
		Khoolna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	55·78	54·
		Nakipur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Rampal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Jessore ...	Narail ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	40·47	45·
		Jessore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	62·35	53·
		Jhenidah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	50·56	53·
		Magoorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	50·48	48·
		Bonkong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	48·01	51·
	Moorshedabad	Kandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	58·38	59·
		Berhampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	46·16	51·
		Lalbagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	47·13	50·
		Azimgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25		50·
		Jungipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	55·01	49·
		Lalgola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	59·02	59·
		Jiagunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·25	
		Akhriguni ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	42·81	
		Patkabari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
...n Bengal	Chittagong ...	Cox's Bazar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	132·89	133
		Chittagong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	76·48	82
		Kutubdia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113·09	
		Satkanya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	65·66	
	Chittagong Hill Tracts.	Rangamati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	63·04	8
		Bunna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	67·20	7
	Backergunge	Patuakhally ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	87·20	8
		Perozepore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	72·16	6
		Burrisal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	73·62	6
		Bhola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	79·26	6

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 17th of January 1890 —contd.

Meteorological Division.	District.	Station.	Rainfall: Saturday, 11th January 1890.	Sunday, 12th January.	Monday, 13th January.	Tuesday, 14th January.	Wednesday, 15th January.	Thursday, 16th January.	Friday, 17th January.	Total: Number of rainy days.	Total: Rainfall of week	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
EAST BENGAL —concld		*Gournaddi*								Nil	Nil	Nil	?	61·31	?
		Bauphal								Nil	Nil	Nil	?	92·89	?
	Noakholly	Noakholly								Nil	Nil	Nil	0·31	102·17	107·50
		Feeny								Nil	Nil	Nil	0·54	78·38	106·45
		Harishpore								Nil	Nil	Nil		82·96	?
		Ramganj								Nil	Nil	Nil		86·75	?
	Furreedpore	Madaripore								Nil	Nil	Nil	0·24	60·86	55·18
		Furreedpore								Nil	Nil	Nil	0·06	63·80	55·98
		Goalundo								Nil	Nil	Nil	0·14	56·29	52·70
	Dacca	Munshigunge								Nil	Nil	Nil	0·18	76·33	69·74
		Dacca								Nil	Nil	Nil	0·14	75·69	58·18
		Narainguge								Nil	Nil	Nil	0·06	80·36	59·51
		Manickgunge								Nil	Nil	Nil	0·19	67·99	49·76
		Joydebpore								Nil	Nil	Nil		66·61	?
	Hill Tipperah	Agartola								Nil	Nil	Nil	0·31	44·08	61·22
	Tipperah	Comilla								Nil	Nil	Nil	0·32	62·17	75·75
		Chandpore								Nil	Nil	Nil	0·19	64·82	75·44
		Brahmunberia								Nil	Nil	Nil	0·38	50·68	61·80
		Ramchandrapore.								Nil	Nil	Nil		60·14	?
		Nasirnagar								Nil	Nil	Nil	?	30·59	?
		Daudkandi								Nil	Nil	Nil		52·29	?
		Kasba								Nil	Nil	Nil		62·44	?
		Laksham								Nil	Nil	Nil	?	49·09	?
	Mymensingh	Kishoregunge								Nil	Nil	Nil	0·30	69·58	69·83
		Atia (*Tangail*)								Nil	Nil	Nil	0·20	61·00	55·18
		Mymensingh								Nil	Nil	Nil	0·16	98·55	73·79
		Jamalpore								Nil	Nil	Nil	0·20	85·14	64·93
		Netrakona								Nil	Nil	Nil	0·05	125·92	72·04
		Subornakhali								Nil	Nil	Nil		57·43	?
		Durgapore								Nil	Nil	Nil		149·98	?
		Shereporo Town								Nil	Nil	Nil	?	87·09	?
		Dewanganj								Nil	Nil	Nil		56·31	?
NORTH BENGAL	Pubna	Pubna								Nil	Nil	Nil	0·18	49·87	53·47
		Serajgunge								Nil	Nil	Nil	0·19	60·26	52·59
	Bogra	Sherepore								Nil	Nil	Nil	0·19	62·66	57·27
		Nowkhilla								Nil	Nil	Nil	0·18	60·91	54·03
		Bogra								Nil	Nil	Nil	0·19	70·63	60·35
		Panchbibi								Nil	Nil	Nil	0·11	64·96	55·51
	Rajshahye	Beauleah								Nil	Nil	Nil	0·26	46·20	52·78
		Nattore								Nil	Nil	Nil	0·37	58·84	54·03
		Naogaon								Nil	Nil	Nil	0·19	57·87	50·83
		Lalpore								Nil	Nil	Nil		36·72	?
		Manda								Nil	Nil	Nil		45·27	?
	Maldah	Maldah								Nil	Nil	Nil	0·21	50·53	51·50
		Chanchal								Nil	Nil	Nil	0·25	28·90	56·45
		Gazol								Nil	Nil	Nil		30·79	?
		Sibganj								Nil	Nil	Nil		51·77	?
	Dinagepore	Mohadebpore								Nil	Nil	Nil	0·18	53·63	56·00
		Churamon								Nil	Nil	Nil	0·03	51·82	51·95
		Raigunge								Nil	Nil	Nil	0·15	52·25	57·41
		Dinagepore								Nil	Nil	Nil	0·15	67·84	63·17
		Balcorghat								Nil	Nil	Nil	0·07	61·28	50·97
		Thakoorgaon								Nil	Nil	Nil		87·47	?
	Rungpore	Bhawanigunge (*Gyabanda*)								Nil	Nil	Nil	0·20	87·55	61·49
		Rungpore								Nil	Nil	Nil	0·09	74·50	74·13
		Kurigram								Nil	Nil	Nil	0·15	90·07	72·98
		Bagdogra (*Nilphamari*)								Nil	Nil	Nil	0·1	87·69	84·81
		Ulipore								Nil	Nil	Nil		79·00	?
	Julpigoree	Julpigoree								Nil	Nil	Nil	0·05	0·11	123·32	116·56
		Alipore Door								Nil	Nil	Nil			110·58	?
		Fallacotta								Nil	Nil	Nil	0·20	?	127·03	?
		Debiganj								Nil	Nil	Nil			89·92	?
		Bhagatpore (Nagrakatta).								Nil	Nil	Nil	0·42	?	138·03	?
	Cooch Behar	Dinhatta								Nil	Nil	Nil	0·19	0·03	98·19	95·75
		Cooch Behar								Nil	Nil	Nil	0·05	0·10	125·39	117·96
		Mickilgunge								Nil	Nil	Nil	Nil		121·37	105·21
		Matabhanga								Nil	Nil	Nil	0·03		117·03	111·19
	Darjeeling Hill.	Buxa		0·20	0·05	0·15				3	0·40	0·91	0·51		192·00	192·28
		Silliguri								Nil	Nil	0·03	0·01		120·74	102·51
		Darjeeling								Nil	Nil	0·16	0·30		128·03	108·12
		Kalimpong								Nil	Nil	0·16	0·02		91·52	82·68
		Kurseong								Nil	Nil	0·03	?		108·88	?
NORTH BEHAR	Purneah	Kissengunge								Nil	Nil	Nil	0·16		102·37	69·97
		Arrareah								Nil	Nil	Nil	0·17		70·61	63·43
		Purneah								Nil	Nil	Nil	0·11		63·45	61·26
		Gondwara								Nil	Nil	Nil		?		
		Balarampore								Nil	Nil	Nil		?		?
		Matiari								Nil	Nil	Nil				
		Kaliaganj								Nil	Nil	Nil				?
	North Bhagulpore.	Maddapore								Nil	Nil	Nil	0·20		69·85	49·23
		Soopool								Nil	Nil	Nil	0·13		67·26	47·85
		Protabganj								Nil	Nil	Nil			87·85	?
	Durbhunga	Tajpore								Nil	Nil	Nil	0·36		42·44	43·94
		Durbhunga								Nil	Nil	Nil	0·16		50·01	45·50
		Madhubani								Nil	Nil	Nil	0·29		63·11	44·61
		Bahera								Nil	Nil	Nil	?		60·96	?
		Roshera								Nil	Nil	Nil			55·84	?
	Mozufferpore	Sitamarhi								Nil	Nil	Nil	0·27		55·00	43·84
		Mozufferpore								Nil	Nil	Nil	0·30		48·41	45·07
		Hajipore								Nil	Nil	Nil	0·28		42·52	41·90
		Pare								Nil	Nil	Nil	?		37·69	?
		Mahua								Nil	Nil	Nil	?		41·02	?
		Sichar								Nil	Nil	Nil			?	?
		Pupri								Nil	Nil	Nil	?		47·00	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 17th of January 1890—concld.

Meteorological Division.	District.	Station.	Rainfall.							Total.		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
			Saturday, 11th January 1890.	Sunday, 12th January.	Monday, 13th January.	Tuesday, 14th January.	Wednesday, 15th January.	Thursday, 16th January.	Friday, 17th January.	Number of rainy days.	Rainfall of week.				
NORTH BEHAR —concluded.	Chumparun...	Motihari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	74·79	44·46
		Bettiah ...	...	... ...	... ...	.....	.....	... .	... ..	Nil	Nil	Nil	0·26	52·29	47·75
		Bagaha ...	.....	... ..	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·87	?
		Burhurwa ...	.....	... .	... ..	.....	.....	.....	.....	Nil	Nil	Nil	?	51·70	?
	Sarun ...	Gopalgunge ...	.....	.....	.....	.....	... ...	... ..	... ..	Nil	Nil	Nil	0·06	35·48	42·79
		Sewan ...	.....	.....	.....	... ..	.....	... .	.....	Nil	Nil	Nil	0·36	44·29	43·59
		Chuprah ...	... .	.....	.....	... ...	.....	... .	... ..	Nil	Nil	Nil	0·26	40·74	40·20
SOUTH BEHAR	Shahabad	Buxar ...	.....	.....	... ..	.....	.....	... ..	.....	Nil	Nil	Nil	0·46	47·44	38·29
		Dehree ...	... ..	.....	.....	.....	... .	.....	.....	Nil	Nil	Nil	0·19	42·06	39·50
		Bhaboosh ...	.....	.....	... ..	.....	.....	... ..	... ..	Nil	Nil	Nil	0·39	38·16	40·67
		Sasseram ...	... ..	... ..	.....	.....	.....	... ..	.....	Nil	Nil	Nil	6·25	29·41	40·46
		Arrah ...	.....	.....	... ..	... ..	.....	.....	.....	Nil	Nil	Nil	0·33	42·09	40·02
		Mohaniah ..	.....	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	?	?	?
	Gya ..	Aurungabad ..	.....	... ..	.....	.....	... ..	.....	.....	Nil	Nil	Nil	0·28	35·42	42·58
		Gya ...	... ..	... ..	... .	.....	... ..	... .	.....	Nil	Nil	Nil	0·23	39·85	42·30
		Nowadah ...	... ..	... .	.....	.....	...	....	.....	Nil	Nil	Nil	0·25	39·59	39·69
		Johnnabad ...	.....	.....	.....	.....	... ..	.....	... ..	Nil	Nil	Nil	0·37	33·40	39·80
		Arwal ...	.....	.....	... ..	... ..	... .	.....	... ..	Nil	Nil	Nil	?	34·34	?
		Daudnagar ..	... ..	... ..	.....	.....	.....	.....	... ..	Nil	Nil	Nil	?	26·09	?
		Sherrghati ..	.....	... ..	.....	... .	... ..	... ..	... ..	Nil	Nil	Nil	?	29·29	?
		Rajauli ...	.....	... .	... .	... ..	.....	.....	.....	Nil	Nil	Nil	?	17·92	?
		Pakri Barawan	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	?	31·00	?
	Patna ...	Patna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	51·49	41·72
		Dinapore ...	.....	... ..	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0·26	45·53	41·25
		Behar ...	.....	.....	...	.....	.....	.....	.....	Nil	Nil	Nil	0·28	41·08	41·60
		Barrh ...	.....	... ..	.....	..	.....	.....	... ..	Nil	Nil	Nil	0·16	35·83	39·51
		Bickram ...	.....	. .	.....	.....	.....	.....	.....	Nil	Nil	Nil		43·28	?
		Hilsa ...	... ..	... ..	.....	.....	.....	.....	.....	Nil	Nil	Nil		35·21	?
	Monghyr ...	Bogoosserai ...	.....	.....	.....	.....	... ..	.....	.....	Nil	Nil	Nil	0·22	47·62	39·85
		Monghyr ...	.....	.....	... ..	.....	.....	.....	.....	Nil	Nil	Nil	0·15	41·67	46·24
		Jamui ..	... ..	... .	... ..	.....	.....	.....	.....	Nil	Nil	Nil	0·24	39·48	42·00
		Gopri ...	... ..	...	... .	... ..	.....	.....	.....	Nil	Nil	Nil	?	50·19	?
		Sheikpura ...	.....	... ..	.....	.....	... ..	.....	.....	Nil	Nil	Nil	?	43·32	?
	South Bhagulpore.	Bhagulpore ...	.....	... ..	.....	.....	... .	... ..	.....	Nil	Nil	Nil	0·15	45·06	41·91
		Banka ...	... .	.....	... .	....	.....	.....	.....	Nil	Nil	Nil	0·21	38·34	43·42
		Kalgong ...	... ..	.....	... .	.....	... ..	.....	... ..	Nil	Nil	Nil	?	46·97	?
		Bangaon ...	.....	... ..	... .	... .	.....	.....	... ..	Nil	Nil	Nil	?	?	?
	Sonthal Pergunnahs.	Rajmehal ...	.....	... ..	.....	... ..	.....	... ...	.....	Nil	Nil	Nil	0·03	50·90	52·09
		Godda ...	... ..	... ..	... .	... ..	.....	.....	.....	Nil	Nil	Nil	0·12	49·04	47·26
		Pakour ..	... ..	... ..	... .	.....	... ..	.....	.....	Nil	Nil	Nil	0·05	75·50	55·13
		Nya Doomka	... ..	.....	... ..	... ..	... ..	.....	... .	Nil	Nil	Nil	0·36	56·75	53·07
		Deognur	... ..	.....	... .	.....	... ..	.....	.....	Nil	Nil	Nil	0·22	49·40	50·42
		Jamtara ...	... ..	.....	..	... .	... ..	.....	.....	Nil	Nil	Nil	0·16	45·21	48·90
		Mohagama ..	... ..	.....	... ..	.	... ..	.....	.....	Nil	Nil	Nil	?	56·41	?
		Nanhat ..	... .	... ..	... .	.....	.....	.....	.....	Nil	Nil	Nil	?	55·87	?
CHOTIA NAGPUR.	Hazaribagh ...	Pachamba (*Giridi*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	38·90	47·29
		Hazaribagh ...	.....	.....	... ..	.....	.....	.....	.....	Nil	Nil	Nil	0·30	49·10	46·84
		Seetagurah ...	.....	.....	... .	.....	.....	.....	.....	Nil	Nil	Nil	0·21	36·24	46·62
		Mahudi Hills	.....	.....	... ..	... ..	.....	.....	...	Nil	Nil	Nil	0·37		47·04
		Jhoomra Hills	.....	.....	... ..	.....	.....	.....	... ..	Nil	Nil	Nil	0·32	43·00	62·35
		Barhi ...	.....	.....	... ..	... ..	.....	.....	.....	Nil	Nil	Nil	?	31·36	?
		Chatra ...	.....	.....	.....	... ..	.....	.....	... ..	Nil	Nil	Nil		46·04	?
		Karagdeha ...	.....	.....	... .	.....	.....	.....	.....	Nil	Nil	Nil	?	39·35	?
		Ramghar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	Lohardugga ...	Lohardugga ...	.....	.....	.. ..	.....	.....	.....	.....	Nil	Nil	Nil	0·51	45·24	50·97
		Ranchi ...	.....	.....	... .	....	... ..	.....	.....	Nil	Nil	Nil	0·27	53·61	51·80
		Palamow ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	34·16	43·01
		Silli ...	.....	.....	.....	.....	.....	.....	... ..	Nil	Nil	Nil	?	33·80	?
		Balumat ...	.. ..	.....	.....	.....	... ..	.....	.....	Nil	Nil	Nil	?	?	?
		Hossenabad ..	.....	...	... ..	.....	... ..	.....	.....	Nil	Nil	Nil	?	44·40	?
		Garwah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28·77	?
	Singbhoom	Chyebassa ...	... .	.....	... ..	.....	.....	.....	.....	Nil	Nil	Nil	0·25	48·76	51·23
		Chakradharpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·30	?
		Ghatsilla ...	.....	.....	.. ..	.....	.....	... ..	.....	Nil	Nil	Nil	?	58·70	?
		Baharagura ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·80	?
	Manbhoom ...	Purulia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	43·46	48·66
		Gobindpore ...	... ..	.....	... .	... .	... ..	... ..	.....	Nil	Nil	Nil	0·28	33·19	44·79
		Raghunathpore.	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	?	45·91	?
		Barrabhoom	.....	....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·32	?
		Jhalda ...	.....	.....	.....	.....	... ..	.....	.....	Nil	Nil	Nil	?	51·42	?
		Chas ...	.....	... ..	... ..	.....	.....	.....	.....	Nil	Nil	Nil	?	58·56	?

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 21st January* 1890.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 17TH JANUARY 1890.

THE meteorology of Bengal for the week calls for few remarks. Ordinary north-east monsoon conditions have generally obtained over the greater part of the province, though there has been a tendency for moist southerly winds to set in at a few of the southern stations, which has caused humidity and also temperature to be rather higher than usual at this season. This setting in of southerly winds has apparently been connected with one or more disturbances which have existed over the north-west Himalayas, but these disturbances have not been sufficiently important, nor have they existed long enough to materially affect the weather in Bengal. For the greater part of the week, therefore, fine clear weather has obtained, except at the stations in and near the hills, where the sky has been somewhat clouded over. Temperature has been moderate, though rather above the normal, and humidity has been decidedly high at some stations. Over the greater part of the province northerly winds have generally been reported, but the current has been rather light and feeble. Pressure has been rather low during the week, but the changes from day to day have not been large, while rainfall has been entirely absent except at the single station of Buxa in the Darjeeling Hills district, where some light showers have fallen.

Pressure.—On the 11th, pressure had fallen over the whole province by amounts which varied from 0·03 inch to 0·07 inch, the fall being largest near the hills. During the following two days the pressure recovered itself slightly, but on the 14th there had been a slight fall which was succeeded by a further rise on the 15th. On the 16th the changes were a little variable, while on the 17th a slight rise was generally reported. For the whole week the mean pressure has been below the normal by amounts which have varied between 0·05 inch and 0·08 inch, the defects being generally largest at the northern stations, and particularly along the line of the hills.

Temperature—Has been rather high throughout the week, and the mean temperature for the whole of the province has been about two and-a-half degrees above the normal. The excess has been even larger than this in Behar, where it has equalled more than three degrees. The distribution of temperature during the week, its range from day to night, and its variation from the normal are best seen in the following table, where the average maximum, minimum and mean temperatures for the week at nine typical stations in different districts of the province are compared with their normal values for the same period. Both day and night temperatures have been decidedly in excess at all these stations except at Cuttack, and as a general rule the day or maximum temperatures have been rather more largely in excess than the night or minimum temperatures. The excess in the day temperature above the normal at Darjeeling has been no less than 8·9°, which is most exceptionally large :—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 17th January 1890.

	Normal mean maximum temperature for the week ending 17th January.	Actual mean maximum temperature for the week ending 17th January 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 17th January.	Actual mean minimum temperature for the week ending 17th January 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 17th January.	Actual mean daily temperature for the week ending 17th January 1890.	Variation of actual mean from the normal.
Cuttack	84·5	84·2	−0·3	60·3	59·4	−0·9	72·4	71·8	−0·6
Calcutta	77·0	78·0	+1·0	56·0	56·9	+0·9	66·6	67·5	+0·9
Dacca	78·7	79·3	+0·6	55·2	57·6	+2·4	66·9	68·5	+1·6
Burdwan	78·4	80·6	+2·2	55·3	55·9	+0·6	66·8	68·3	+1·5
Patna	72·5	75·9	+3·4	50·6	53·2	+2·6	61·5	64·5	+3·0
Gya	75·5	78·5	+3·0	50·9	53·3	+2·4	63·1	65·9	+2·8
Purneah	74·8	75·3	+0·5	48·8	51·4	+2·6	61·8	63·3	+1·5
Hazaribagh	72·3	75·9	+3·6	51·1	52·8	+1·7	61·8	64·3	+2·5
Darjeeling	44·4	53·3	+8·9	35·5	36·7	+1·2	40·2	45·0	+4·8

Rainfall.—With the exception of two or three unimportant light showers at Buxa in the Darjeeling Hills district, the whole province has been rainless throughout the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 17th of January 1890 :—

Meteorological Divisions.	Temperature						Rainfall.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
	°	°	°	°	°	°	Inches.	Inches.	Inches.				Inches.	Inches.	Inches.	Inches.
Orissa	85·8*	53·5	81·1*	59·6	70·3*	+0·4	Nil	0·05	−0·05	0·0	0·2	−0·2	Nil	0·10	62·01	53·63
South-West Bengal ...	86·3	53·1	79·5	50·7	68·1	+2·0	Nil	0·08	−0·08	0·0	0·2	−0·2	Nil	0·19	52·37	51·75
East Bengal	81·1	54·9	77·6	57·5	67·5	+2·7	Nil	0·06	−0·06	0·0	0·2	−0·2	Nil	0·22	75 53	73·93
North Bengal	79·8*	51·7	77·6*	54·3	65·8*	+2·6	Nil	0·09	−0·09	0·0	0·2	−0·2	0·02	0·16	78·14	70·03
North Behar	77·9	47·9	75·7	52·7	64·2	+3·1	Nil	0·14	−0·14	0·0	0·3	−0·3	Nil	0·22	57·66	48·41
South Behar	80·8	49·3	77·3	52·8	65·0	+3·2	Nil	0·15	−0·15	0·0	0·3	−0·3	Nil	0·23	44·16	43·57
Chutia Nagpur	80·0*	47·9*	76·2*	52·2*	64 2*	+2·6*	Nil	0·12	−0·12	0·0	0·4	−0·4	Nil	0·29	43·08	49·17

* Pooree, Julpigurі, and Chyebassa not included.

Meteorological Office, Bengal ;
The 21st January 1890

A Pedler,
Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 12th to 18th January 1890.

Month.	Date.	Pressure reduced to 32° M.	Temperature.					Hygrometry			
			Daily Mean.	Maximum.	Range.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	Rainfall.
		Inches.	°	°	°		°	Inches.	°	%	Inches.
Jan. 1890 ...	12th ...	30·031	68·3	78·9	21·2	57·7	70·6	67·6	·637	65·9	85	Nil
,, ,, ...	13th ...	·042	70·2	80·9	21·5	59·4	73·6	68·6	·633	65·7	76	.....
,, ,, ...	14th ...	·032	71·0	80·9	19·8	61·1	73·2	69·4	·669	67 3	82	... .
,, ,, ...	15th ...	·054	67·7	78·9	22·5	56·4	71·4	63 6	·485	58·1	63	.. ...
,, ,, ...	16th ...	·068	68·0	79.9	23·8	56·1	71·6	62·7	·452	56·1	63	
,, ,, .	17th ...	·090	68·0	80·0	24·0	56·0	72·2	65·0	·522	60·1	66	.....
,, ,, ...	18th ...	·094	68·9	80·9	24·0	56·9	70·9	64·6	·526	60·4	70	. ..

		Inches.
The mean 10 A.M. pressure of the seven days		30·059
The mean temperature of the seven days		68·9
The extreme variation of temperature		24·9
The maximum temperature		80·9
		%
The mean 10 A.M. relative humidity of the seven days		72
		Inches.
The total fall of rain from 12th to 18th January 1890		Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. Little,
For Meteorological Reporter to the Govt. of India.

Meteorological Office, India ;
The 20th January 1890.

Results of the Meteorological Observations taken at the Alipore Observatory from 12th to 18th January 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fair.	Temperature.				Hygrometry.				Wind.		Rain.	Weather.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1890.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Jan.	12th	135·1	8·5	29·952	66·6	77·8	20·9	56·9	62·7	0·521	60·1	81	WSW and calm ...	38	Nil	Chiefly clear, ≏, ∴
,,	13th	133 9	9·2	·950	68·1	79·0	21 7	57·3	63 8	·538	61 0	80	WSW and SW ...	81	,,	Clear, ≏, ∴
,,	14th	133 9	8·6	·942	68 5	79 3	18·8	60 5	63·4	·518	60 0	77	SW and NNE ...	48	,,	Chiefly clear, ≏, ∴
,,	15th	129·6	8·4	·975	66·1	77·5	22·0	55·5	60·5	·457	56·4	73	NNE and NNW ...	47	,,	Chiefly clear, ≏, ∴
,,	16th	129 3	9·2	30 002	65 9	78·6	23 0	55 6	60 4	·455	56 3	73	NW by N and calm	31	,,	Clear, ≏, ∴
,,	17th	124 9		·019	66 8	79 9	25 2	54·7	60·7	·451	56·0	69	NW by N and NNW	34	,,	Clear, ≏, ∴
,,	18th	129·4	8·9	·003	67 6	78·6	22 6	56·0	61·9	·479	57 8	71	NNW and SW by W	47	,,	Clear, ≏

	Inches.
The mean pressure of the seven days	29·978
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...	30·023
	Hours.
The total number of hours of bright sunshine	61·9
The maximum possible number of hours of sunshine	76·0
	°
The mean temperature of the seven days	67·1
The average temperature of the corresponding period for 24 years, S.-G.'s Office	67·1
The extreme variation of temperature	25·2
The maximum temperature	79 9
	Miles.
The highest velocity of the wind in one hour	9
	lbs.
The highest pressure of wind on one square foot	Not measurable.
	%
The mean relative humidity	75
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office	70
	Inches.
The total fall of rain from 12th to 18th January 1890	Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	0 03
The total fall from 1st to 18th January 1890	Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	0·14

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

≏ dew; = fog.

C. LITTLE,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;
Calcutta, the 20th January 1890.

MEMORANDUM.

For the week ending 4th January 1890, the returns of the principal Municipalities in Bengal disclosed the following particulars :—

1. Births were registered at the rate of 25·8 per 1,000 of population, and deaths at 23·7 per 1,000 as opposed to 24 and 27·9 per 1,000, respectively, during the preceding week ending 28th December 1889, indicating an improvement in the registration of births with a considerable falling off in that of deaths.

2. In the following Municipalities births and deaths were registered at the highest rates :—

Births.	Ratio per *mille.*	*Deaths.*	Ratio per *mille.*
Darjiling	51·9	Utterpara	84·9
Naraingunj	49·7	Poori	81·8
Durbhanga	40·1	Comillah	57·7
Monghyr	39·8	Naraingunj	53·8
Bhagulpore	38·0	Jessore	49·0
Utterpara	37·7	Hughli and Chinsurah	47·6
Chupra	36·2	Burdwan	44·2
Arrah	32·3	Serampore	39·3
Bali	31·6	Darjiling	37·0
Serampore	31·4	Ranaghat	35·9
Comillah	30·8	Rampore Bauleah	31·5
		Chittagong	30·5

3. The subjoined table gives the death-rates from the following specific diseases. The figures denote that, as compared with the results of the preceding week, there was a diminution of mortality from all the diseases excepting small-pox, *vide* figures below :—

	Ratio per *mille* during the weeks ending—	
	4th January 1890.	28th December 1889.
Cholera	2·2	3·2
Small-pox	·5	·4
Fever	9·8	10·4
Bowel-complaints	3·6	4·8
Injury	·2	·6
Other causes	7·3	8·4

4. Of the diseases mentioned above, while small-pox and bowel-complaints were noticeably fatal only in the Poori town, viz., at the rates of 14·7 and 12·5 per 1,000 of population, respectively, cholera, fever and the maladies classed under the head of "Other causes" caused the highest mortality in the following Municipalities :— .

Cholera.	Ratio per *mille.*	*Fever.*	Ratio per *mille.*	*Other causes.*	Ratio per *mille.*
Jessore	24·5	Poori	31·5	Utterpara	37·7
Comillah	19·2	Burdwan	27·4	Poori	21·0
Chittagong	18·8	Rampore Bauleah ...	23·6	Serampore	19·6
Naraingunj	16·6			Comillah	19·2
Hughli and Chinsurah ...	11·5			Midnapore	13·9
Dacca	4·5			Burdwan	12·2
				Hughli and Chinsurah ...	11·5
				Bhagulpore	10

5. It is observable that Poori continues to suffer very severely from small-pox which first appeared in the town a fortnight ago.

6. The mortality of the week classified under the heads of *Sex*, *Class* and *Age* stood as follows :—

According to Sex.	Ratio per *mille.*	*According to Class.*	Ratio per *mille.*	*According to Age.*	Ratio per *mille.*
Males	25·0	Hindus	23·6	Under 1 year ...	202·8
Females	22·3	Mahomedans ...	24·2	1 and under 5 years ...	20·7
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the tolal male and female population	114	Buddhists	51·4	5 „ 10 „ ...	13·7
		Other classes ...	76·8	10 „ 15 „ ...	6·5
				15 „ 20 „ ...	16·1
				20 „ 30 „ ...	13·5
				30 „ 40 „ ...	18·1
				40 „ 50 „ ...	15·0
				50 „ 60 „ ...	28·2
				60 years and upwards ...	69·6

The 20th January 1890.

W. H. Gregg, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

Statement showing the Results of the Registration of Births and Deaths in the principal Municipalities in Bengal during the week ending 4th January 1890.

1	2	3			4			5			6	7							8						9	10		11		12
		POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—																		
												Disease.															Sex.			
					NUMBER OF—			RATIO PER 1,000 OF POPULATION PER ANNUM.				DEATHS FROM—							RATIO PER 1,000 OF POPULATION PER ANNUM.												
DISTRICTS.	NAMES OF MUNICIPALITIES.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	DEATHS.		RATIO PER 1,000 OF POPULATION PER ANNUM.		Ratio of male deaths to every 100 female deaths, calculated on the proportion which mortality bears to the total male and female population.
																											Males.	Females.	Males.	Females.	
Burdwan ...	Burdwan	18,063	16,017	34,080	7	10	17	10·7	15·2	25·9	70	...	...	19	3	..	8	29	...	...	27·4	4·6	..	12·2	44·2	33·6	17	12	48·9	34·0	141
Midnapore ...	Midnapore ...	16,927	16,633	33,560	9	4	13	13·9	6·2	20·1	225	...	...	6	2	...	9	17	...	...	9·3	3·1	..	13·9	26·3	24·8	7	10	21·5	31·3	68
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	10	7	17	16·4	11·5	27·9	142	7	...	9	6	...	7	29	11·5	...	14·8	9·8	...	11·5	47·6	44·3	10	19	32·8	62·4	52
Serampore ...	Serampore ..	13,559	12,937	26,496	8	8	16	15·7	15·7	31·4	100	1	1	3	4	1	10	20	2·0	2·0	5·9	7·8	2·0	19·6	39·3	68·7	13	7	49·9	28·1	175
	Utterpara	3,046	2,464	5,510	4	...	4	37·7	...	37·7	No female birth.	...	...	3	2	...	4	9	...	...	28·3	18·9	...	37·7	84·9	56·6	5	4	85·4	84·4	101
Howrah ..	Howrah	53,153	37,660	90,813	13	21	34	7·4	12·0	19·5	62	2	...	14	12	...	15	43	1·1	...	8·0	6·9	...	8·6	24·6	31·5	23	20	22·5	27·6	81
	Bali	7,836	6,979	14,815	3	6	9	10·5	21·1	31·6	50	...	...	5	2	...	1	8	..	..	17·5	7·0	...	3·5	28·1	21·1	5	3	33·2	22·4	150
Nuddea ..	Kishnaghur ..	13,263	14,214	27,477	10	1	11	18·9	1·9	20·8	1,000	...	...	4	...	...	3	7	..	...	7·5	...	...	5·7	13·2	9·5	5	2	19·6	7·3	271
	Ranaghat	4,028	4,655	8,683	2	3	5	11·9	18·0	29·9	66	2	...	2	...	...	2	6	11·9	...	11·9	..	...	11·9	35·9	53·9	2	4	25·8	44·7	57
	Santipore	13,705	15,979	29,687	5	1	6	8·8	1·7	10·5	500	...	...	4	2	...	1	7	...	..	7·0	3·5	...	1·7	12·3	15·8	5	2	19·0	6·5	316
Jessore ..	Jessore	4,830	3,665	8,495	2	...	2	12·2	...	12·2	No female birth.	4	...	9	1	1	12		2·5	...	19·4	..	...	6·1	49·0	61·2	3	5	32·3	70·9	45
Rajshahye ...	Rampore Beauleah.	10,766	9,025	19,791	6	5	11	15·8	13·1	28·9	120	1	...	9	1	1	12		2·6	..	23·6	2·6	2·6	...	31·5	28·9	6	6	29·0	34·6	86
Darjiling ..	Darjiling	4,579	2,439	7,018	2	5	7	14·8	37·0	51·9	40	.	...	3	1	...	1	5	...	...	22·2	7·4	...	7·4	37·0	51·9	4	1	45·4	21·3	214
Dacca ...	Dacca	42,782	37,379	80,161	19	15	34	12·3	9·7	22·1	126	7	.	8	9	...	14	38	4·5	.	5·2	5·8	...	9·1	24·7	36·3	16	22	19·4	30·6	63
	Naraingunj ...	7,805	4,956	12,561	6	6	12	24·8	24·8	49·7	100	4	...	3	3	...	3	13	16·6	...	12·4	12·4	...	12·4	53·8	62·1	7	6	47·9	63·0	74
Chittagong ...	Chittagong ..	13,340	8,790	22,130	6	6	12	14·1	14·1	28·2	100	8	.	2	2	.	1	13	18·8	...	4·7	4·7	...	2·3	30·5	25·2	11	2	42·9	11·8	382
Tipperah ..	Comillah	8,153	5,353	13,506	4	4	8	15·4	15·4	30·8	100	5	...	5	...	..	5	15	19·2	..	19·2	...	...	19·2	57·7	42·4	9	6	57·4	58·3	98
Patna	Patna City ..	78,762	51,475	130,237	23	19	42	7·5	6·1	13·6	121	3	2	10	5	...	9	29	1·0	·6	5·2	1·6	...	2·9	9·4	16·9	15	14	9·9	8·9	112
Gya	Gya	38,290	37,831	76,121	16	24	40	10·9	16·4	27·3	66	...	...	22	...	1	12	35	...	...	15·0	...	·7	8·2	23·9	30·1	23	12	31·2	16·5	194
Shahabad .	Arrah	20,960	22,505	43,465	14	13	27	16·7	15·6	32·3	107	...	1	8	2	...	...	11	...	1·2	9·6	2·4	...	..	13·2	20·3	5	6	12·4	13·9	92
Mozufferpore	Mozufferpore ...	23,084	19,658	42,742	7	3	10	8·5	3·6	12·2	233	..	...	...	2	1	1	4	...	...	...	2·4	1·2	1·2	4·9	21·9	1	3	2·3	7·9	33
Durbhanga .	Durbhanga ..	33,774	32,322	66,096	23	28	51	18·1	22·0	40·1	82	...	..	20	3	...	7	30	...		15·7	2·4	...	5·5	23·6	15·7	14	16	21·6	25·7	84
Sarun	Chupra	25,116	26,554	51,670	21	15	36	21·1	15·1	36·2	140	...	..	5	3	.	4	12	...	...	5·0	3·0	. .	4·0	12·1	14·1	6	6	12·4	11·7	109
Bhagulpore ...	Bhagulpore ..	29,640	27,813	57,453	24	18	42	21·7	16·3	38·0	133	...	...	9	1	...	11	21	...	...	6·1	·9	...	16·0	19·0	19·0	15	6	26·3	11·2	236
Monghyr ..	Monghyr	28,154	29,366	57,520	20	24	44	18·1	21·7	39·8	83	...	...	8	3	1	10	22	...	...	7·2	2·7	·9	9·0	19·9	27·3	13	9	24·0	15·9	169
Purneah ..	Purneah	8,463	6,553	15,016	2	5	7	6·9	17·3	24·2	40	...	...	2	...	...	...	2	...	..	6·9	..	...	..	6·9	31·2	2	...	12·3	...	No female death.
Poori	Poori	13,247	11,537	24,784	7	2	9	14·7	4·2	18·9	350	1	7	15	6	...	10	39	2·1	14·7	31·5	12·5	.	21·0	81·8	73·4	23	16	90·3	72·1	125
	Total ..	50,986	610,588	1,061,574	273	253	526	13·4	12·4	25·8	107	45	11	200	74	5	149	484	2·2	·5	9·8	3·6	·2	7·3	23·7	27·9	265	219	25·0	22·3	114

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Class. Deaths among— Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Ratio per 1,000 of Population per annum. Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan	Burdwan	...	18	11	...	...	...	39·5	55·7	..	...
Midnapore	Midnapore	..	9	8	...	...	...	15·0	67·6	...	...
Hooghli	Hooghli and Chinsurah	..	23	6	...		...	47·3	50·6	...	...
Serampore	Serampore	...	12	1	...	...		39·2	55·4	...	...
	Utterpara	..	8	1	...	...	...	78·1	262·6	..	..
Howrah	Howrah	...	28	14	...	1		21·4	35·5	..	215·8
	Bali	..	7	1	...	...	...	27·1	39·7	...	..
Nuddea	Kishnaghur	...	5	2	...	...	...	14·0	12·6	...	...
	Ranaghat	..	2	4	...	...	...	14·2	152·4	..	...
	Santipore	..	6	1	...	...	...	15·1	5·8	...	...
Jessore	Jessore	...	5	3	...	...	...	57·6	40·8	...	...
Rajshahye	Rampore Beauleah	..	4	8	...	...	...	21·0	42·4	...	...
Darjiling	Darjiling	...	5	...	...	...	...	56·6	...	...	...
Dacca	Dacca	...	25	13	..	...	...	32·3	17·2	...	...
	Naraingunj	..	4	9	...	...	...	32·9	76·0	..	...
Chittagong	Chittagong	..	1	10	2	...	...	9·0	34·0	4·3·4	..
Tipperah	Comillah	...	6	9	...	...	...	52·5	63·3	...	...
Patna	Patna City	..	25	4	...	...	...	10·9	5·1	...	...
Gya	Gya	...	31	4	...	...	...	23·9	12·9	...	..
Shahabad	Arrah	...	9	2	...	...	...	15·1	8·4	...	...
Mozufferpore	Mozufferpore	...	1	3	...	...	...	1·7	12·5	...	...
Durbhanga	Durbhanga	...	20	10	...	...	...	21·5	23·6	...	...
Saran	Chupra	...	11	1	...	...	...	14·4	4·4	...	...
Bhagulpore	Bhagulpore	...	16	5	...	...	...	20·9	15·1	...	...
Monghyr	Monghyr	...	16	6	...	...	...	18·6	24·8	...	...
Purneah	Purneah	...	1	1	...	...	...	5·7	9·2	...	...
Poori	Poori	...	39	...	...	...	...	82·7	...	...	...
	TOTAL	..	344	137	2	1	...	23·6	24·2	51·4	76·8

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Age. Deaths. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan	Burdwan	7	3	4	1	1	2	1	1	1	8
Midnapore	Midnapore	2	...	..	.	1	2	2	3	1	6
Hooghli	Hooghli and Chinsurah	6	3	4	..	3	4	3	1	3	2
Serampore	Serampore	5	1	...	1	1	3	5	2	2	...
	Utterpara	4	...	...	...	...	3	1		...	1
Howrah	Howrah	11	6	2	..	1	5	9	2	2	5
	Bali	2	...	1	..		...	1	1	...	3
Nuddea	Kishnaghur	2		...	...	.	1	1	...	1	2
	Ranaghat	2	...	...	..	...	1		2	1	...
	Santipore	1	1	...	1	...	1	..	...	...	3
Jessore	Jessore	1	1	.	1	...	...	2	2	1	...
Rajshahye	Rampore Beauleah	1	1	2	..	1	1	2	...	...	4
Darjiling	Darjiling	.	1	..	...	...	1	1	1	1	..
Dacca	Dacca	4	1	3	2	5	7	4	4	3	5
	Naraingunj	2	3	1	1	...	2	1	2	1	.
Chittagong	Chittagong	...			1	...	1	6	1	2	2
Tipperah	Comillah	5	1	...	..	...	3	2	2	...	2
Patna	Patna City	6		...	1	2	5	5	2	4	4
Gya	Gya	5	3	1	...	3	1	4	3	5	10
Shahabad	Arrah	2	1	1	...			...	3	...	4
Mozufferpore	Mozufferpore	1	..	1	...	...	...	...	...	2	...
Durbhanga	Durbhanga	6	...	4	...	2	5	3	1	6	3
Saran	Chupra	6	...	...	...	3	...	1	...	...	2
Bhagulpore	Bhagulpore	6	2	...	...	2	3	1	..	1	6
Monghyr	Monghyr	7	2	2	2	...	2	1	...	...	6
Purneah	Purneah	...	...	...	...	...	.	...	...	...	2
Poori	Poori	5	7	3	1	...	2	5	3	5	8
	TOTAL	99	37	29	12	25	55	61	36	42	88

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Age. Ratio per 1,000 of Population per annum. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan	Burdwan	551·5	69·1	89·2	20·7	16·6	19·1	7·5	11·8	21·2	280·7
Midnapore	Midnapore	140·0		...	...	16·5	14·2	15·9	41·9	25·2	170·5
Hooghli	Hooghli and Chinsurah	388·5	70·3	72·1	...	62·2	33·5	27·3	12·5	60·0	50·2
Serampore	Serampore	366·2	28·5	...	23·4	2·.·8	29·0	5·.·3	30·8	64·3	...
	Utterpara	1,291·9	...		...	...	135·5	49·0	..	.	200·0
Howrah	Howrah	277·3	56·3	16·5	...	7·1	11·5	24·3	8·8	18·9	69·3
	Bali	287·3		45·8	...	...	...	18·6	26·9	..	213·1
Nuddea	Kishnaghur	209·7	...	...	...	...	10·8	12·1	...	24·7	60·2
	Ranaghat	50·.·4	...	...	...	.	34·5	...	103·6	71·8	.
	Santipore	61·5	17·9	...	17·9	...	10·6	...	..	.	79·4
Jessore	Jessore	268·0	105·3	...	76·2	..	...	68·0	99·0	92·4	
Rajshahye	Rampore Beauleah	129·1	30·7	50·0	...	31·3	12·5	28·9	...	...	216·0
Darjiling	Darjiling	...	80·9	..	..	...	26·0	36·3	75·1	213·1	...
Dacca	Dacca	109·6	7·1	15·7	13·1	35·6	23·8	17·8	24·8	33·9	46·7
	Naraingunj	372·8	136·8	39·4	45·8	...	39·0	24·3	74·7	66·5	...
Chittagong	Chittagong	...	..	...	2·.·2	..	11·2	9·.·5	23·0	96·9	130·7
Tipperah	Comillah	575·4	39·8	...	..	...	56·5	52·2	79·1	...	153·4
Patna	Patna City	72·4	...	...	3·6	9·3	9·0	11·2	5·5	14·7	15·1
Gya	Gya	145·3	24·6	7·4	...	29·8	3·.·5	16·3	16·0	39·6	101·0
Shahabad	Arrah	80·7	11·7	1·.·1	...	. .	. .	...	33·3	...	72·1
Mozufferpore	Mozufferpore	54·5	...	11·6	...	...	...	...	...	32·0	...
Durbhanga	Durbhanga	200·4	...	26·6	.	25·9	19·3	14·0	7·0	71·1	48·8
Saran	Chupra	221·1	...	...	...	44·9	...	6·7	...	...	30·6
Bhagulpore	Bhagulpore	261·3	19·2	...	...	.24·9	14·3	5·6	...	12·2	86·6
Monghyr	Monghyr	245·1	16·7	14·7	13·1	...	10·1	5·8	...	...	87·0
Purneah	Purneah	...	...	...	...	...	...	...	..	...	128·
Poori	Poori	653·1	202·6	69·6	27·7	...	19·7	64·2	46·9	116·5	230·3
	TOTAL	202·8	20·7	13·7	6·5	16·1	13·5	13·1	15·0	28·2	69·6

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,
The 20th January 1890.

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing Quantities of Goods carried during the month of October 1889.

ORISSA CIRCLE.

TALDUNDA CANAL SYSTEM.

LENGTH OF CANAL OPEN { TALDUNDA CANAL, 27 MILES. / MACHGONG „ 4 „

Number of Boats or Rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
3	1. Grain ...	.....	26	26	725	26	725	
..	2. Cotton ...	.....	.....	.....	.....	.....	.....	
...	3. Oilseeds ...	.....	.....	.....	.....	.....	.....	
3	4. Salt ...	.....	34	34	3,290	34	3,290	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
22	7. Building materials	.....	390	390	465	10	60	
...	8. Miscellaneous ...	.....	.....	.....	.....	.....	.....	
1	9. Fuel ...	.....	9	9	60	9	60	
aft	10. Timber No.	.....	1	1	2	1	2	
afts	11. Bamboos „	.....	3,000	3,000	50	3,000	50	
9 & afts.	12. Total ...	..... /	459 & 3,001 No.	459 & 3,001 No.	4,592	79 & 3,001 No.	4,187	
2 & rafts.	13. Total of same month last year.	12 /	255 & 6,017 No.	267 & 6,017 No.	9,305	267 & 6,017 No	9,305	

	Up.	Down.	Total.
Total number of boats plying cargo No.	.....	29	29
Total number of boats plying passenger No.	10	3	13
Total empty boats	30	10	40
Total registered tonnage, cargo, private Tons	.....	150	150
Ditto ditto, Government Tons	.....	626	626
Total registered tonnage, passenger Tons	294	10	304
Ditto ditto, empty Tons	319	235	554
Ton-mileage ...	5,617	11,287	16,904
Estimated value of cargo Rs.	.....	4,540	4,540
Number of passengers ...	8	599	607
Rafts, bamboos No.	.....	3,000	3,000
Do., bullahs „	.....	1	1
Estimated value of rafts Rs.	.....	52	52
Tollage on boats „	64-4-0	138-7-0	202-11-0
Compounded tollage on boats Rs.	.....	.....	.....
Tollage on rafts „	.....	1-15-6	1-15-6
Two boats' demurrage for 60 days ...	.....	.....	26-0-0
Total tollage on boats per ton-mile Rs.	.....	.....	0-0-2·30
Total tollage on rafts per 100 cubic feet Rs.	.....	.....	.....

	Rs. A. P.
Total tollage of month—24 + 25 + 26 + 26½ ...	230 10 6
Total tollage of same month last year ...	207 12 6

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ..	4 11 0
2. Tollage per month ...	230 10 6
3. Total ...	235 5 6
4. Amount credited in the accounts of the month ...	235 5 6
5. Balance due at the end of the month....	.....

KENDRAPARA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 75 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
91	1. Grain ...	253	695	948	64,350	948	64,350	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
8	3. Oilseeds ...	4	68	72	7,300	72	7,300	
13	4. Salt ...	7	33	40	2,270	40	2,270	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
47	7. Building materials	3	810	813	8,750	456	7,620	
69	8. Miscellaneous ...	423	293	716	37,960	697	28,860	
8	9. Fuel ...	25	.....	25	80	25	80	
18 rafts	10. Timber ...	126 c. ft.	1,542 c. ft.	1,688 c. ft.	250	1,668 c. ft.	250	
...	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
236 & 18 rafts.	12. Total ...	715 & 126 c. ft.	1,899 & 1,542 c. ft.	2,614 & 1,668 c. ft.	1,20,960	2,238 & 1,668 c. ft.	1,10,730	
253	13. Total of same month last year.	984	1,160	2,144	2,82,250	2,144	2,82,250	

	Up.	Down.	Total.
4. Total number of boats plying cargo No.	102	134	236
5. Total number of boats plying passenger No.	55	55	110
5½. Ditto empty boats „	136	144	280
6. Total registered tonnage, cargo, private Tons	1,458	2,582	4,040
6½. Ditto ditto, Government „	21	666	687
7. Total registered tonnage, passenger Tons	1,881	1,893	3,774
7½. Ditto ditto empty boats „	952	578	1,530
8. Ton-mileage ...	191,870	235,680	427,550
9. Estimated value of cargo Rs.	28,230	92,480	1,20,710
0. Number of passengers ...	3,254	3,289	6,543
1. Rafts, bamboos C. ft.	.....	.....	.....
2. Do., timber „	126	1,542	1,668
3. Estimated value of rafts Rs.	50	200	250
4. Tollage on boats „	1,844-3-5	2,600-6-11	4,444-10-4
5. Compounded tollage on boats Rs.	.....	.....	.....
6. Tollage on rafts „	1-1-6	9-3-10	10-8-4
7. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-2
8. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-10-1

	Rs.	A.	P.
Total tollage of month—24 + 25 + 26 ...	4,455	2	8
Total tollage of same month last year ...	4,368	1	6

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month ...	3,897	3	10
2. Tollage per month ...	4,455	2	8
3. Total ...	8,352	6	6
4. Amount credited in the accounts of the month ...	4,033	5	7
5. Balance due at the end of the month ...	4,319	0	11

HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 33 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
47	1. Grain ...	165	4	169	8,960	169	8,960	
2	2. Cotton ...	.....	7	7	1,900	7	1,900	
23	3. Oilseeds ...	111	.....	111	9,360	111	9,360	
30	4. Salt ...	.....	82	82	6,930	82	6,930	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
37	7. Building materials	71	224	295	1,140	71	750	
35	8. Miscellaneous ...	84	27	111	9,050	111	9,050	
8	9. Fuel ...	62	.....	62	190	62	190	
rafts.	10. Timber ...	5,826 c. ft.	.....	5,826 c. ft.	900	5,826 c. ft.	900	
...	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
182 & rafts.	12. Total	493 & 5,826 c. ft.	344	837 & 5,826 c. ft.	38,430	613 & 5,826 c. ft.	38,040	
284	13. Total of same month last year ...	824	239	1,063	56,830	1,063	56,830	

	Up.	Down.	Total.
Total number of boats plying cargo No.	114	68	182
Total number of boats plying passenger No.	11	5	16
Ditto empty boats „	66	98	164
Total registered tonnage, cargo, private Tons	923	268	1,191
Ditto ditto, Government „	.....	445	445
Total registered tonnage, passenger Tons	47	21	68
Ditto empty boats „	255	362	617
Ton-mileage ...	35,655	21,375	57,030
Estimated value of cargo Rs.	24,120	13,410	37,530
Number of passengers ...	45	28	73
Rafts, bamboos C. ft.	.....	.....	.....
Do., timber „	5,826	.....	5,826
Estimated value of rafts Rs.	900	.....	900
Tollage on boats „	304-13-4	167-2-6	471-15-10
Compounded tollage on boats Rs.	.....	.....	.....
Tollage on rafts „	96-4-9	.....	96-4-9
Total tollage on boats per ton-mile Rs.	.....	.....	0-0-1 6
Total tollage on rafts per 100 cubic feet Rs.	.....	.....	1-10-5

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	568 4 7
Total tollage of same month last year	659 2 6

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month	132 12 9
2. Tollage per month ...	568 4 7
3. Total ...	701 1 4
4. Amount credited in the accounts of the month	630 2 10
5. Balance due at the end of the month ...	70 14 6

HIGH LEVEL CANAL, RANGE II.

LENGTH OF CANAL OPEN, 12½ MILES.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
20	1. Grain ...	51½	7	58½	2,409	58½	2,409	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
...	3. Oilseeds ...	.....	.....	.....	.....	.....	.....	
1	4. Salt ...	.....	4	4	560	4	560	
10	5. Piece-goods ...	.....	11	11	3,080	11	3,080	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
45	7. Building materials	21½	332	353½	402	.....	.....	
7	8. Miscellaneous ...	2½	22	24½	2,254	24½	2,254	
4	9. Fuel ...	.....	12	12	33	3	6	
3 rafts	10. Timber ...	.....	3,204 c. ft.	3,204 c. ft.	1,602	3,204 c. ft.	1,602	
...	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
87 & 3 rafts.	12. Total ...	75½	388 & 3,204 c. ft.	463½ & 3,204 c. ft.	10,340	101 & 3,204 c. ft.	9,911	
125 & 3 rafts.	13. Total of same month last year.	265	237½ & 53 No.	502½ & 53 No.	20,703	410½ & 53 No.	20,622	

	Up.	Down.	Total.
4. Total number of boats plying cargo ... No.	22	65	87
5. Total number of boats plying passenger No.	2	3	5
6. Ditto empty boats ,,	53	18	71
8. Total registered tonnage, cargo and boat Tons	109	94	203
8½. Ditto Govt. boat ditto ,,	43	682	725
7. Total registered tonnage, passenger Tons	4	5	9
7½. Ditto empty ditto ,,	309	45	354
8. Ton-mileage ...	5,192	8,640	13,832
9. Estimated value of cargo Rs.	2,439	6,299	8,738
10. Number of passengers ...	249	199	448
11. Rafts, bamboos C. ft.	.....	.....	.....
12. Do., bullahs ,,	.....	3,204	3,204
13. Estimated value of rafts Rs.	.....	1,602	1,602
14. Tollage on boats ,,	55-8-0	143-12-0	199-4-0
15. Compounded tollage on boats Rs.	.....	.....	.....
16. Tollage on rafts ,,	.....	25-13-3	25-13-3
17. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-2·76
18. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-12-10

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	225 1 3
Total tollage of same month last year ...	192 6 6

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	27 3 9
2. Tollage per month ...	225 1 3
3. Total ...	252 5 0
4. Amount credited in the accounts of the month ...	252 5 0
5. Balance due at the end of the month ...	.....

HIGH LEVEL CANAL, RANGE III.

LENGTH OF CANAL OPEN, 19 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
12	1. Grain ...	27½	4½	32	1,664	32	1,664	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
...	3. Oilseeds ...	.....	.....	.....	.....	.....	.....	
2	4. Salt ...	...	6½	6½	744	6½	744	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	.....	...	.....	
15	7. Building materials	.....	135	135	234	.....	.....	
2	8. Miscellaneous ...	.....	9	9	1,812	9	1,812	
...	9. Fuel ...	.....	...	...	.....	.....	.....	
2 rafts	10. Timber ...	.....	180 c. ft.	180 c. ft.	78	180 c. ft.	78	
...	11. Bamboos ...	.....	.....	.....	...	.....	.....	
31 & rafts.	12. Total ...	27½	155 & 180 c. ft.	182½ & 180 c. ft.	4,532	47½ & 180 c.ft.	4,298	
59	13. Total of same month last year.	116	53½	169½	13,223	165½	13,210	

	Up.	Down.	Total.
1. Total number of boats plying cargo No.	11	20	31
2. Total number of boats plying passenger No.	.....	...	.....
3. Ditto empty ditto ,,	21	11	32
4. Total registered tonnage, cargo and boat Tons	55	40	95
5. Ditto Govt. ditto ,,	.....	270	270
6. Total registered tonnage, passenger Tons	.....	.....	.....
7. Ditto empty ditto ,,	125	26	151
Ton-mileage ...	1,155	1,676	2,831
Estimated value of cargo Rs.	1,301	3,153	4,454
Number of passengers ..	215	148½	363½
Rafts, bamboos C. ft.	.....	.....	.....
Do., bullahs ,,	.....	180	180
Estimated value of rafts Rs.	.....	78	78
Tollage on boats ,,	19-11-9	54-15-0	74-10-9
Compounded tollage on boats Rs.	.....	.....	.....
Tollage on rafts ,,	.....	1-14-0	1-14-0
Total tollage on boats per ton-mile Rs.	.....	.....	0-0-5·06
Total tollage on rafts per 100 cubic feet Rs.	.....	.....	1-0-8

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	76 8 9
Total tollage of same month last year	71 9 3

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	2 6 0
2. Tollage per month ...	76 8 9
3. Total ...	78 14 9
4. Amount credited in the accounts of the month ...	78 14 9
5. Balance due at the end of the month ...	.....

JAJEPORE CANAL.

LENGTH OF CANAL OPEN, 6½ MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
2	1. Grain ...	.....	7½	7½	380	7½	380	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
...	3. Oilseeds ...	.....	.....	.....	.....	.....	.....	
...	4. Salt ...	.....	.....	.....	.....	.....	.....	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
...	7. Building materials	.....	.....	.....	.....	.....	.....	
14	8. Miscellaneous ...	.....	5	5	280	5	280	
...	9. Fuel ...	.....	.....	.....	.....	.....	.....	
...	10. Timber ...	.....	.....	.....	.....	.....	.....	
...	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
16	12. Total ...	.....	12½	12½	660	12½	660	
23 & 15 rafts.	13. Total of same month last year.	128½ & 648 No.	.....	128½ & 648 No.	4,624	33½ & 648 No.	4,540	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	.....	16	16
15. Total number of boats plying passenger No.	1	2	3
15½. Ditto empty boats „	16	2	18
16. Total registered tonnage, cargo and boat Tons	.....	25	25
16½. Ditto Govt. boat „	.....	.....	.....
17. Total registered tonnage, passenger Tons	2	4	6
17½. Ditto, empty boats „	.....	.....	.....
18. Ton-mileage ...	144	235	379
19. Estimated value of cargo Rs.	.....	660	660
20. Number of passengers ...	8	22	30
21. Rafts, bamboos C. ft.	.....	.....	.....
22. Do., bullahs „	.....	.....	.....
23. Estimated value of rafts Rs.	.....	.....	.....
24. Tollage on boats „	1-14-6	4-6-6	6-5-0
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	.....	.....	.....
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3·29
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	.....

	Rs.	A.	P.
Total tollage of month—24 + 25 + 26 ...	6	5	0
Total tollage of same month last year ...	32	7	6

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month ...	0	3	6
2. Tollage per month ...	6	5	6
3. Total ...	6	8	
4. Amount credited in the accounts of the month ...	6	8	
5. Balance due at the end of the month ...	.....		

SOUTH-WESTERN CIRCLE.

MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
950	1. Grain ...	5,124	344	5,468	3,05,012	5,468	3,05,012	
1	2. Cotton ...	.....	.....	.....	180	.....	180	* 10 mds.
16	3. Oilseeds ...	52	53	105	9,766	105	9,766	
69	4. Salt ...	.....	751	751	78,867	751	78,867	
4	5. Piece-goods ...	2	35	37	98,500	37	98,500	
8	6. Metal	46	20	66	62,246	66	62,246	
27	7. Building materials	97	21	118	856	118	856	
320	8. Miscellaneous ...	795	668	1,463	2,52,382	1,463	2,52,382	
24	9. Fuel ...	44	57	101	2,032	101	2,032	
86 rafts	10. Timber ...	36,205 c. ft.	94 c. ft.	36,299 c. ft.	9,545	36,299 c. ft	9,545	
1 raft	11. Bamboos ...	800 „	.....	800 „	48	800 „	48	
1,419 & 87 rafts.	12. Total ...	6,160 & 37,005 c. ft.	1,949 & 94 c ft.	8,109 & 37,099 c. ft	8,19,434	8,109 & 37,099 c ft.	8,19,434	
1,804 & 85 rafts.	13. Total of same month last year.	7,925 & 26,596 c. ft.	2,763 & 541 c. ft	10,688 & 27,137 c. ft.	11,20,048	10,688 & 27,137 c.ft.	11,20,048	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	1,124	295	1,419
15. Total number of boats plying passenger No.	607	739	1,346
15½. Ditto empty „	524	877	1,401
16. Total registered tonnage, cargo Tons	14,180	3,241	17,421
17. Total registered tonnage, passenger Tons	3,803	4,908	8,711
17½. Ditto empty „	1,942	3,758	5,700
18. Ton-mileage ..	425,125	231,004	656,129
19. Estimated value of cargo Rs.	4,18,141	3,91,700	8,09,841
20. Number of passengers ...	7,005	8,768	15,773
21. Rafts, bamboos C. ft.	800	.....	800
22. Do., bullahs „	36,205	94	36,299
23. Estimated value of rafts Rs	9,374	219	9,593
24. Tollage on boats „	6,737-3-0	3,541-6-9	10,278-9-9
25. Compounded tollage on boats Rs	.....	.....	.....
26. Tollage on rafts „	275-13-0	3-12-0	279-9-0
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-12-0

	Rs. A. P.
Total tollage of month—24+25+26 ...	10,558 2 9
Total tollage of same month last year ...	13,019 4 6

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month	4,499 12 10
2. Tollage per month ...	10,558 2 9
3. Total ...	15,057 15 7
4. Amount paid into Treasury during the month ...	12,150 1 6
5. Balance due at the end of the month ...	2,907 14 1

HIDGELLEE TIDAL CANAL.

LENGTH OF CANAL OPEN, 29 MILES.

Number of boats rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
337	1. Grain ...	2,056	... ...	2,056	1,03,208	2,056	1,03,208	
...	2. Cotton ...	..	... ..	.....	.....	.....	...	
6	3. Oilseeds ...	4	13	17	1,680	17	1,680	
25	4. Salt ...	... ..	194	194	21,490	194	21,490	
2	5. Piece-goods ...	... ..	5	5	5,200	5	5,200	
1	6. Metal ..	.....	...	.....	50	.....	50	
22	7. Building materials	24	103	127	1,050	127	1,050	
693	8. Miscellaneous ...	894	287	1,181	87,192	1,181	87,192	
7	9. Fuel ...	27	18	45	703	45	703	
rafts	10. Timber ...	1,694 c. ft.	2,209 c. ft.	3,903 c ft.	3,367	3,903 c ft	3,367	
...	11. Bamboos ...	.....	.....	.....	... ..	.....	... ..	
93 & rafts.	12. Total ..	3,005 & 1,694 c. ft.	620 & 2,209 c. ft.	3,625 & 3,903 c. ft.	2,23,940	3,625 & 3,903 c. ft	2,23,940	
415 & rafts.	13. Total of same month last year.	3,730 & 973 c. ft.	963 & 56 c ft	4,693 & 1,029 c. ft.	2,69,345	4,693 & 1,029 c. ft.	2,69,345	

	Up.	Down.	Total.
Total number of boats plying cargo No.	596	497	1,093
Total number of boats plying passenger No.	59	59	118
Total registered tonnage, cargo Tons	6,159	3,351	9,510
Total registered tonnage, passenger Tons	710	541	1,251
Ton-mileage	107,677	68,881	176,558
Estimated value of cargo Rs.	1,31,752	88,821	2,20,573
Number of passengers ...	2,031	1,760	3,791
Rafts, bamboos C. ft.	.....	.....	.....
Do., bullahs ,,	1,694	2,209	3,903
Estimated value of rafts Rs.	1,135	2,232	3,367
Tollage on boats ,,	1,882-15-9	1,208-9-6	3,091-9-3
Compounded tollage on boats Rs.	.....	0-5-6	0-5-6
Tollage on rafts ,,	17-13-0	65-6-3	83-3-3
Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3·3
Total tollage on rafts per 100 cubic feet Rs.	.....	.....	2-2-1

	Rs.	A.	P.
Total tollage of month—24 + 25 + 26 ...	3,175	2	0
Total tollage of same month last year	4,242	13	3

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month ...	1,744	15	6
2. Tollage per month ...	3,175	2	0
3. Total ...	4,920	1	6
4. Amount paid into Treasury during the month ..	3,176	12	9
5. Balance due at the end of the month	1,743	4	9

SONE CIRCLE.

PATNA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 86¼ MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
24	1. Grain ...	4	292	296	19,428	296	19,428	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
1	3. Oilseeds ...	1	5	6	1,164	6	1,164	
...	4. Salt ...	47	.....	47	5,312	47	5,312	
31	5. Piece-goods ...	166	5	171	31,933	171	31,933	
...	6. Metal ...	4	.....	4	1,380	4	1,380	
19	7. Building materials	.....	142	142	1,229	130	1,179	
62	8. Miscellaneous ...	264	272	536	73,972	309	73,294	
rafts ...	9. Fuel ..	.....	7	7	25	7	25	
	10. Timber ...	.....	4	4	33	4	33	
	11. Bamboos ...	.....	7	7	185	7	185	
137	12. Total ...	486	734	1,220	1,34,661	981	1,33,933	
141	13. Total of same month last year ...	433	1,036	1,469	1,61,876	1,129	1,59,380	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	60	77	137
15. Total number of boats plying passenger No.	5	8	13
15½. Ditto empty „	102	39	141
16. Total registered tonnage, cargo Tons	839	1,000	1,839
17. Total registered tonnage, passenger Tons	114	148	262
17½. Ditto empty „	348	230	578
18. Ton-mileage ...	54,396	88,784	143,180
19. Estimated value of cargo Rs.	45,694	88,724	1,34,418
20. Number of passengers ...	290	375	665
21. Rafts, bamboos C. ft.	.....	1,095	1,095
22. Do., bullahs „	.....	862	862
23. Estimated value of rafts Rs.	.....	243	243
24. Tollage on boats „	446-3-0	658-0-6	1,104-3-6
25. Compounded tollage on boats Rs.	75-0-0	75-0-0	150-0-0
26. Tollage on rafts „	.....	5-1-9	5-1-9
27. Total tollage on boats per ton-mile Rs	.....	.....	0-0-1·6
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-4-2

	Rs.	A.
Total tollage of month—24 + 25 + 26 ...	1,259	5
Total tollage of same month last year ...	1,478	11

Memorandum of Tollage.

	Rs.	A.
1. Balance not recovered on the 1st of the month ...	421	9
2. Tollage per month ...	1,259	5
3. Total ...	1,680	14
4. Amount credited in the accounts of the month	1,545	2
5. Balance due at the end of the month ...	135	11

ARRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
19	1. Grain ...	2	121	123	9,864	123	9,864	
1	2. Cotton ...	3	.....	3	2,980	3	2,980	
4	3. Oilseeds ...	1	67	68	7,604	68	7,604	
24	4. Salt ...	221	.....	221	26,758	221	26,758	
...	5. Piece-goods	21	4	25	39,100	25	39,100	
...	6. Metal ...	1	.....	1	380	1	380	
19	7. Building materials	1	171	172	520	143	400	
92	8. Miscellaneous ...	64	738	802	54,059	330	53,566	
3	9. Fuel ...	.....	57	57	800	57	800	
...	10. Timber ...	.....	2	2	209	2	209	
Rafts	11. Bamboos	.....	13	13	200	13	200	
	Firewood ...	.....	164	164	674	164	674	
162	12. Total ...	314	1,337	1,651	1,43,148	1,150	1,42,535	
123	13. Total of same month last year.	477	740	1,217	1,38,656	1,131	1,36,540	

	Up.	Down.	Total.
Total number of boats plying cargo No.	37	125	162
Total number of boats plying passenger No.	1	4	5
Total number of empty boats No.	100	50	150
Total registered tonnage, cargo Tons	538	2,009	2,547
Total registered tonnage, passenger Tons	69	81	150
Total registered tonnage, empty Tons	441	210	651
Ton-mileage ...	46,838	103,263	150,101
Estimated value of cargo Rs.	79,915	62,359	1,42,274
Number of passengers ...	950	1,040	1,990
Rafts, bamboos C.ft.	.....	2,050	2,050
Do., bullahs „	.....	.....	.....
Do., firewood „	.....	12,350	12,350
Estimated value of rafts Rs.	.....	874	874
Tollage on boats „	289-6-9	613-10-0	903-0-9
Compounded tollage on boats Rs.	164-0-0	164-0-0	328-0-0
Tollage on rafts „	.....	17-13-6	17-13-6
Total tollage on boats per ton-mile Rs.	.....	.....	0-0-1·57
Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-1-11

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	1,248 14 3
Total tollage of same month last year ...	1,185 6 3

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month	435 10 6
2. Tollage per month ...	1,248 14 3
3. Total ...	1,684 8 9
4. Amount credited in the accounts of the month	1,387 14 0
5. Balance due at the end of the month ...	296 10 9

BUXAR CANAL SYSTEM.

LENGTH OF CANAL OPEN, 67 MILES.

ber of ats.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
6	1. Grain ...	.....	122	122	7,994	122	7,994	
	2. Cotton ...	.....	.....	.....	.....	.....	.....	
3	3. Oilseeds ...	.....	70	70	6,943	70	6,943	
	4. Salt ...	2	.....	2	432	2	432	
	5. Piece-goods ...	7	1	8	10,910	8	10,910	
	6. Metal ...	1	.....	1	690	1	690	
0	7. Building materials	.....	142	142	845	.....	.....	
0	8. Miscellaneous ...	27	244	271	19,790	271	19,790	
	9. Fuel ...	.....	.....	.....	.....	.....	.....	
fts	10. Timber ...	.....	48	48	345	48	345	
	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
9	12. Total ...	37	627	664	47,949	522	47,104	
7	13. Total of same month last year.	134	861	895	91,052	895	91,052	

	Up.	Down.	Total.
otal number of boats plying cargo No.	2	37	39
otal number of boats plying passenger No.	10	9	19
Ditto empty „	24	7	31
otal registered tonnage, cargo Tons	40	803	843
otal registered tonnage, passenger Tons	270	243	513
Ditto empty „	92	24	116
on-mileage ...	4,674	17,496	22,170
stimated value of cargo Rs.	13,738	33,866	47,604
umber of passengers ...	749	712	1,461
afts, bamboos C. ft.	.....	.....	.....
Do., bullahs „	.....	3,636	3,636
stimated value of rafts Rs.	.....	345	345
ollage on boats „	24-10-3	208-15-9	233-10 0
ompounded tollage on boats Rs.	91-0-0	91-0-0	182-0-0
ollage on rafts „	.....	9-4-0	9-4-0
otal tollage on boats per ton-mile Rs.	.....	.....	0-0-3·5
otal tollage on rafts per 100 cubic feet Rs.	.....	.....	0-4-0

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	424 14 0
Total tollage of same month last year ...	628 2 6

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	54 4 0
2. Tollage per month ...	424 14 0
3. Total ...	479 2 0
4. Amount credited in the accounts of the month ...	457 9 0
5. Balance due at the end of the month ...	21 9 0

ABSTRACT FOR THE MONTH OF OCTOBER 1889 AS COMPARED WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR.

Canal.	Traffic, 1889-90.		Traffic, 1888-89.		Remarks.
	During the month.	To end of the month.	During the month.	To end of the month.	
Orissa Circle.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Taldunda Canal System ...	230 10 6	2,635 2 1	207 12 6	1,274 2 9	
Kendrapara Canal System	4,455 2 8	25,716 8 4	4,368 1 6	24,768 6 5	
High Level, Range I ...	568 4 7	3,967 1 3	659 2 6	3,373 13 9	
Ditto, „ II ...	225 1 3	1,702 1 6	192 6 6	1,464 5 3	
Ditto, „ III ...	76 8 9	813 8 6	71 9 3	715 11 0	
Jajepore Canal ...	6 5 0	50 5 8	32 7 6	39 5 6	
Total Orissa Circle ...	5,562 0 9	34,884 11 4	5,531 7 9	31,635 12 8	
South-Western Circle.					
Midnapore Canal ..	10,558 2 9	85,923 4 3	13,019 4 6	77,084 7 9	
Hidgellee Tidal Canal .	3,175 2 0	31,162 9 9	4,242 13 3	39,800 15 3	
Total South-Western Circle	13,733 4 9	1,17,085 14 0	17,262 1 9	1,16,885 7 0	
Sone Circle.					
Patna Canal System ...	1,259 5 3	15,691 9 6	1,478 11 6	16,288 15 0	
Arrah ditto ...	1,248 14 3	11,267 1 8	1,185 6 3	12,174 10 6	
Buxar ditto ...	424 14 0	4,097 12 5	628 2 6	5,655 2 0	
Total Sone Circle ...	2,933 1 6	30,966 7 7	3,292 4 3	34,118 11 6	
Grand Total ...	22,228 7 0	1,82,937 0 11	26,085 13 9	1,82,639 15 2	

GOVERNMENT TRANSPORT SERVICE.

Canal.	Traffic, 1889-90.						Traffic, 1888-89.					
	During the month.			To end of the month.			During the month.			To end of the month.		
	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total re
Orissa Circle.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs.
High Level	816	290	744 3 1	3,921	4,268	4,164 13 11	703	71	716 12 3	2,461	1,269	2,728
Total Orissa Circle ...	816	290	744 3 1	3,921	4,268	4,164 13 11	703	71	716 12 3	2,461	1,269	2,728

TOTAL NAVIGATION RECEIPTS.

Canal.	Earnings, 1889-90.		Earnings, 1888-89.		Remarks
	During the month.	To end of the month.	During the month.	To end of the month.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Orissa Canals ...	6,306 3 10	39,049 9 3	6,248 4 0	34,364 8 2	
Midnapore Canal ...	10,558 2 9	85,923 4 3	13,019 4 6	77,084 7 9	
Hidgellee Tidal Canal ...	3,175 2 0	31,162 9 9	4,242 13 3	39,800 15 3	
Sone Canals ...	2,933 1 6	30,966 7 7	3,292 4 3	34,118 11 6	
Total ...	22,972 10 1	1,87,101 14 10	26,802 10 0	1,85,368 10 8	

Calcutta,
The 21st January 1890.

G. A. G. Shawe,
Under-Secy. to the Govt. of Benga

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 18th January 1890, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 18th January 1890.			Week ending Saturday, the 19th January 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,673	4,01,615	7,255	1,803	4,62,560	8,717
Jute	188	1,41,075	2,484	211	1,31,950	2,401
Firewood	66	40,125	600	167	75,125	1,167
Other articles	766	2,04,505	2,752	1,169	2,36,615	3,754
Total ...	2,693	7,87,380	13,091	3,350	9,09,550	16,039

Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of November 1889, as compared with the same month of the previous year.

Staples.	1888		1889.		Total.		Increase.	Decrease.
	Up	Down.	Up.	Down.	1888.	1889.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	1,211	.....	1,213	.....	1,211	1,213	2	..
Cotton, raw	8	...	13	.....	8	13	5	... ..
Cotton piece-goods—								
1.—European	45	3	33	.....	48	33	.....	15
Grains—								
2.—Rice	54	416	48	6	470	54	.....	416
3.—Gram	1	...	...	4	1	4	3	. ...
4.—Others	5	33	10	10	38	20	...	18
Hides and skins—								
1.—Hides of cattle—								
b.—Undressed	... ..	2	.... .	11	2	11	9	. .
Jute—								
1.—Raw	.....	118	23	7	118	23	... ...	95
2.—Gunny bags and cloths	9	.. ...	7	1	9	8	. ...	1
Leather, manufactured	8	.....	5	.....	8	5	.....	3
Liquors—								
1.—Beer	1	.... .	.....	.....	1	. ....	... .	1
2.—Wines	1	.... .	.....	.....	1	.....		1
Metals—								
1.—Copper, unwrought	....	.. ...	.....	5	.....	5	5	.....
2.—Iron	1	.....	13	.....	1	13	12	... ..
4.—Others	1	5	1	.....	6	1	... .	5
Oils—								
1.—Castor	... ..	1	1	.....	1	1	.....	. ..
2.—Kerosine	3	.....	5	2	3	7	4	
3.—Others	4	.....	.....	.....	4	.. ...	.....	4
Oilseeds—								
1.—Linseed	....	20	.....	8	20	8	... ..	12
2.—Mustard and rape	16	.....	25	12	16	37	21	. ...
Provisions—								
1.—Ghee	. ....	.....	4	.....	.....	4	4	. ...
2.—Dried fruits and nuts	6	2	...	.....	8	.....	... .	8
3.—Others	7	. ....	2	4	7	6	.....	1
Paper and pasteboard	2	1	.....	.....	3	.....	.....	3
Railway plant and rolling-stock	109	26	37	30	135	67	.....	68
Salt	22	.....	45	.....	22	45	23	.....
Silk, raw—								
2.—Indian	.....	2	8	3	2	11	9	.....
Silk piece-goods—								
2.—Indian	.....	7	.....	3	7	3	.....	4
Stone and lime	10	. ....	6	.....	10	6	.....	4
Sugar—								
1.—Drained	15	. ..	3	.....	15	3	.....	12
2.—Undrained	1	....	6	.....	1	6	5	.....
Tobacco	. ...	.....	1	1	.....	2	2	.....
Timber	1	.....	3	.....	1	3	2	... .
Wool—								
1.—Raw	... ..	1	1	.....	1	1	.....	.....
b.—Indian	4	.....	.....	.....	4	.....	... .	4
All other articles of merchandise	60	20	42	31	80	73	... ..	7
Total ...	1,605	857	1,553	131	2,262	1,696	106	672

	Tons.
INCREASE.	
Hides and skins—	
(1) Hides of cattle—	
(*b*) Undressed	9
The increase is due to greater export.	
Metals—	
(2) Iron	12
Due to greater import for local consumption.	
Oilseeds—	
(2) Mustard and rape	21
Due to greater demand.	
Salt	28
Owing to sudden demand imported by rail.	
Silk, raw	
(2) Indian	9
Due to greater export to Europe.	
DECREASE.	
Cotton piece-goods—	
(1) European	15
This was imported by the steamer plying between Jeagunge and Calcutta.	
Grains—	
(2) Rice	416
This is due to less export from intermediate stations owing to less demand in North-Western Provinces this year.	
Jute—	
(1) Raw	95
This was despatched by boat.	
Oilseeds—	
(1) Linseed	12
Less exported owing to less demand.	
Railway plant and rolling-stock	68
Less Railway material was carried during the month.	
Sugar—	
(1) Drained	12
This is due to less demand, bazar being dull.	

R. G. MOOKERJEE,
Manager, Nalhati State Railway.

The 27th December 1889.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for the first 11 *days of January* 1890, *on* 1,525½ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period .	361,717	4,16,729 7 0	42,50,665 20	9,60,460 2 0	30,683 8 0	14,07,873 1 0	100,533½	146,312½	246,8
Or per mile of railway . ..	.....	273 2 9	.. ...	629 9 8	20 1 10	922 14 3	.....	.....	...
For previous weeks of half-year	...	.....	.....	... .	.....	.....	. ....	... ..	.....
Total for 11 days ...	361,717	4,16,729 7 0	42,50,665 20	9,60,460 2 0	30,683 8 0	14,07,873 1 0	100,533½	146,312½	246,8
COMPARISON.									
Total for corresponding first 12 days of previous year ...	384,947	4,61,374 12 6	49,06,786 30	10,94,156 3 7	26,814 5 5	15,82,345 5 6	111,242	179,594	290,
Per mile of railway corresponding period of previous year	.....	302 7 1	.....	717 3 10	17 9 3	1,037 4 3	.....	.....	.....
Total corresponding date of previous year	384,947	4,61,374 12 6	49,06,786 30	10,94,156 3 7	26,814 5 5	15,82,345 5 6	111,242	179,594	290,

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for the first 12 days of January 1889.			Receipts for the first 11 days of January 1890.			Total receipts from 1st April 1888 to 12th January 1889.			Total receipts from 1st April 1889 to 11th January 1890.			Total increase in 1890.	Total decrease 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,525½	15,82,345	1,037	1,525½	14,07,873	923	1,525½	3,41,22,071	546	1,525½	3,39,08,940	543	.....	153,13

PATNA-GYA STATE RAILWAY

Approximate Return of Traffic for the first 11 *days of January* 1890, *on* 57½ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic		Other earnings (estimated).	Total earnings	Traffic Train-miles run		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period ...	21,710	11,145 9 0	53,625 30	3,661 13 0	72 13 0	14,880 3 0	2,716	1,046	3,762
Or per mile of railway	380	194 13 8	937 30	64 0 3	1 4 4	260 2 3	..	.	.
For previous weeks of half-year	...	...	... ...	... ...	.....	... ...	..	...	...
Total for 11 days ...	21,710	11,145 9 0	53,625 30	3,661 13 0	72 13 0	14,880 3 0	2,716	1,046	3,762
Comparison									
Total for corresponding first 12 days of previous year ...	22,863	11,985 3 0	41,644 20	2,937 3 0	69 2 9	14,991 8 9	3,226	878	4,104
Per mile of railway corresponding period of previous year ...	400	209 8 6	780 20	51 5 7	1 3 4	262 1 5	..	...	..
Total to corresponding date of previous year	22,863	11,985 3 0	44,644 20	2,937 3 0	69 2 9	14,991 8 9	3,226	878	4,104

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for the first 12 days of January 1889.			Receipts for the first 11 days of January 1890.			Total receipts from 1st April 1888 to 12th January 1889.			Total receipts from 1st April 1889 to 11th January 1890.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	14,992	262	57½	14,880	260	57½	3,83,750	164	57½	3,97,311	169	13,561	.....

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for the first 11 *days of January* 1890, *on* 22¼ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the period ...	28,832	7,334 11 0	17,311 0	722 3 0	10 8 0	8,067 6 0	1,419	99	1,518
Or per mile of railway ..	.....	329 10 4	. ...	32 7 4	0 7 7	362 9 3	..	.....	.....
For previous weeks of half-year	.....	.....	... ..	...		...	.	.	.....
Total for 11 days ...	28,832	7,334 11 0	17,311 0	722 3 0	10 8 0	8,067 6 0	1,419	99	1,518
Comparison.									
Total for corresponding first 12 days of previous year	31,203	7,705 7 3	15,086 20	538 15 0	11 2 0	8,255 8 3	1,538	112	1,650
Per mile of railway corresponding period of previous year ..	.....	346 5 0	.....	24 3 7	0 8 0	371 0 7	...	..	..
Total to corresponding date of previous year	31,203	7,705 7 3	15,086 20	538 15 0	11 2 0	8,255 8 3	1,538	112	1,650

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for the first 12 days of January 1889.			Receipts for the first 11 days of January 1890.			Total receipts from 1st April 1888 to 12th January 1889.			Total receipts from 1st April 1889 to 11th January 1890.			Total increase in 1889.	Total decrease in 1889.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
22¼	8,256	371	22¼	8,067	363	22¼	2,15,138	236	22¼	2,12,063	232	.....	3,075

NALHATI STATE RAILWAY.

Approximate Return of Traffic for first 11 *days of January* 1890, *on* 27¼ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A P	Mds. S	Rs. A. P.	Rs. A. P.	Rs. A. P.			
affic for the first 11 days	4,553	1,692 0 0	29,324 0	1,884 0 0	31 0 0	3,357 0 0	800	399	1,199
mile of railway	167	60 0 0	1,076 0	62 0 0	1 0 0	123 0 0	.....	.....	.....
evious weeks of half-	..	.. ..	.	..	.....	...	...	... ..	.....
... ...									
al for one week	4,553	1,692 0 0	29,324 0	1,884 0 0	31 0 0	3,357 0 0	800	399	1,199
COMPARISON.									
or corresponding period vious year ..	5,053	1,913 0 0	24,731 0	1,266 0 0	22 0 0	3,201 0 0	872	762	1,634
of railway correspond eek of previous year .	185	70 0 0	908 0	46 0 0	1 0 0	117 0 0	.....	.....	.....
o corresponding date of us year	5,053	1,913 0 0	24,731 0	1,266 0 0	22 0 0	3,201 0 0	872	762	1,634

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

...TS FOR LAST 12 DAYS OF JANUARY 1889.			Receipts for last 11 days of January 1890.			Total receipts from 1st April 1889 to 12th January 1889			Total receipts from 1st April 1889 to 11th January 1890.		Total increase in 1889-90.	Total decrease in 1889-90.
Receipts.	Per mile worked	Mean mileage worked	Receipts.	Per mile worked	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts	Per mile worked per week.		
Rs	Rs		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
3,201	117	27¼	3,357	123	27¼	78,142	73	27¼	77,907	73	.....	535

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for first 11 *days of January* 1890, *on* 273 *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
affic for first 11 days ..	68,548	28,612 0 0	3,42,046 0	39,248 0 0	7,435 0 0	75,295 0 0	8,246	13,261	21,507
mile of railway ..	251	105 0 0	1,253 0	144 0 0	5 0 0	254 0 0*	.....	.....	.....
evious weeks of half-	.....	...	.. ..	.....	.. ..	..	.....	.....	.....
... .									
Total for one week ...	68,548	28,612 0 0	3,42,046 0	39,248 0 0	7,435 0 0	75,295 0 0	8,246	13,261	21,507
COMPARISON.									
for corresponding period evious year	63,107	22,470 0 0	2,28,770 0	20,114 0 0	4,558 0 0	47,142 0 0	9,215	9,080	18,295
le of railway correspond- week of previous year	231	82 0 0	838 0	74 0 0	1 0 0	157 0 0*	.....	.....	.....
to corresponding date of ious year	63,107	22,470 0 0	2,28,770 0	20,114 0 0	4,558 0 0	47,142 0 0	9,215	9,080	18,295

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

...IPTS FOR FIRST 12 DAYS OF JANUARY 1889			Receipts for first 11 days of January 1890			Total receipts from 1st April 1888 to 12th January 1889			Total receipts from 1st April 1889 to 11th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
n eage rked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
73	47,142	173	273	75 295	276	264·07	12,06,645	126	273	15,59,317	146	2,02,672	.....

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.
Approximate earnings for week ending 21st December 1889	7,007
Corresponding week last year	10,835
Decrease	3,828
Receipts from 1st July to 21st December 1889	2,76,214
From 1st July to 22nd December 1888	2,96,767
Decrease	20,553

Compared with 1887, there is an increase of Rs. 28,649 for the corresponding period.

	Miles.
Miles open week ending 21st December 1889	51
Corresponding week last year	51

	Rs.	A.	P.
Receipts per mile open week ending 21st December 1889	137	6	3
Corresponding week last year	212	7	4
Decrease	75	1	1

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 159A.

GENERAL.—*The 23rd January* 1890.—Sub-Lieutenant O. B. Griffiths, of the Calcutta Naval Volunteers, is allowed leave of absence for nine months, with effect from the 1st proximo.

Mr. F. H. Barrow, C.S., has been granted by Her Majesty's Secretary of State for India an extension of furlough for one month.

The 24th January 1890.—Baboo Mon Mohun Roy, Temporary Deputy Magistrate and Deputy Collector, Bankoora, is allowed leave for two months and fifteen days, under article 278(*a*) of the Civil Service Regulations, with effect from the date on which he may be relieved.

Baboo Nogendra Nath Pal Chowdry, Deputy Magistrate and Deputy Collector, Aurangabad, Gya, is transferred to the Sudder station of the district of Bankoora.

Baboo Ram Churn Lal, Deputy Magistrate and Deputy Collector, Muzufferpore, is transferred to the district of Gya, and is appointed to have charge of the Aurangabad subdivision of that district.

Mr. R. H. Renny, Assistant Commissioner, is transferred to the Sudder station of the district of Singbhoom.

Mr. E. F. Growse, Officiating Joint-Magistrate and Deputy Collector, Shahabad, is allowed furlough for eight months, under article 340 of the Civil Service Regulations, with effect from the 15th March 1890, or such subsequent date as he may avail himself of it.

Baboo Okhoy Coomar Chatterjee, Deputy Magistrate and Deputy Collector, Rajshahye, is vested with the powers of a Collector under Act X of 1870 in that district.

Mr. C. A. Wilkins, District and Sessions Judge, Bhugulpore, is allowed leave for seventeen days, under article 308 of the Civil Service Regulations, with effect from the 1st proximo.

Mr. F. E. Pargiter, Joint-Magistrate and Deputy Collector, Rajshahye, is appointed to act as District and Sessions Judge of Bhagulpore, during the absence, on leave, of Mr. C. A. Wilkins, or until further orders.

Baboo Bhubendra Nath Roy, Sub-Deputy Collector, Bhagulpore, is transferred to Monghyr with effect from the date on which he joined his appointment.

Baboo Bogola Prosunno Mozoomdar, Deputy Magistrate and Deputy Collector, Chandpore, Tipperah, is allowed leave for two months, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

The 25th January 1890.—The order of the 13th instant, transferring Baboo Gopi Krishna Lall, Sub-Deputy Collector, Godda, Southal Pergunnahs, to Singbhoom, is cancelled.

The 27th January 1890.—Baboo Radhica Lall Shome, Sub-Deputy Collector, Bishenpore, Bankoora, is allowed leave for ten days, under article 291 of the Civil Service Regulations, in extension of the leave granted to him under the order of the 10th ultimo.

In modification of the order of the 16th ultimo, Baboo Dhoneswar Mohapatra is appointed to act as Uriya Translator to Government, during the absence, on leave, of Baboo Chaturbhooj Patnaik, or until further orders.

The 28th January 1890.—Mr. G. W. Place, Joint Magistrate and Deputy Collector, Midnapore, acted as Magistrate and Collector of that district from the afternoon of the 13th to the forenoon of the 23rd instant.

Mr. C P. Caspersz, Joint-Magistrate and Deputy Collector, is appointed to act in the first grade of Joint-Magistrates and Deputy Collectors from the forenoon of the 16th instant up to the date on which he may receive charge of his appointment as Officiating Magistrate and Collector of Chittagong.

Baboo Benode Behari Sircar, Sub Deputy Collector, Burdwan, is allowed leave for six months, under article 369 of the Civil Service Regulations in extension of the leave granted to him under the order of the 6th August 1889.

Baboo Jogendra Nath Chuckerbutty, Sub-Deputy Collector, Midnapore, is transferred to the district of Burdwan.

Baboo Prankissen Das, Sub-Deputy Collector, Bishenpore, Bankoora, is transferred to the district of Midnapore.

Baboo Trailakhya Nath Bhuttacharjee, Temporary Sub-Deputy Collector, in charge of the Chupra Distillery in Sarun, is allowed leave for one week, under article 317 of the Civil Service Regulations, with effect from the 1st proximo.

POLICE.—*The 27th January* 1890.—Mr. R. F. G. Faussett is appointed to be an Inspector of Police of the first grade, with effect from the 1st December 1889, but will continue to act, until further orders, as an Assistant Superintendent of Police.

The 28th January 1890.—Mr. James Costello, Superintendent of the First Division, Town Police, is allowed privilege leave for three months, with effect from the 16th instant.

First class Inspector E. Robertson of the Calcutta Police is appointed to act as Superintendent of the First Division, Town Police, during the absence of Mr. J. Costello, on leave, or until further orders.

The services of Mr. A. Shuttleworth, Assistant Superintendent of Police, Backergunge, are placed at the disposal of the Government of India in the Home Department.

JAILS.—*The 18th January* 1890.—Mr. C. H. C. Sevenoaks, Superintendent of the Midnapore Central Jail, is allowed leave up to the 26th instant, under article 291 of the Civil Service Regulations, in extension of the leave granted to him under the order of the 4th ultimo.

ECCLESIASTICAL.—*The 22nd January* 1890.—The Revd. F. Orton, Senior Chaplain, Bengal, has been granted by Her Majesty's Secretary of State for India extension of leave for six months on medical certificate, with effect from the 30th December 1889.

The 23rd January 1890.—The Revd. W. Kitchin, Junior Chaplain, Bengal, has been granted by Her Majesty's Secretary of State for India extension of leave for six months on medical certificate, with effect from the 6th February 1890.

EDUCATION.—*The 27th January* 1890.—Baboo Romesh Chunder Sen, B.L., Officiating Law Lecturer, Chittagong College, is confirmed in that appointment, *vice* Baboo Satkari Haldar, resigned.

The 28th January 1890.—Baboo Nobin Chandra Dey, Law Lecturer, Patna College, is allowed leave without allowances for six months, in extension of the leave granted to him under the order of the 24th July 1889.

Baboo Kailash Chandra Sen, Assistant Inspector of Schools, Chittagong Division, is appointed temporarily as Assistant Inspector of Schools, Dacca Division, and is placed in charge of the current duties of the office of the Inspector of Schools, Eastern Circle, in addition to his own, *vice* Baboo Dina Nath Sen, on leave.

Baboo Bidyadhur Das, Deputy Inspector of Schools, Tipperah, is appointed to act as Assistant Inspector of Schools, Chittagong Division, during the absence, on deputation, of Baboo Kailash Chandra Sen, or until further orders.

MEDICAL.—*The 28th January* 1890.—Surgeon-Major R. L. Dutt, Civil Surgeon, Purneah, is appointed to act as Civil Surgeon of Midnapore, during the absence, on deputation, of Surgeon-Major A. Tomes, or until further orders, with effect from the date on which he joined his appointment.

The services of Surgeon W. H. B. Robinson, Officiating Civil Surgeon of Jessore, are replaced at the disposal of the Government of India in the Home Department.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 24th January, 1890.—With reference to the Government notification, dated the 17th December, 1889, published at page 1036, Part I of the *Calcutta Gazette* of the 18th idem, ordering a survey of the lands in thannas Satkania and Banskhali, in the district of Chittagong, the Lieutenant-Governor is pleased to appoint Mr. W. J. O'Sullivan, Surveyor, third grade, to be an Assistant Superintendent of Survey, under section 4 of the Bengal Survey Act V of 1875, for the purposes of the said survey.

P NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 24th January, 1890.—With reference to the Government notifications, dated the 16th April and the 17th May, 1889, Mr. F. A. Slack is appointed, under rule 1, chapter VI of the rules under the Bengal Tenancy Act, to be Settlement Officer, *vice* Baboo Durga Charan Ghose, Special Deputy Collector, and is deputed to settle all lands, with the exception of the island of Moheshkhal, which are the property of Government and are included in old thanna Ramoo in the district of Chittagong.

P NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 24th January, 1890.—With reference to the notification of the 17th December, 89, under section 3 of Act V (B.C.) of 1875, regarding the survery of lands in thannas atkania and Banskhali, in the district of Chittagong, the Lieutenant-Governor is pleased to appoint Mr. F. A. Slack to be the Superintendent of Survey under section 4 of the same Act for the purpose of carrying out the said survey.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 27th January, 1890.—With reference to the Government Notification, dated the 31st December, 1889, published at page 4, Part I of the *Calcutta Gazette* of the 1st January, 1890, ordering a survey of estate No. 1764, in the district of Backergunge, the Lieutenant-Governor is pleased to appoint Mr. J. McHatton, Surveyor, fourth grade, to be an Assistant Superintendent of Survey, under section 4 of the Bengal Survey Act V of 1875, for the purposes of the said survey.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 27th January, 1890.—In column 4 of Schedule II annexed to the Government Resolution of the 23rd May, 1888, on the subject of the preparation of price lists of staple food-crops under section 39 of the Bengal Tenancy Act VIII of 1885, published at pages 444-449, Part I of the *Calcutta Gazette* of the same date, *for* "Tajpore" *substitute* "Somastipore" against the Tajpore sub-division of the district of Durbhanga in the Patna Division.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 28th January, 1890.—With reference to the Government notification, dated the 28th April, 1888, ordering that a survey shall be made and a record of rights prepared, under section 101 of the Bengal Tenancy Act VIII of 1885, in respect of all lands included within the boundaries of estate No. 4657, Chur Badna, 2nd plot, in the district of Backergunge, Baboo Pyari Mohan Bose, Sub-Deputy Collector, is hereby appointed, under Rule 1, Chapter VI of the Rules made by Government under the said Act, to be the Settlement Officer of the estate, *vice* Baboo Grish Chundra Dutt, Deputy Collector, transferred.

P NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 28th January, 1890.—With reference to the Government notifications, dated the 31st July, 3rd September, and 13th November, 1888, directing that a survey shall be made and a record of rights prepared, under section 101 of the Bengal Tenancy Act VIII of 1885, in respect of all lands included within the boundaries of the estates—

No. 5225	...	Char Shambhoopura,
5226		Golokepura,
5285		Jaynugger,
52 9		Lamchipata,
2724		Taluq Biswanath Takurti, and
,, 5234	...	,, Pudma,

in the district of Backergunge, Baboo Pyari Mohun Bose, Sub-Deputy Collector, is hereby appointed, under Rule I, Chapter VI of the Rules made by Government under the said Act, to be Settlement Officer of those estates, *vice* Baboo Girish Chandra Datta, Deputy Collector, transferred.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 22nd January 1890.—Baboo Purna Chandra Roy, Deputy Collector, is appointed Deputy Collector of Income-tax in the district of Furreedpore, *vice* Mr. Nil Kanta Sarkar, and under section 40 of Act II of 1886 is vested with the powers of a Collector under the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 160A.

The 21st January 1890.—Shah Burhanooddeen Mozuffer Hossein, an Honorary Magistrate of the Sheikpoorah Bench, in the district of Monghyr, is vested with the powers of a Magistrate of the second class.

Baboo Jogendro Nath Ghose, Munsif of Contai, Midnapore, is promoted to the first grade of Munsifs, with effect from the 27th November 1889, *vice* Baboo Gopi Mohun Mookerjee, deceased.

Baboo Jadu Nath Ghose, Munsif of Commillah, Tipperah, is promoted to the first grade of Munsifs, with effect from the 1st instant, *vice* Baboo Har Chandra Das, retired.

Baboo Hari Nath Roy, Additional Munsif of Diamond Harbour, 24-Pergunnahs, is promoted to the second grade of Munsifs, with effect from the 27th November 1889, *vice* Baboo Jogendro Nath Ghose.

Baboo Annada Prosad Bagchi, Munsif of Kushtea, Nuddea, is promoted to the second grade of Munsifs with effect from the 1st instant, *vice* Baboo Jadu Nath Ghose.

Baboo Ram Lall Dutt, Munsif of Jamui, Bhagulpore, is promoted to the third grade of Munsifs, with effect from the 27th November 1889, *vice* Baboo Hari Nath Roy.

Baboo Promotho Krishna Singh, Munsif of Commillah, Tipperah, is promoted to the third grade of Munsifs, with effect from the 1st instant, *vice* Baboo Annada Prosad Bagchi.

Baboo Advoita Prosad De, substantive *pro tempore* Munsif of Ramroygram, Tipperah, is appointed to be a Munsif of the fourth grade, with effect from the 27th November 1889, *vice* Baboo Ram Lall Dutt.

Baboo Dandadhari Biswas, substantive *pro tempore* Munsif of Chupra, Sarun, is appointed to be a Munsif of the fourth grade, with effect from the 1st instant, *vice* Baboo Promotho Krishna Singh.

Baboo Gopal Chandra Bose, Officiating Additional Subordinate Judge, Bhagulpore, is appointed to be a substantive *pro tempore* Subordinate Judge of the third grade.

Baboo Kali Charan Ghoshal, Officiating Subordinate Judge, Mymensingh, is appointed to be a substantive *pro tempore* Subordinate Judge of the third grade.

Baboo Haro Govind Mookerjee, Officiating Subordinate Judge, Dinagepore, is appointed to be a substantive *pro tempore* Subordinate Judge of the third grade.

Baboo Loke Nath Nundy, Additional Munsif of Serampore, Hooghly, is promoted temporarily to the first grade of Munsifs, *vice* Baboo Gopal Chandra Bose.

Moulvi Abdul Bari, Munsif of Mozufferpore, Tirhoot, is promoted temporarily to the first grade of Munsifs, *vice* Baboo Kali Charan Ghoshal.

Baboo Ganeshyam Gupta, Munsif of Gyebanda, Rungpore, is promoted temporarily to the first grade of Munsifs, *vice* Baboo Haro Govind Mookerjee.

Baboo Jogendro Nath Mookerjee, Munsif of Gurbetta, Midnapore, is promoted temporarily to the second grade of Munsifs, *vice* Baboo Loke Nath Nundy.

Baboo Debendro Nath Roy, Munsif of Doobrajpore, Beerbhoom, is promoted temporarily to the second grade of Munsifs, *vice* Moulvi Abdul Bari.

[illegible] is promoted temporarily to the second grade of Munsifs, *vice* Baboo Ganeshyam Gupta.

Baboo Lall Singh, Additional Munsif of Sewan, Sarun, is promoted temporarily to the third grade of Munsifs, *vice* Baboo Jogendro Nath Mookerjee.

Baboo Krishna Lall Chatterjee, Munsif of Kaligunge, Dacca, is promoted temporarily to the third grade of Munsifs, *vice* Baboo Debendro Nath Roy.

Baboo Doorga Das Basu, Munsif of Manickgunge, Dacca, is promoted temporarily to the third grade of Munsifs, *vice* Baboo Mohendro Nath Das.

The 22nd January 1890.—Under the authority vested in him by the final clause of section 357 of the Code of Criminal Procedure, Act X of 1882, the Lieutenant-Governor empowers Baboo Srish Chandra Mazumdar, Sub-Deputy Magistrate of Sitamarhi, in the district of Mozufferpore, to take down evidence in criminal cases in the English language.

Baboo Baroda Persad Bagchee is appointed to be an Honorary Magistrate of the Independent Bench at the Sudder station of the Rungpore district, and is vested with the powers of a Magistrate of the third class.

The 24th January 1890.—Baboo Naba Krishna Bhaduri is appointed to be an Honorary Magistrate of the Municipal Bench at Narsingunge, in the district of Dacca, and is vested with the powers of a Magistrate of the third class.

The 25th January 1890.—Baboo Satkari Haldar, B.L., is appointed to act as a Munsif in the district of Jessore, to be ordinarily stationed at Bagirhat, during the absence, on leave, of Baboo Gopi Krishna Banerjee, or until further orders.

The 28th January 1890.—Mr. W. Warden, Collector of Customs, Chittagong, is vested with the power to try summarily the offences mentioned in section 260 of the Code of Criminal Procedure.

Baboo Poorna Chunder Roy, Deputy Magistrate, Furreedpore, is vested with powers under section 110 of Act X of 1882 (the Code of Criminal Procedure).

Baboo Poorna Chunder Chatterjee, Deputy Magistrate, Maldah, is vested with powers under sections 110, 133 and 186 of Act X of 1882 (the Code of Criminal Procedure).

Baboo Bejoy Kishore Thakurta and Baboo Mohesh Chandra Das are appointed to be Honorary Magistrates of the Bench at Manickgunge, in the district of Dacca, and are vested with the powers of a Magistrate of the third class.

Sayad Badrul Husan is appointed to be an Honorary Magistrate of the Jhaoogunge Bench, in the district of Patna, and is vested with the powers of a Magistrate of the third class.

The undermentioned Honorary Magistrates, who are attached to the Jamui Bench, in the district of Monghyr, are vested with the powers of a Magistrate of the second class :—

Maharajah Ravaneshwar Prosad Singh Bahadoor.
Baboo Hur Prosad Singh.
„ Hurbuns Narayan Singh.

The following gentlemen are appointed to be Honorary Magistrates of the Saidpore Bench, in the district of Rungpore, and are vested with the powers of a Magistrate of the third class :—

Revd. R. Nazel. | Mr. P. A. Jordan.

Baboo Sarat Chundra Pal, B.L., is appointed to act as a Munsif in the district of Burdwan, to be ordinarily stationed at the Sudder station of that district, during the absence, on leave, of Baboo Sham Kissore Bose, or until further orders.

The undermentioned Honorary Magistrates, who are attached to the First General Bench at the Sudder station of the Hooghly district, are vested with the powers of a Magistrate of the first class—

Baboo Lolit Mohun Sing. | Baboo Okhoy Chunder Sirkar.
Sahibzadah Amirooddeen Mahomed.

Dr. K. D. Ghose, Honorary Magistrate of the Khulna Bench, is vested with the powers of a Magistrate of the second class.

Baboo Bidhu Bhusan Banerjee, Honorary Magistrate of the Satkhira Bench, in the Khulna district, is vested with the powers of a Magistrate of the second class.

Mr. J. S. Douglas, Joint-Magistrate and Deputy Collector, Gya, is vested, under section 407 of the Code of Criminal Procedure, with power to hear appeals from convictions by Magistrates of the second and third classes.

Mr. L. P. Shirres, Officiating Joint-Magistrate and Deputy Collector, Lohardugga, is vested with powers under section 188 of Act I (B.C.) of 1879.

Mr. Shirres is also vested, under section 407 of the Code of Criminal Procedure, with power to hear appeals from convictions by Magistrates of the second and third classes.

Mr. Ibrahim Ahmed, Barrister-at-Law, is appointed to act as an Additional Munsif in the district of Bhagulpore, to be ordinarily stationed at the Sudder station of that district.

ERRATA.—*The 25th January* 1890.—With reference to the order dated the 18th December 1889, published in the *Calcutta Gazette* of the 25th idem, appointing Mr. C. A. Shillingford as an Honorary Magistrate of the Independent Bench at the Sudder station of the Purneah district, *for* "Mr. C. A. Shillingford" *read* "Mr. C. J. Shillingford."

The 27th January 1890.—In the notification of the 21st instant, published in the *Calcutta Gazette* of the 22nd idem, appointing Moulvi Mohomed Nasurul Huq, Officiating Munsif, Behar, Shahabad, to be a substantive *pro tempore* Munsif in Chota Nagpore, to be ordinarily stationed at Lohardugga, *for* "Behar" *read* "Buxar."

GRANTS OF LEAVE TO MUNSIFS.—*The 22nd January* 1890.—Baboo Gopi Krishna Banerjee, Munsif of Bagirhat, in the district of Jessore, is allowed leave for two months, under article 369 of the Civil Service Regulations, with effect from the 1st February 1890, or from the date on which he may be relieved.

The 22nd January 1890.—Baboo Karunamoy Banerjee, Munsif of Jessore, is allowed leave for thirty days, viz., three days under article 309 of the Civil Service Regulations, and the remaining twenty-seven days under article 306 (*b*) of the same Regulations, with effect from the 29th December 1889.

The 24th January 1890.—Baboo Sham Kissore Bose, Munsif of Burdwan, is allowed leave for thirty-seven days, viz., seven days under article 309 of the Civil Service Regulations, and the remaining period under article 306(*b*) of the same Regulations, with effect from the 5th February 1890, or from the date on which he may be relieved.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[First Publication.]

NOTIFICATION.

The 21st January 1890.—Under section 2 of Act II (B.C.) of 1867 (an Act to provide for the punishment of public gambling and the keeping of common gaming houses), the Lieutenant-Governor is pleased to authorize the extension, from the 1st February 1890, of the provisions of the said Act to the villages of Saidpore and Kuja Saidpore (commonly known as the town and bazar of Saidpore), within the jurisdiction of the police-station of Nilphamari and the district of Rungpore. The boundaries of the tract within which the said Act shall be in force are as follows:—

North—A straight line drawn from the Saidpore Rifle Range to Penduram Bairagi's house

South—A straight line drawn from the east of Baboopara to the village road east of Nanku Havildar's parah.

East—A straight line drawn from Penduram Bairagi's house to the east of Babooparah.

West—A straight line drawn from the village road east of Nanku Havildar's parah to the Saidpore Rifle Range.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[First Publication.]

NOTIFICATION.

The 22nd January 1890.—It is hereby notified that the Lieutenant-Governor authorises the extension of the provisions of section 34 of Act V of 1861 to the town comprising the places known as Makundprosad, Jagarsing and Gurujang, in the district of Pooree, within the boundaries noted below, with effect from the 1st April 1890—

Bounded on the north by Tangiapara, Nuagan, Kumbharbast and Kunjiama; on the south by Sanpala, Khorda, and Jaganathpur; on the east by Bartola and Kholadwar; on the west by Sardhapur.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th January 1890.—It is hereby notified that the Lieutenant-Governor authorizes the extension of the provisions of section 34 of Act V of 1861 to Sarjankanda, Binodpur, Madhab Lakhikol, Pakuria, Charpara, and Urakanda, in the sub-division of Goalundo, Rajbari, within the boundaries specified below, with effect from the 1st February 1890—

FIRST.

Binodpur and Sarjankanda.

Bounded on the—

North—By the footpath north of Bhajon's tank and the Binodpur village road crossing the Railway line up to Raja Surja Kumar's Institution and tank.

East—By the Charitable dispensary, engine-shed, Government telegraph office, and the footpath leading from the Railway line and passing by Railway employes and pleaders' houses to the footpath on the south of Ram Chand Chakravarty's house.

South—By the footpath from the house of Ram Chand Chakravarty across Faridpur road and then by the Baniaboha road up to the wooden bridge.

West—By a line skirting Bhavanipur *bil* across the Railway and round Daserdangi and so to a footpath north of the Bhajon's tank.

SECOND.

Madhab Lakhikol, Pakuria, Charpara, and Urakanda.

North—By the khal and the river Padma.

East—By Delundi and Sabar.

South—By the footpath leading from Bhoydia to the Lakhikol road and Sonakandor village.

West—By the Lakhikol road and the village Sonakandor.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th January 1890.—The Joint Sub-Registry Office at Chaprasir Hât in the sub-district of Fenny, in the district of Noakhally, is removed from its present site at Chaprasir Hât to Buktar Munshi's Hât.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th January 1890.—It is hereby notified, under the provisions of section 15 of Act V of 1861, that the villages of Bamna, Chechang, Amtali, Talser, Dewatala, Kalagachia, Safipur, Kachichira, Chota Safipur, Katakhali, Daskhali, Bukabonia, Kalikabari, Joynagore, Nizkati, Sanbarria, Jufrukalia, Kalikabari II, Gazipore, Bebaziakhali, Bara-Tabsoar, Karaitala, Kushinchira, Bhaizara, Khulpatna, Barahowla, Ajudia, Patkakhali, Ruhita, and Dhona, in the Perozepore sub-division, in the district of Backergunge, being still in a disturbed and dangerous state, owing to the existence of disputes regarding the possession of lands and collection of rents, the Lieutenant-Governor has sanctioned the retention for a further period of one year, commencing from the 15th February 1890, of a special police force of one Sub-Inspector, two head-constables, and 19 constables to be quartered in the above mentioned 30 villages for the purpose of keeping the peace between the Bamna Chowdhuries and their ryots.

2. The total cost of the force noted below will be assessed on, and levied from, the inhabitants of the villages in proportion to their respective means:—

	Rs.	A.	P.
1 Sub-Inspector, fourth grade	50	0	0
1 Head-constable, first grade	25	0	0
1 Ditto second grade	20	0	0
5 Constables, Rs. 9 each, first grade	45	0	0
7 Ditto „ 8 „ second grade	56	0	0
7 Ditto „ 7 „ third grade	49	0	0
Pensionary charges at 2 annas per rupee	30	10	0
Contingencies at 10 per cent.	24	8	0
Total ..	300	2	0
1 Sub-Inspector's boat hire	20	0	0
	320	2	0
For one year	3,841	8	0
Clothing allowance of 21 men at Rs. 4 each for one year	84	0	0
Repairs of barracks	50	0	0
Grand Total for one year	3,975	8	0

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th January 1890.—The Lieutenant-Governor sanctions, with effect from the 14th May 1889, the undermentioned changes in the district of Manbhoom:—

1*st*.—The outpost at Gohira, subordinate to thana Gobindpore, will be abolished, and its jurisdiction merged in that of thana Gobindpore.

2*nd*.—The outpost at Kotaldi, subordinate to thana Topchanchi, will be abolished, and its jurisdiction merged in that of thana Topchanchi.

3*rd*.—The outpost at Kashipore, subordinate to thana Gourandi, will be abolished, and its jurisdiction merged in that of thana Gourandi.

4th.—Two new outposts will be established, one at Hura, subordinate to thana Purulia, and the other at Dhaska, subordinate to thana Barabhoom.

5th.—The thana of Joypore, of which the boundaries were defined by the notification dated the 9th February 1875, will be converted into an outpost and made subordinate to thana Jhaldah.

6th.—The villages mentioned in the list below will be transferred from the jurisdiction of thana Manbazar to that of thana Barabhoom :—

No.	Name of Village.	Thukburst No.	Name of pergunnah.	No.	Name of Village.	Thukburst No	Name of pergunnah.
1	Jaspur ...	45	Koilapal.	25	Chirudihi ...	27	Koilapal.
	Sindruli ...	43	Ditto.		Radhanagar ...	32	Ditto.
	Kamra ...	42	Ditto.		Chota Talpat ...	49	Ditto.
	Chirugaroo ...	36	Ditto.		Talpat ...	29	Ditto.
5	Koyra ...	37	Ditto.		Mahulbani ...	31	Ditto.
	Jhariabad ...	38	Ditto.	30	Karmatar ...	30	Ditto.
	Churkoo ...	41	Ditto.		Puabad ...	28	Ditto.
	Barrasul ...	44	Ditto.		Bahadurpur ...	14	Ditto.
	Sursingha ...	46	Ditto.		Benko ...	15	Ditto.
10	Saranga ...	47	Ditto.		Bhaghidiha ...	12	Ditto.
	Kadia ...	40	Ditto.	35	Bhasamkata ...	13	Ditto.
	Tasgram ...	39	Ditto.		Dhobagara ...	18	Ditto.
	Birakata ...	22	Ditto.		Barkola ...	17	Ditto.
	Lalangdihi ...	23	Ditto.		Kapatdongh ...	16	Ditto.
15	Koilapal Khas ...	19	Ditto.		Paharpur ...	10	Ditto.
	Chalunia ...	21	Ditto.	40	Kukrudobar ...	9	Ditto.
	Nutandihi ...	20	Ditto.		Andharjharia ...	8	Ditto.
	Kesra and Koyradihi	35	Ditto.		Pakhurkata ...	7	Ditto.
	Shamnagar ...	34	Ditto.		Dhobanni ...	11	Ditto.
20	Kendadihi ...	24	Ditto.		Jorasal ...	6	Ditto.
	Dollonbani ...	48	Ditto.	45	Katgara ...	5	Ditto.
	Naopol ...	33	Ditto.		Simabad ...	4	Ditto.
	Kbiradihi ...	25	Ditto.		Bara Karman ...	3	Ditto.
	Hargara ...	26	Ditto.		Baubahal ...	2	Ditto.
				49	Chota Karman ...	1	Ditto.

Note.—In the above list the names given are those of the villages as demarcated and surveyed by the Revenue Survey Department and as shown in their maps and records.

In consequence of the conversion of thana Joypore into an outpost of thana Jhaldah, and the transfer of certain villages from thana Manbazar to thana Barabhoom, the following are declared to be the revised boundaries of thanas Jhaldah, Barabhoom and Manbazar, in modification of the boundaries defined by the notification, dated the 9th February 1875, published in the *Calcutta Gazette* of the 24th idem :—

Thana Jhaldah.

On the North—The northern boundaries of pergunnahs Joypur and Jaitara, from the village of Kurkura on the west to the Gowaie Nuddee on the east; thence the Gowaie Nuddee eastward to the junction of this Nuddee with the Tusurkow Nuddee at the north-east corner of village Kosamkeari.

On the East—The boundaries of pergunnah Khaspail, from the junction of the Tusurkow Nuddee with the Gowaie Nuddee southward to the village of Gamuria.

On the South—Commencing from the village of Gamuria on the east and running westward, the boundaries of pergunnahs Khaspail, Joypur, Mokundpur, Bygoonkodar, Jhaldah, Hesla and Toorang to the boundary of the district.

On the West—The boundary of the district along the boundaries of pergunnahs Toorang, Hesla, Jhaldah and Joypur.

Thana Barabhoom.

On the North—Thana Purulia.

On the West—Thana Chandil (formerly Inchaghor.)

On the South—The boundary of the district.

On the East—The boundaries of pergunnahs Koilapal and Barabhoom.

Thana Manbazar.

On the North—Thana Purulia.

On the West and South—Thana Barabhoom.

On the East—The boundary of the district along the boundaries of pergunnah Manbhoom.

Note.—In the above description the villages and pergunnahs named (with the exception of a portion of pergunnah Khaspail north of the Gowaie Nuddee) are included within the boundaries of the thanas to which reference is made.

John Edgar,
Chief Secy. to the Govt. of Bengal.

[Second Publication.]

NOTIFICATION.

The 18th January 1890.—Under section 2 of Act II (B.C.) of 1867 (an Act to provide for the punishment of public gambling and the keeping of common gaming-houses), the Lieutenant-Governor authorizes the extension, from the 1st February 1890, of the provisions of sections 11 to 14 of the said Act to the town of Rampore Hât (including Brahamanigram, Kalisanra, and Khalasiparah), in the district of Beerbhoom.

2. For the purposes of the above Act, the boundaries of the place shall be as follows:

North—East Indian Railway Rifle Butts.
South—Sanghatta khal.
East—Khair tank.
West—Village Suifalla.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—BENGAL.

ESTABLISHMENT.

The 27th January 1890.

No. 19.—This Department's Declaration No. 301, dated 27th August 1888, published at page 764 of the *Calcutta Gazette* of the 29th idem, for the acquisition of land for a new line and ghât to and at Sabbalpur, in village Sabbalpur, pergunnah Phulwari, zillah Patna, is hereby cancelled.

The 28th January 1890.

No. 21.—Mr. E. C Elliot, Assistant Engineer, 1st grade, Eastern Bengal State Railway, is granted three days' extension of special leave, with effect from the 8th November 1889.

No. 24.—*Promotions.*—The Lieutenant-Governor is pleased to make the following promotions in the Engineer Establishment, with effect from the date specified:—

Names.	From	To	With effect from	Nature of promotion.
Mr. J. W. Johnson	Executive Engineer, 1st grade, *sub. pro tem.*	Executive Engineer, 1st grade	13th Nov. 1889 ...	Permanent.
„ J. H. Toogood	Executive Engineer, 3rd grade.	Executive Engineer, 2nd grade.	Ditto	Ditto.
„ T. M. L. Thompson.	Executive Engineer, 3rd grade, *sub. pro tem.*	Executive Engineer, 3rd grade.	Ditto	Ditto.
Mr. A. S. Thomson	Assistant Engineer, 1st grade.	Executive Engineer, 4th grade	Ditto	Ditto.
„ C. P. Wardo	Assistant Engineer, 1st grade, *sub. pro tem.*	Assistant Engineer, 1st grade.	Ditto	Ditto.

E. J. MARTIN,
Secy. to the Govt. of Bengal, P. W. Dept.

ESTABLISHMENT.

The 27th January 1890.

No. 20.—Rai Rajkissen Banerjee, Sahib, Executive Engineer, Brahmini-Byturni Division, was on privilege leave from the 23rd January to the 23rd March 1889. This cancels Bengal Government notification No. 57 of the 25th February 1889.

The 28th January 1890.

No. 22.—Rai Raj Kissen Banerjee, Sahib, Executive Engineer, brahmini-Byturni Division, is transferred to the Pooree Division.

No. 23.—Rai Annada Prasad Sarkar, Sahib, Assistant Engineer, attached to the Office of the Superintending Engineer, Orissa Circle, is transferred to the Acquapada-Rajepore Division.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

The 28th January 1890.

No. 25.—*Notifications.*—Colonel J. M. McNeile, R E., Chief Engineer, second class, having returned from the leave on which he proceeded on the 17th July 1886, and having resumed charge of his office as Chief Engineer, Irrigation Branch, is appointed to be Secretary to the Government of Bengal, in the Public Works Department, with effect from this date.

No. 26.—With reference to the above notification, Mr. E. J. Martin, Chief Engineer, second class, is appointed to be Joint-Secretary to the Government of Bengal in the Public Works Department.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal, P. W. Dept.

PUBLIC WORKS DEPARTMENT,—MARINE.

NOTIFICATION No. 13Mne.

The 27th January 1890.—In accordance with the provisions of section 69 of Act IV of 1887, the following abstract of the estimates of receipts and expenditure of the Chittagong Port Fund for the year 1889-90 is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

Abstract of the Receipts and Expenditure of the Commissioners of the Port of Chittagong for the year 1889-90.

RECEIPTS.	1887-88.	1888-89.			1889-90.
	Actuals.	Sanctioned estimate.	Six months' actuals.	Revised estimate.	Budget estimate.
	Rs.	Rs.	Rs.	Rs.	Rs.
XVI.—Marine—					
Port dues	39,334	39,000	.....	41,500	39,000
Fees and fines—					
Water	4,757	4,000	.....	5,000	4,500
Mooring fees	10,371	10,000	.....	11,000	8,371
Licenses	107	150	.....	200	200
Moiscally toll receipts	38	.....	.....	500	500
Other fees and fines, ...	207	330	.....	225	350
Sundry receipts	1,737	2,456	.....	2,206	2,556
Total ...	56,551	56,136	15,172	60,631	55,477
Opening balance	.....	.....	.....	47,357(a)	.....
GRAND TOTAL ...	56,551	56,136	15,172	1,07,988	55,477

EXPENDITURE.	1887-88.	1888-89.			1889-90.
	Actuals.	Sanctioned estimate.	Six months' actuals.	Revised estimate.	Budget estimate.
	Rs.	Rs.	Rs.	Rs.	Rs.
Refunds	40	105	.....	50	50
Administration	3,398	3,423	.....	2,893	10,340
Law and Justice	.....	.....	.....	50	50
Police	1,171	1,200	.....	1,200	1,200
Total ...	4,609	4,728	.....	4,195	11,220
Establishment	1,277	1,225	.....	2,412	2,532
Vessels and boats	3,933	6,136	.....	5,719	5,827
Semaphore establishment	143	144	.....	144	144
Harbour Master's establishment	216	216	.....	216	216
Tidal observatory ditto	133	133	.....	133	133
Light-houses ditto	7,397	7,170	.....	7,045	7,045
Moiscally toll establishment	.....	.....	.....	404	420
Miscellaneous ditto	1,503	1,512	.....	1,512	1,512
Miscellaneous	18,749	4,633	.....	6,205	6,205
Total ...	33,351	21,168	.....	23,790	24,034
Public Works	11,547	4,750	.....	7,450	8,050
Closing balance	.....	.....	.....	72,553	.....
GRAND TOTAL ..	49,507	30,646	8,962	1,07,988	43,284

(a)—Does not include Rs. 20,200 invested in Government securities.

NOTIFICATION—No. 18Mne.

The 28th January 1890.—In accordance with the provisions of section 50, sub-section (3) of Act X of 1889 (the Indian Ports Act), the following account of the receipts and charges of the Hospital Port Dues Fund of the Port of Calcutta for the year 1888-89 is published for general information. It should be read as a supplement to the abstract account of the receipts and charges of the Port of Calcutta and its Approaches for the year 1888-89, which was published under Notification No. 184Mne., dated the 25th November 1889, at Part I, page 969 of the *Calcutta Gazette* of the 27th idem.

J. M. McNEILE, *Col.*, R. E.,
Secretary to the Government of Bengal.

Statement of Receipts and Charges on account of the Hospital Port Dues Fund for the year 1888-89—*Final.*

	RECEIPTS.	CHARGES.																
		CHARGES OF SICK SEAMEN SENT TO HOSPITALS.						HEALTH OFFICER—ESTABLISHMENT AND CONTINGENCIES.										
	Hospital Port Dues.	General Hospital.	Medical College Hospital.	Howrah Hospital.	Mayo Hospital.	Maintenance of seamen in the lunatic asylum.	Percentage cost of treasury establishment.	Salary of Health Officer.	Establishment.	Steam-launch and dingies.	Dooly bearer.	Contingencies.	Miscellaneous.	Postage charges.	Dockyard services and supplies.	House rent.	Travelling allowance.	TOTAL.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Balance on 31st March 1888.	78,178 9 1	...	.....	.....	.....	.....	.....	.....	.....	... ...	... ..	.....	.....	... ...	.....	.....	.....	.....
April 1888 ...	4,238 12 0	... ...	.....	316 0 0	... ..	90 0 0	.....	1,300 0 0	194 0 3	87 8 0	132 0 0	1 7 8	5 9 6	... ..	.....	45 0 0	.....	2,171 9 5
May ,, ...	4,798 4 0	... ...	... ..	446 0 0	.....	45 0 0	...	1,300 0 0	201 4 0	87 0 0	132 0 0	4 4 0	18 11 0	0 1 0	.....	45 0 0	.....	2,279 4 0
June ,, ...	3,337 5 0	.....	... ..	507 0 0	.....	45 0 0	..	1,300 0 0	201 4 0	87 8 0	132 0 0	4 4 0	8 3 6	... ...	...	45 0 0	.....	2,330 3 6
July ,, ...	5,204 10 0	.....	.....	515 0 0	..	45 0 0	... .	1,383 13 10	201 4 0	87 0 0	132 0 0	4 0 0	24 7 3	.. ...	176 6 7	45 0 0	27 9 0	2,640 8 8
August ,, ...	4,646 2 0	... ...	... ..	677 0 0	45 0 0	49 5 8	.. ..	1,216 2 0	201 4 0	87 8 0	132 0 0	4 0 0	28 8 0	1 0 0	... ...	45 0 0	.. ...	2,484 11 8
September ,, ...	4,409 2 0	....	.. ..	386 0 0	.....	... ..	...	1,300 0 0	226 15 2	87 8 0	132 0 0	7 0 0	38 10 3	... ...	.....	45 0 0	.....	2,223 1 5
October ,, ...	3,342 7 0	.....	... ..	441 0 0	.....	.. ..	283 4 5	1,300 0 0	227 7 0	87 0 0	132 0 0	4 0 9	9 13 9	... ...	... ...	45 0 0	.....	2,529 9 2
November ,, ...	7,230 4 0	7,683 0 0	.....	319 0 0	..	.. ..	.. ...	1,300 0 0	228 8 11	85 8 0	132 0 0	8 10 6	16 10 6	... ..	... .	45 0 0	.....	9,818 5 11
December ,, ...	5,574 15 0	.....	.....	490 0 0	39 0 0	....	.....	1,300 0 0	225 4 0	87 0 0	132 0 0	2 1 3	35 9 6	... ..	924 11 1	45 0 0	.. ...	3,240 9 10
January 1889 ...	6,177 9 0	.....	826 0 0	500 0 0	..	.....	.....	1,300 0 0	225 4 0	87 8 0	132 0 0	...	27 15 9	.....	616 13 3	45 0 0	.....	3,790 9 0
February ,, ...	5,564 6 0	11,469 0 0	780 0 0	409 0 0	.....	.. ..	.....	1,300 0 0	225 4 0	87 8 0	132 0 0	... ..	9 13 0	.. ...	158 13 5	45 0 0	.....	14,616 6 5
March ,, ...	7,593 10 1	2,061 0 0	173 0 0	314 0 0	.....	... .	260 14 8	1,300 0 0	212 0 6	86 0 0	132 0 6	.. ..	41 0 0	... ..	477 12 2	45 0 0	.....	5,102 11 4
Total ...	62,119 6 1	21,213 0 0	1,779 0 0	5,320 0 0	82 0 0	274 5 8	544 3 1	15 599 15 10	2,569 11 10	1,044 8 0	1,584 0 0	39 11 5	264 0 0	1 1 0	2,384 8 6	540 0 0	27 9 0	53.267 10 4
Balance on 31st March 1889.	.....	.....	... ..	... ..	... ..	... .	... .	.....	... ...	... ..	.....	... .	.. ...	.....	...	.....	.....	87,030 4 10
GRAND TOTAL ...	1,40,247 15 2	.....	.....	.....	.....	.....	...	... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,40,297 15 2

NOTIFICATION No. 21Mne.

The 28th January 1890.—The following abstract account of the receipts and payments of the Balasore Port Fund for the year 1888-89, which has been submitted by the Collector of Sea Customs, Balasore, for publication under section 36, sub-section (2) of Act X of 1889, is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal.

Abstract account of the receipts and payments with the opening and the closing balances of the Balasore Port Fund for the year 1888-89.

RECEIPTS.	Amount.	Total.	CHARGES.	Amount.	Total.
	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
Opening balance on 1st April 1888—			Balance at debit on 1st April 1888 ...	.....	5,291 2 0
Port receipts—					
Port dues on vessels	4,375 6 1		Percentage for treasury establishment	.....	86 13 0
Contribution from Government	10,000 0 0				
		14,375 6 1	Light-houses—		
Fees and fines—			Establishment	1,930 4 10	
Registration fees	19 0 0		Stores	2,363 2 8	
Savage	0 4 0		Contingencies	127 10 6	
		19 4 0			4,421 2 0
Miscellaneous—			General management—		
Miscellaneous receipts	.....	140 13 0	Port Officer	3,600 0 0	
Sundry receipts—			Establishment	1,548 0 0	
Sale proceeds of unclaimed wrecked property.	... .	21 11 6	Travelling allowance	228 5 0	
			Contingencies	90 11 0	
					5,467 0 0
			Vessels and boats—		
			Dockyard services and supplies ...	3,273 4 0	
			Stores	1,540 3 2	
					4,813 7 2
			Repairs—		
			Medical stores	.....	85 3 0
			Miscellaneous—		
			Miscellaneous	.....	948 13 4
			Pensions and gratuities—		
			Pensions	.....	114 3 0
Total Receipt ...	.....	14,566 2 7			
Debit balance on 31st March 1889 ..	.....	6,661 8 11	Total Payments ...	.....	15,936 9 6
GRAND TOTAL ...	.....	21,227 11 6	GRAND TOTAL ...	.....	21,227 11 6

BALASORE SEA CUSTOM'S OFFICE,
The 30th December 1889.

R. CORNISH,
Collector of Sea Customs.

NOTIFICATION No. 22Mne.

The 28th January 1890.—The following communication, No. 331, dated the 21st January 1890, from the Government of Bombay, regarding the removal of quarantine at Aden and Perim on arrivals from the Arabian Coast between Lith and Lothaia, is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal.

No. 331, dated Bombay Castle, the 31st January 1890.

From—J. DEC. ATKINS, ESQ., C.S., Acting Under-Secretary to the Govt. of Bombay, General Department.

To—The Secretary to the Government of Bengal.

IN continuation of my letter No. 2959, dated 26th July 1889, I am directed to state that, under instructions from the Government of India, the notification of the Government of Bombay, No. 2956 of the same date, which imposed quarantine at Aden and Perim on arrivals from the Arabian Coast between Lith and Lothaia, has been withdrawn.

[First Publication.]

NOTIFICATION No. 12Mne.

The 24th January 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 9).

AFRICA—NORTH-EAST SHORE.

GULF OF ADEN.

Permanent Light-ship off Ras Marbut, Aden Harbour.

Information has been received from the Political Resident at Aden that on the 15th February the temporary Light-vessel moored off Ras Marbut, Aden, Harbour, will be replaced by the permanent Light-ship. The vessel is moored in 18 feet at low water, and shows at an elevation of 39 feet above the sea a flashing White Light visible every minute. The vessel is painted Red, but has no Red Ball at mast-head and exhibits no Red Flag during the day as stated at page 90, Chapter IV, 3rd Edition of the Gulf of Aden Pilot.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 22nd January* 1890.

[Firt Publication.]

NOTIFICATION No. 14Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNM ENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 10).

AFRICA—EAST COAST.

RED SEA—WESTERN SHORE.

A light placed on the island of Difnein, Musawwa Channel.

INFORMATION has been received from the Consul-General for Italy, through the Director of Indian Marine, that a light visible at 6 miles distance, to indicate the North entry of the Musawwa Channel, has been placed on the N.-E. end of the Island of Difnein. The light is in latitude 16° 37′ 8″ N. and longitude 39° 18′ 15″ E. Arc of illumination 195 degrees, leaving a dark sector between the 65° and 250°.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[First Publication.]

NOTIFICATION No. 15Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 11).

AUSTRALIA—EAST COAST.

ULLADULLA HARBOUR.

Fixed light on Warden head, and discontinuance of pier light.

THE British Admiralty has given notice (No. 456 of 1889) that on 1st December 1889 a light would be exhibited from a light-house recently erected on Warden head, south side of entrance to Ulladulla harbour.

The light is a *fixed* White light, visible in clear weather from a distance of about 12 miles.

Position: Approximate lat. 35° 22¼′ S.; long. 150° 31¼′ E.

Also, that on the same date, the light (fixed *green*) previously shown from the pier head, Ulladulla harbour, would be discontinued.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[First Publication.]

NOTIFICATION No. 16Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 12).

AFRICA—EAST COAST.

ZANZIBAR ISLAND.

Fixed light on Mwana Mwana Island.

INFORMATION has been received from the British Admiralty (No. 452 of 1889) that a light is now exhibited from a light-house (construction commenced in 1881) on the north extreme of Mwana Mwana island, north-west coast of Zanzibar island.

The light is a *fixed* white light.

Position: Lat. 5° 45′ 10″ S.; long. 39° 13′ 10″ E.

NOTE.—The regular exhibition of this light should not be relied on.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[First Publicatoin]

NOTIFICATION No. 17Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)
NOTICE TO MARINERS—(No. 13).
INDIA—SOUTH.
CEYLON—EAST COAST.

A "Torpedo Buoy" placed at the entrance to Trincomalee Harbour.

THE Colonial Government of Ceylon has given notice that on and after 25th December 1889 until 28th February 1890, a Red Buoy, with a red flag and the words "Torpedo Buoy" painted on it, will be placed in the entrance to Trincomalee Harbour between Ostenburg Point and Little Sober Island, and 260 yards from the former.

The water in the triangle formed by this Red Buoy, the E. Point of Small Sober Island and Clappenburg Point, will be obstructed by mines.

All vessels should pass between the Buoy and Ostenburg Point.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[First Publication.]

NOTIFICATION No. 19Mne.

The 28th January 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)
NOTICE TO MARINERS—(No. 14).
BAY OF BENGAL.
BURMA COAST.

Date of alteration of Savage Island light—Port of Akyab.

WITH reference to Notice to Mariners, No. 50, dated the 31st May 1889, issued by this office, a telegraphic communication has been received from the Port Officer, Akyab, that the transfer of Savage island light, at the entrance of the Port of Akyab, will commence from the 27th instant.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 27th January* 1890.

[First Publication.]

NOTIFICATION No. 20Mne.

The 28th January 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).
NOTICE TO MARINERS—(No. 15).
BAY OF BENGAL.
BURMA COAST.

Position of a water-logged Native vessel and pieces of wreckage.

A TELEGRAPHIC communication has been received from the Port Officer, Rangoon, that the Master of the steam-ship *Euphrates* reports having passed on the 23rd instant a water-logged native vessel in latitude 15° 23′ north, longitude 94° 59′ east; also pieces of wreckage when 8 miles off Krishna light-vessel. Shipmasters are cautioned accordingly.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 27th January* 1890.

[Third Publication.]

NOTIFICATION No. 3Mne.

The 7th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 3).

JAPAN.

YEZO—SOUTH-WEST COAST.

Non-existence of Waywoda rock.

THE British Admiralty has given notice (No. 422 of 1889) of the non-existence of Waywoda (Voevoda) rock in the sea of Japan.

This rock was originally reported by the Russian corvette *Voevoda*, when proceeding from Hakodate to Peter the Great bay. It was seen at a distance of 3 miles from the ship at 7h. P.M. on 28th June 1859, during thick weather, and estimated to be about 12 feet above water; the position assigned by dead reckoning, being lat. 42° 16′ N., long. 137° 18′ E.

The rock was searched for on two occasions by French vessels of war without success prior to 1886. In September 1886, eight of Her Majesty's ships passed near the assigned position of the rock, in such a manner that an area of 40 miles in latitude and 62 miles in longitude was examined, and no sign of the rock was observed.

In June 1888, an American whaling barque reported having seen two rocks from 8 to 12 feet high, about 500 yards apart, in lat. 42° 30′ N., long. 137° 5′ E., or about 15 miles north-westward of the *Voevoda's* reported position.

Consequent on this latter report a further special search has been made by five of Her Majesty's ships on the China station throughout 7th September 1889. During this search the position of the rocks reported by the American whaling barque, as well as that of the Waywoda rock, was passed over without seeing any signs of a rock above water, or obtaining any soundings indicative of shallow ground.

After a careful review of the above circumstances, it is considered that the objects seen by both the *Voevoda* and the American whaling barque were floating, and therefore the rock has been removed from the Admiralty Charts.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 6th January* 1890.

[Third Publication.]

NOTIFICATION No. 4Mne.

The 7th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 4).

JAPAN.

KIUSIU—NORTH-WEST COAST.

Sunken rocks in Iki Channel, and on south coast Iki sima.

THE British Admiralty has given notice (No. 434 of 1889) of the existence of the undermentioned sunken rocks lying in Iki channel, and on the south coast of Iki sima:—

1. A rock, with a depth of 1¾ fathoms, lies near the fairway in Iki channel, with Yebosi sima light-house bearing S. 75° E., and the eastern extreme of Na sima North.
   Position, lat. 33° 42′ 35″ N., long. 129° 52′ 20″ E.
2. A rock, with a depth of 2¼ fathoms, lies in Iki channel, with the north extreme o Na sima, in line with the Watch-house on Iki sima, bearing N. 87° W., an Akasi saki, the north-east extreme of Iki sima, N. 44° W.
   Position, lat. 33° 44″ 40′ N., long. 129° 54′ 10″ E.
3. A rock, with a depth of 1¾ fathoms, lies off the south coast of Iki sima, wit Ko saki bearing S. 73° W., distant 4¼ cables.
   Position, lat. 33° 42′ 25″ N., long. 129° 43′ 30″ E.
4. A rock (*Tsurizone rock*), with a depth of 1¾ fathoms, lies 4¼ cables southward o Hira sima, with Ko saki bearing N. 86° E., and western extreme of Nag sima N. 7° W.
   Position, lat. 33° 41′ 35″ N., long. 129° 37′ 50″ E.

5. A rock (*Sorazone rock*), with a depth of 3¼ fathoms, and 5 cables in extent in a north and south direction, lies nearly in the fairway of the southern entrance to Go no Ura, 6 cables distant from Tskuye sima, and with the north-west extreme of that islet in line with the north extreme of Hira sima.

Position, lat. 33° 43′ 5″ N., long. 129° 39′ 40″ E.

6. A rock (*Ozone rock*), awash at low water spring tides, is an extension of the shoal shown on Admiralty Chart No. 127, on the eastern side of entrance to Go no Ura; it lies 3½ cables from the coast of Iki sima, with the south extreme of Haru sima bearing S. 86° W., and north-east extreme of Oö sima N. 45° W.

7. The rock (*Hirase rock*) in the northern part of Go no Ura, and shown on Admiralty Charts as "Covers," lies a little westward of the position given, with Tskuye sima bearing S. 27° W., distant $1\frac{6}{10}$ miles.

CAUTION.—There are many rocks and shoals near the coasts in this locality as yet not charted. Careful navigation is therefore needed.

The depths given are at low water spring tides.

(*The bearings are Magnetic, Variation 4° Westerly in* 1889).

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 6th January* 1890.

[Third Publication.]

NOTIFICATION No. 5Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 5).

TASMANIA.

BASS AND BANKS STRAITS.

Intended alteration in colour of light-houses.

THE British Admiralty has given notice (No. 439 of 1889) that on 1st January 1890, or as soon after as may be, the light-houses on the coasts of Tasmania, together with those on King island and Kent group (Bass strait) and on Goose and Swan islands (Banks strait), will be painted entirely white.

At present the lower parts of the light-houses are painted white, and the upper parts red.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 11th January* 1890.

[Third Publication.]

NOTIFICATION No. 6Mne.

The 13th January 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 6).

ARABIAN SEA.

NINE DEGREES CHANNEL.

Unsuccessful search for reef reported north-east of Minikoi Island.

THE following Notice to Mariners (No. 443 of 1889), issued by the British Admiralty, is republished with reference to Nos. 80 and 85, dated, respectively, the 23rd August and 6th September last, issued by this office:—

In consequence of a reef having been stated to exist in the Nine Degrees channel, about 50 miles north-east of Minikoi island, in lat. 8° 48′ N., long 73° 40′ E., by the Master of the S.S. *Noord Braband*, August 1889, who reported it as being 8 miles in length in a south-east and north-west direction, an examination of the locality has been made by

Commander R. F. Hoskyn, R.N., in charge of the India Marine Survey, with the following result :—

The examination, carried out in the I.G.S.S. *Investigator*, and extending over three days, from 2nd to 4th November 1889, embraced the reported position of the reef between lat. 8° 35′ and 9° 5′ N., and long. 73° 15′ to 74° 0′ E. The least depth found on the suspected spot was 1,179 fathoms, gray ooze, and no indication was afforded by the soundings of the existence of shallow water. On one occasion, however, some patches of what appeared to be discoloured water were observed; but they were all examined and proved to be merely the reflection of clouds in smooth streaks of water.

Throughout the time the weather was uniformly fine, and favourable for observations, and the positions of the soundings were satisfactorily determined.

Considering the detailed nature of this examination by Commander Hoskyn, and the fact of the locality being near the track of shipping using the Nine Degrees channel, the existence of this extensive danger is considered disproved.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the* 11*th January* 1890.

[Third Publication.]

NOTIFICATION No. 7Mne.

The 13*th January* 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 7).

AUSTRALIA—EAST COAST.

PIONEER RIVER APPROACH.

Sunken rock north-eastward of Round Top island.

THE British Admiralty has given notice (No. 444 of 1889) of the existence of a sunken rock lying about 6 cables north-eastward of Round Top island, Pioneer river approach.

This rock (*Taroba rock*), with about 19 feet over it at low water, lies with the following bearings :—

Round Top island summit ...	...	... S.W. ½ S.
Flat Top island light-house ...	...	... West.

Position : lat. 21° 9′ 45″ S., long. 149° 17′ 50″ E.

(*The bearings are Magnetic. Variation* 7° *Easterly in* 1889.)

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the* 11*th January* 1890.

[Third Publication]

NOTIFICATION No. 8Mne.

The 13*th January* 1890.—The following Notice to Mariners is published for general information.

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 8).

AUSTRALIA—SOUTH COAST.

PORT PHILLIP ENTRANCE.

Submarine telegraph cable between Swan island and Observatory Point.

THE British Admiralty has given notice (No. 446 of 1889) that a submarine telegraph cable has been laid between Swan island and Observatory Point within the entrance to port Phillip.

The cable is laid from Swan beacon to Pope's Eye fort (situated near the white pile beacon on the south-west part of that shoal) and thence to Observatory Point.

CAUTION.—Mariners are warned that anchorage within 4 cables on either side of this cable is prohibited.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the* 11*th January* 1890.

HIGH COURT NOTICE.

CIRCULAR ORDER ISSUED BY AUTHORITY OF THE HIGH COURT OF JUDICATURE AT FORT WILLIAM IN BENGAL.

CIVIL.

No. 1, *dated the 9th January* 1890.

THE following corrections should be made in the General Rules and Circular Orders (Civil) :—

(1) At page 128, Chapter III, Rule 117, *for* "Act XXVII of 1860" *substitute* "Act VII of 1889."

(2) At pages 212 to 214, Chapter IV, *cancel* Rule 3, clauses (*a*) and (*b*).

(3) At page 241, Chapter IV, *cancel* Rule 17; and in Rule 12A, clause 2(*d*), *for* "Act XXVII of 1860" *substitute* "Act VII of 1889" (*vide* pages 47, 48 and 51 of the Addenda and Corrigenda slips for February 1882).

(4) At pages 275 and 276, Chapter V, *cancel* Rule 28, clause (*a*), with its foot-note, and clauses (*b*), (*c*) and (*d*).

(5) In the Chronological Index *cancel*—

Circular Order No. 17 of 23rd June 1870.
General Letter No. 8 of 27th May 1876.
Ditto No. 14 of 4th September 1876.
Circular Order No. 5 of 3rd March 1877.
Ditto No. 7 of 21st February 1880.

Dates of Criminal Sessions for the year 1890.

No. of Sessions.	Day of the week.	Date.
First Sessions	Monday	February, 17th.
Second ,, ...	Ditto	April, 28th.
Third ,, ...	Ditto	July, 14th.
Fourth ,, ...	Ditto	September, 1st.
Fifth ,, ...	Ditto	December, 8th.

By order,

J. G. APCAR, *Clerk of the Crown.*

HIGH COURT, CROWN OFFICE, *the 13th January* 1890.

Sheriff's Office, the 22nd January 1890.

NOTICE is hereby given that the First Criminal Sessions of the year 1890 of the High Court of Judicature at Fort William in Bengal for the Town of Calcutta and Factory of Fort William, and the places subordinate thereto, will be holden at the Court-house in the Town of Calcutta, on Monday, the seventeenth day of February next, at 11 o'clock in the forenoon, and so on from day to day until the said Sessions be over. And it is hereby proclaimed that all persons who will prosecute any of the prisoners to be brought up for trial at the said Sessions be present then and there to prosecute.

H. B. H. TURNER, *Sheriff.*

শরিফ আফিস, সন ১৮৯০ সাল তারিখ ২২শে জানুয়ারি।

সকলকে সমাচার দেওয়া যাইতেছে যে সুবে বাঙ্গালার কোর্ট উইলিয়ম দুর্গের অধীন শহর কলিকাতার ও অন্যান্য স্থানের ফৌজদারী বিচার নিষ্পত্তি জন্য আগামী সন ১৮৯০ সালের ১৭ই ফেব্রুয়ারি সোমবার বেলা ১১ ঘটিকার সময় এবং যে পর্য্যন্ত সেশিয়ানের কার্য্য শেষ না হয় প্রতিদিন উক্ত সময়ে কলিকাতার হাই কোর্টের আপন আদালত ঘরে সন ১৮৯০ সালের প্রথম ক্রমিনেল সেশিয়ান বসিবেক এবং এতদ্দ্বারা প্রচার করা যাইতেছে যে, যে সকল ব্যক্তি কোন কয়েদির বিরুদ্ধে ফৌজদারী মিছিল করিবেক তাহারা উক্ত স্থানে উক্ত সময়ে হাজির থাকিয়া মোকদ্দমা করে ইতি।

এইচ: বি: এইচ: টারনার, শরিফ।

IN THE COURT OF SMALL CAUSES OF CALCUTTA.

NOTICE.

THE following list of days to be observed in the year 1890 as holidays in the Court of Small Causes of Calcutta has been drawn up with the approval of the Local Government, and is published in accordance with the provisions of section 92 of Act XV of 1882 (Presidency Small Cause Courts' Act) :—

Names of holidays.	English date.	Bengali date.	Days of the week.	Number of days.
	1890.	1296.		
New Year's day	January, 1st ...	Pous, 18th .	Wednesday ...	
Basanta or Sree Panchami ...	„ 25th ...	Magh, 13th .	Saturday ...	
Dole Jattra	March, 6th ...	Falgoon, 23rd ...	Thursday ...	
Good Friday and Easter Saturday.	April, 4th and 5th ...	Chaitra, 23rd and 24th	Friday and Saturday.	
Mohabishal Sankranti ...	„ 12th ...	„ 31st ...	Saturday ...	
		1297.		
Eed-ul-Fitre ...	May, 20th and 21st	Jaistha, 7th and 8th	Tuesday and Wednesday.	
Empress' Birthday	„ 24th ...	„ 11th ...	Saturday ...	
Dasahara Ganga Snan	„ 29th ...	„ 16th ...	Thursday ...	
Eed-uz-Zoha ...	July, 28th and 29th	Sraban, 13th and 14th.	Monday and Tuesday.	
Janmastomi ...	August, 7th ...	Sraban, 23rd ...	Thursday ...	1
Mohurrum ...	„ 25th to 27th	Bhadro, 10th to 12th	Monday to Wednesday.	3
Dusserah Vacation, including Mohalya, Doorga and Lukhmi Poojahs, Fatcha Doaz-Dohum, Kali Pooja, Bhatriditia and Kartick Pooja.	October, 13th, to November, 15th.	Assin, 28th, to Kartic, 30th.	Monday to Saturday.	34
Juggodhatri Pooja ...	November, 20th and 21st.	Aghran, 5th and 6th	Thursday and Friday.	2
Christmas holidays ...	December, 24th to 31st.	Pous, 10th to 17th ...	Wednesday to Wednesday.	8

The above days are inclusive. All Sundays are holidays. The second day of the Hindu festival "Sree Panchami" falls on Sunday, and the Mahomedan festival Fateha Doaz-Dohum falls within the Dusserah Vacation.

GIDEON C. SCONCE,
THOMAS JONES,
K. M. CHATTERJEE,
JADU NATH ROY,
Judges, Court of Small Causes of Calcutta.

COURT OF SMALL CAUSES OF CALCUTTA, *the 23rd January* 1890.

EDUCATION DEPARTMENT, BENGAL.

Subordinate Educational Service.

The 21st December 1889.—Babu Ram Das Mookerjea, Departmental Sub-Inspector of Schools, Nuddea (class VI), is declared to have been absent on leave for fifteen days, commencing from the 1st December 1889, under Article 294 of the Civil Service Regulations.

The 8th January 1890.—Babu Kali Kamal Chatterjea, Departmental Sub-Inspector of Schools, Furreedpore (class VI), is allowed leave of absence for three months, under Article 294 of the Civil Service Regulations, with effect from the 10th November 1889.

Babu Gobinda Chandra Dutt, Board Sub-Inspector of Schools, Furreedpore (class VII), is appointed to act as Departmental Sub-Inspector of Schools, Furreedpore, *vice* Babu Kali Kamal Chatterjea, on leave.

The 14th January 1890.—The late Babu Chandra Nath Bhattacharjea, Head Master of the Arrah Zillah School (class III), is declared to have been absent, on leave, from the 23rd to the 30th June 1889, both days inclusive, under Article 306 of the Civil Service Regulations.

Babu Baladeb Ram Jha, B.A., Second Master of the Arrah Zillah School (class V), is declared to have acted as Head Master of the same institution, during the absence, on leave, of the late Babu Chandra Nath Bhattacharjea.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the Opium manufactured at the Patna and Ghazeepore Factories will be brought to sale in the present year about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so :—

DATES.	Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Wednesday, 2nd April 1890. ...	2,250	2,500	4,750
On or about Thursday, 1st May ,, ...	2,250	2,500	4,750
On or about Monday, 2nd June ,, ...	2,250	2,500	4,750
On or about Wednesday, 2nd July ,, ...	2,250	2,500	4,750
On or about Monday, 4th August ,, ...	2,250	2,500	4,750
On or about Monday, 1st September ,, ...	2,250	2,500	4,750
On or about Wednesday, 1st October ,, ...	2,250	2,500	4,750
On or about Monday, 3rd November ,, ...	2,250	2,500	4,750
On or about Monday, 1st December ,, ...	2,250	2,500	4,750
Total ...	20,250	22,500	42,750

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L. P., *Calcutta, the 28th January* 1890.

Statement showing the Importation of Salt (private property) in bond and afloat on the River Hooghly, subject to Customs Duty, on the 15th January 1890

DESCRIPTION OF SALT.	Government golahs.	Private golahs.	Afloat.	Total.
	Mds.	Mds.	Mds.	Mds.
Liverpool Punga	8,04,401	.....	2,16,021	10,20,422
Bombay Kurkutch	4,995	.....	52,177	57,172
Arabian and Persian Gulfs Kurkutch and Muscat Rock ...	7,82,888	.....	66,375	8,49,263
Aden Kurkutch	1,15,136	.....	43,556	1,58,692
Hamburg salt	29,288	.....	1,44,986	1,74,274
Total ...	17,36,708	.....	5,23,115	22,59,823

By order of the Board of Revenue, L. P.,

J. SCOBELL ARMSTRONG, *Collector of Customs.*

CUSTOM HOUSE, CALCUTTA, *the 22nd January* 1890.

No. 72*A.*

NOTIFICATION.

LAND REVENUE.

(Bengal Tenancy Act.)

THE HON'BLE F. M. HALLIDAY.

Dated Calcutta, the 24th January 1890.

THE price-lists of staple food-crops in the local areas of Bengal, prepared under section 39 (1) of the Bengal Tenancy Act, VIII of 1885, for the period from the 1st July to the 30th September 1889, having been approved by the Board of Revenue, are published for general information under sub-section 4 of that section.

By order of the Board of Revenue, L.P.,

C. W. BOLTON,

Offg. Secretary.

Price-list (retail) of staple food-crops in the local areas of Bengal, prepared under section 39 of the Bengal Tenancy Act (No. VIII) of 1885, for three months, from July to September 1889.

PATNA DIVISION.

1	2	3	4	5	6	7	8	9	10
District	Local areas.	Marts at which prices were taken.	Staple food crop or crops.	Market days for the preparation of price-lists.	Quantities per rupee in seers of 80 tolahs, Company's weight.			Average price for the quarter ending 30th September 1889.	Remarks.
					July.	August.	September.		
					S. c.	S. c.	S. c.	S. c.	
	Sudder subdivision ..	Patna	*Makai* up-land ...	1st of each month	17 1	17 1	19 0	17 11½	
			Rice low-land ...		12 10	12 7	12 12	12 9½	
	Barh ditto ..	Barh	*Makai* up-land ...	Ditto ditto	Nil.	16 12	18 4	17 8	
A ...			Rice low-land ...		10 0	10 12	9 12	10 2½	
	Behar ditto ...	Behar	Wheat up-land ..	Ditto ditto	14 0	15 2	15 8	14 14	
			Rice low-land ...		12 8	13 10	14 0	13 6	
	Dinapore ditto ...	Dinapore ...	Barley up-land ...	Ditto ditto	15 8	18 8	18 8	17 8	
			Rice low-land ...		12 0	12 0	12 8	12 2½	
	Sudder subdivision ...	Gya	Wheat up-land ...	1st Sunday of every month...	16 8	16 12	15 8	16 4	
			Rice low-land ...		13 4	13 8	13 8	13 6½	
	Nowada ditto ..	Nowada	Wheat up-land ...	Last Friday of ditto ...	13 0	14 0	15 0	14 0	
...			Rice low-land ...		13 0	13 0	14 8	13 8	
	Jehanabad ditto ..	Jehanabad ..	Wheat up-land ...	1st Monday of ditto ...	15 0	15 8	15 0	15 2½	
			Rice low-land ..		12 12	12 12	13 8	13 0	
	Aurungabad ditto ...	Aurungabad ...	Wheat up-land ...	1st Sunday of ditto ..	16 0	16 12	17 0	17 4	
			Rice low-land ...		14 8	14 8	14 10	14 8½	
	Sudder subdivision	Arrah	Wheat up-land ...	1st Saturday of ditto ..	14 8	14 12	14 4	14 8	
			Rice low-land ...		13 2	12 10	13 4	13 0	
	Buxar ditto ..	Buxar ...	Wheat up-land .. White	1st Thursday of ditto ...	15 0	15 0	14 8	14 13½	
			Red ...		16 0	15 8	14 12	15 0½	
ARAD ...			Rice low-land ...		12 8	12 8	12 5	12 7	
	Sasseram ditto ..	Sasseram ...	Wheat up-land ...	Ditto ditto ..	15 0	15 0	16 0	15 5½	
			Rice low-land ...		13 1	13 1	13 8	13 3½	
	Bhaboosh ditto ..	Bhaboosh ...	Wheat up-land ...	Ditto ditto ...	15 0	15 1	15 0	15 0½	
			Rice low-land ...		12 0	12 8	12 0	12 2½	
	Sudder subdivision ..	Mozufferpore ...	*Makai* up-land ...	30th of each month ...	Nil.	20 0	22 0	21 0	
			Rice low-land ...		11 0	13 0	13 0	12 5½	
FFER-	Seetamarhee ditto ...	Seetamarhee ...	*Makai* up-land ...	2nd Sunday of each month	Nil.	Nil.	Nil.	Nil.	
E.			Rice low-land ..		9 10	8 6	10 2	9 6	
	Hajeepore ditto ...	Hajeepore ...	*Makai* up-land ...	27th of each month . .	16 8	Nil.	20 8	18 8	
			Rice low-land ...		11 4	11 6	14 0	12 3½	
	Sudder subdivision .	Durbhunga ..	*Murwa* up-land ...	25th of each month	16 12	17 9	23 1	19 2	
			Rice low-land ...		13 0	11 4	13 3	12 7½	
HUNGA ...	Madhubani ditto ..	Madhubani ...	*Murwa* up-land ...	Ditto ditto	13 8	16 7	26 5	18 12	
			Rice low-land ...		10 14	10 14	11 8	11 1½	
	Tajpore ditto ...	Tajpore	*Makai* up-land ...	Ditto ditto	Nil.	16 0	24 0	20 0	
			Rice low-land ...		11 8	11 12	13 0	11 12	
	Sudder subdivision...	Motihari	*Makai* up-land ...	1st Sunday of the month ...	15 8	No sale.	No sale.	15 8	
PARUN ...			Rice low-land ...		10 10	10 0	11 0	10 8½	
	Bettiah ditto ...	Bettiah	*Makai* up-land ...	1st Friday of ditto ...	Nil.	Nil.	20 0	20 0	
			Rice low-land ...		12 8	11 0	13 0	12 2½	
	Sudder subdivision ..	Chuprah ...	*Makai* up-land ...	15th of each month	18 0	Nil.	Nil.	18 0	
			Rice low-land ..		10 4	10 12	10 12	10 9½	
.. ...	Gopalgunge ditto ...	Meergunge ...	*Makai* up-land ...	1st Tuesday of each month...	Nil.	Nil.	Nil.	Nil.	
			Rice low-land ...		10 5	10 13	10 10	10 9½	
	Sewan ditto ...	Sewan	*Makai* up-land ...	1st Monday of ditto ...	16 12	Nil.	17 4	17 0	
			Rice low-land ..		Nil.	10 6	11 10	11 0	

BHAGULPORE DIVISION.

1	2	3	4	5	6	7	8	9	10
District.	Local areas.	Marts at which prices were taken.	Staple food-crop or crops.	Market days for the preparation of price-lists.	Quantities per rupee in seers of 80 tolahs, Company's weight.			Average price for the quarter ending 30th September 1889.	Rema
					July.	August.	September.		
					S. c.	S. c.	S. c.	S. c.	
Monghyr ...	Sudder subdivision ..	Monghyr ...	Wheat up-land ...	7th of every month	16 1	16 0	15 1	15 12½	
			Rice low-land ...		12 5	11 15	11 13	12 0½	
	Begusarai ditto .	Begusarai ...	Wheat up-land ..	25th of ditto	14 13	15 0	14 11	14 13½	
			Rice low-land ...		12 4	12 1	13 6	12 9	
	Jamui ditto ..	Jamui ...	Wheat up-land ...	1st Tuesday of every month	14 8	14 4	14 8	14 6½	
			Rice low-land .		12 1	12 4	12 9	12 5½	
Bhagulpore	Sudder subdivision	Bhagulpore	*Makai* up-land ...	2nd Monday of each month ..	16 6	No sale.	22 4	19 5	
			Rice low-land ..		13 14	13 12	13 12	13 12½	
	Banka ditto ..	Banka ...	*Makai* up land ..	Ditto ditto .	No sale	No sale.	30 0	30 0	
			Rice low-land ...		13 5	13 4	12 15	13 2½	
	Muddehpura ditto .	Muddehpura ..	*Murwa* up-land ...	Ditto ditto ..	25 8	27 8	40 0	30 5½	
			Rice low-land ...		14 0	14 0	21 0	16 0	
	Soopole ditto .	Soopole ...	*Murwa* up-land ...	Ditto ditto .	20 0	21 8	35 0	25 8	
			Rice low-land ...		13 0	12 0	14 4	13 1½	
Purneah ...	Sudder subdivision	Kusba	Wheat up-land ..	Last day of the month ..	15 0	14 0	15 0	14 10½	
			Rice low-land ...		12 0	12 0	12 0	12 0	
	Arrareah ditto ..	Arrareah ...	Wheat up-land ..	Last market day of each month.	16 0	14 0	15 0	15 0	
			Rice low-land ..		12 0	12 0	14 0	12 10½	
	Kissengunge ditto .	Kissengunge ..	Wheat up-land .	Ditto ditto ..	12 0	12 0	12 0	12 0	
			Rice low-land ..		12 0	16 0	10 0	12 10½	
Maldah ...	District of Maldah ...	Rahanpur ..	Rice	2nd Monday of each month .	13 14	14 5	12 0	13 6½	

CHITTAGONG DIVISION.

Chittagong ...	Sudder subdivision	Chittagong ...	Rice ...	2nd market day of each month	12 0	12 12	13 15	12 14½
	Cox's Bazar ditto	Cox's Bazar ...	Do.	Ditto ditto ...	11 0	11 0	13 0	11 10½
Noakhally ...	Sudder subdivision	Kalitara Hat	Rice	Last Monday of each month	12 0	13 0	13 0	12 10½
	Fenny ditto	Fenny Hat ...	Do.	Ditto ditto .	13 10	12 14	14 15	13 13
Tipperah ...	Sudder subdivision	Commillah ...	Rice	1st market day of the month	14 0	14 0	11 0	13 0
	Brahmunberiah ditto	Brahmunberiah .	Do. ... Aman	Ditto ditto	14 8	12 8	11 8	12 10
			Aus	.....	Nil	14 3	12 5	13 4
	Chandpore ditto	Chandpore ...	Do.	Ditto ditto ...	12 0	14 12	12 5	13 0½

BURDWAN DIVISION.

Burdwan ...	Sudder subdivision	Burdwan	Rice	18th of every month	13 2	13 11	13 14	13 9
	Raneegunge ditto	Raneegunge ...	Do.	17th of ditto	13 12	14 8	16 6	14 14
	Cutwa ditto	Cutwa	Do.	Wednesday which immediately precede the 15th, or falls on the 15th of each month.	14 0	14 0	13 7	13 13
	Culna ditto	Culna	Do.	17th of every month .	12 14	13 0	12 14	12 14½
Midnapore ...	Sudder subdivision ..	Midnapore ..	Rice	2nd Saturday of every month	15 10	15 0	15 8	15 6
	Ghattal ditto ..	Ghattal	Do.	1st of each month	14 8	15 9	16 13	15 10
	Tumlook ditto ..	Tumlook ...	Do.	3rd Wednesday of every month	13 5	12 3	12 13	12 12½
	Contai ditto ..	Contai . ..	Do.	25th of each month	15 7	14 4	17 4	15 10½
Beerbhoom ...	Sudder subdivision ..	Soory	Rice	23rd of each month	13 8	14 4	16 0	14 0½
	Rampore Hat ditto ..	Rampore Hat ..	Do.	1st market day after the 15th of each month.	12 0	13 0	14 1	13 0½

BURDWAN DIVISION—*concluded.*

1	2	3	4	5	6	7	8	9	
District.	Local areas.	Marts at which prices were taken.	Staple food-crop or crops.	Market days for the preparation of price-lists.	Quantities per rupee in seers of 80 tolahs, Company's weight.			Average price for the quarter ending 30th September 1889.	Re
					July.	August.	September.		
					S. c.	S. c.	S. c.	S. c.	
Hooghly	Sudder subdivision	Hooghly	Rice	2nd Thursday of each month	10 15	12 11	13 0	12 3½	
	Serampore ditto	Bhuddeesur	Do.	Ditto ditto	12 0	12 8	12 2	12 3½	
	Jehanabad ditto	Jehanabad	Do.	Ditto ditto	13 14	15 9	14 8	14 10½	
	Howrah ditto	Mohiaree	Do.	Ditto ditto	11 13	12 0	12 0	11 15	
	Uluberiah ditto	Uluberiah	Do.	Ditto ditto	12 4	13 0	13 0	12 12	
Bankoora	Sudder subdivision	Bankoora	Rice	30th of the month	16 9	15 5	16 0	15 15½	
	Bishenpore ditto	Bishenpore	Do.	Ditto	18 12	17 6	17 0	17 9½	

RAJSHAHYE DIVISION.

Rajshahye	Sudder subdivision	Beauleah	Rice	Last Friday of every month	12 0	12 12	12 0	12 4	
	Nowgong ditto	Nowgong	Do.	Last Wednesday of every month.	14 13	13 3	13 8	13 13½	
	Nattore ditto	Nattore	Do.	Last day of every month	14 4	13 2	12 6	13 4	
Pubna	District of Pubna	Pubna	Rice	1st Tuesday of every month	13 11	13 8	12 15	13 6	
Rungpore	Sudder subdivision	Rungpore	Rice, Amun	2nd Saturday of every month	14 2	13 9	10 2	12 9½	
			Aus		Nil	Nil	14 2	14 2	
	Nelphamari ditto	Nelphamari	Do. Amun	2nd Wednesday of every month.	13 5	12 1	12 1	12 7½	
			Aus		Nil	17 2	15 5	16 3½	
	Kurigaon ditto	Kurigaon	Do. Amun	4th Saturday of every month	13 8	13 8	13 8	13 8	
			Aus		16 8	16 8	18 0	17 0	
	Gyabanda ditto	Gyabanda	Do.	1st Friday of every month	12 0	11 6	11 4	11 8½	
Dinagepore	District of Dinagepore	Railway Bazar Hát.	Rice	1st Sunday of every month	12 7	14 0	15 0	13 15	
Bogra	District of Bogra	Bogra	Rice	1st market day after the 1st of each month.	15 0	15 0	12 0	14 0	

DACCA DIVISION.

Dacca	Sudder subdivision	Dacca	Rice	1st Sunday of every month	13 4	13 2	14 4	13 8½	
	Naraingunge ditto	Muddergunge	Do.	Monday following the Sunday selected for Mirkadim.	13 9	13 6	11 5	12 12	
	Manickgunge ditto	Manickgunge	Do.	1st Sunday of every month	13 5	13 7	12 10	13 2	
	Munshigunge ditto	Moonshir Hát	Do. Amun	1st Saturday of every month	13 9	13 12	11 11	13 0	
			Aus		Nil	Nil	12 8	12 8	
		Meerkadim	Do. Amun	1st Sunday of every month	13 9	13 6	11 6	12 12½	
			Aus		Nil	Nil	12 13	12 13	
Furreedpore	Sudder subdivision	Furreedpore	Rice	2nd Wednesday of every month.	14 0	13 4	11 9	11 15	
	Goalundo ditto	Goalundo	Do.	1st ditto ditto	11 10	11 10	11 0	11 6½	
	Madaripore ditto	Madaripore	Do.	2nd Saturday of every month	13 0	12 8	11 0	12 2½	
Mymensingh	Sudder subdivision	Nasirabad	Rice	2nd market day on the 3rd week of every month.	13 8	10 8	1 0	11 5½	
	Tangail ditto	Kagmari	Do.	Last market day of each month.	16 4	12 1	10 15	13 1½	
	Jamalpore ditto	Jamalpore	Do.	1st Saturday of every month	13 5	12 13	1 5	12 2½	
	Kishoregunge ditto	Kishoregunge	Do. Amun	3rd Thursday of each month	14 4	12 3	9 15	12 2	
			Aus		15 9	14 1	11 11	13 12½	
	Netrokona ditto	Netrokona	Do. Amun	1st Saturday of each month	17 4	13 5	10 5	13 10	
			Aus		Nil	16 0	11 0	13 8	
Backergunge	Sudder subdivision	Burrisal	Rice	Saturday, 2nd week of the month.	11 4	11 4	10 8	11 0	
	Patuakhally ditto	Patuakhally	Do.	Tuesday ditto	11 8	11 3	12 0	11 9	
	Perozepore ditto	Perozepore	Do.	Ditto, ditto	12 6	11 8	10 11	11 8½	
	Dakhin Shabazpore subdivision.	Bhola	Do.	Monday, 3rd week of the month.	13 0	11 7	14 0	12 13	

PRESIDENCY DIVISION.

1	2	3	4	5	6	7	8	9	10
DISTRICT.	Local area.	Marts at which prices were taken.	Staple food-crop or crops.	Market days for the preparation of price-lists.	QUANTITIES PER RUPEE IN SEERS OF 80 TOLAHS, COMPANY'S WEIGHT.			Average price for the quarter ending 30th September 1889.	REMARKS.
					July.	August.	September.		
					S. C.	S. C.	S. C.	S. C.	
NUDEA-	Sudder subdivision ..	Berhampore ...	Rice	20th of every month	13 8	12 8	12 13	12 13½	
	Lalbagh ditto ..	Lalbagh	Do.	1st Monday of each month ...	13 0	13 0	10 10	12 3½	
	Kandi ditto ...	Kandi	Do.	4th Saturday ditto ...	14 0	16 0	16 0	15 5½	
	Jungypore ditto ..	Jungypore ..	Do.	1st Tuesday ditto ...	13 0	12 8	12 8	12 10½	
	Sudder subdivision ..	Goaree	Rice ... Amun ... / Aus ...	3rd Wednesday of each month.	12 12	12 8	13 0	12 12	
					Nil.	13 12	12 12	13 4	
	Ranaghat ditto ..	Ranaghat ...	Do. ... Amun ... / Aus ...	3rd Monday ditto ...	13 5	13 14	13 5	13 8	
					14 8	14 8	14 8	14 8	
NADEA ...	Meherpore ditto... ..	Kaliahazar ..	Do. ... Amun ... / Aus ...	Ditto ditto ...	13 0	13 0	12 0	12 10½	
					15 0	15 0	14 0	14 10½	
	Chuadanga ditto ...	Chuadanga ..	Do. ... Amun ... / Aus ...	3rd Saturday ditto ..	12 8	12 8	12 8	12 8	
					13 0	13 0	13 0	13 0	
	Kooshtea ditto ..	Bahadurkhali ..	Do. ... Amun ... / Aus ...	3rd Monday ditto ...	12 15	13 2	12 0	12 11	
					Nil.	Nil.	13 8	13 8	
JESSORE ...	Sudder subdivision	Jessore	Rice... Amun .. / Aus ...	Monday, 2nd week of every month.	12 13	12 12	11 10	12 6½	
					13 7	12 12	11 10	12 9½	
	Narail ditto ..	Narail	Do. .. Amun ... / Aus ..	Thursday, ditto ...	12 11	Nil.	Nil.	12 11	
					12 11	13 7	13 7	13 3	
	Magoorah ditto ...	Magoorah	Do. Amun ... / Aus ...	Ditto, ditto	12 6	11 13	Nil.	12 1½	
					13 2	12 15	12 12	12 15	
	Jhenidah ditto .	Sulkupah and Jhenidah.*	Do.	Saturday and Thursday, 2nd week of every month.	12 13	12 13	12 2	12 9½	* From 8th Aug. 1889
	Bongong ditto ...	Bongong	Do. ... Amun .. / Aus ...	Monday, ditto ...	12 2	12 9	11 0	11 14½	
					10 0	14 8	13 9	14 11	
24 PERGUNNAHS.	Sudder subdivision ..	Chetla Hát ...	Rice	2nd Wednesday of every month.	11 10	11 14	11 4	11 9½	
	Baraset, Dum-Dum, and Barrackpore subdivisions.	Baraset	Do.	Last Friday of each month ...	13 0	12 8	12 8	12 10½	
	Diamond Harbour subdivision.	Mugra Hát ..	Do.	2nd Thursday of every month	13 5	12 12	13 5	13 2	
	Bussirhat subdivision .	Baduria Baraon ...	Do.	2nd Tuesday ditto ...	13 8	13 8	13 0	13 5½	
	Sudder subdivision ..	Khoolna	Rice	1st Wednesday ditto ...	13 11	13 11	12 12	13 6	
KHOOLNA ...	Satkhira ditto... ..	Satkhira	Do.	1st Tuesday ditto ..	12 3	12 3	11 2	11 13½	
	Bagirhat ditto	Bagirhat	Do.	1st Wednesday ditto ...	13 4	13 0	12 8	12 14½	

Notification under Section 30 of Act XII of 1882 (The Indian Salt Act).

IN exercise of the powers conferred by the second paragraph of notification No. 769, dated 11th February 1888, issued by the Governor-General of India in Council (in the Department of Finance and Commerce), under section 28 of Act XII of 1882, and published at pages 67-72 of the *Gazette of India*, dated 11th February 1888, the Commissioner of Salt, Abkari and Separate Revenue, Madras Presidency, under section 30 of Act XII of 1882, authorises the person named below to exercise the powers of a Salt Revenue officer :—

Locality.	Name.	Rank.	Powers to be conferred.	REMARKS.
Basudebpur Circle	Chandra Mahanty.	Peon, third grade	Salt Revenue Officer.	*Vice* Monogobind Mahanty who has forfeited his appointment.

E. MILLETT, *Assistant Secretary.*

BOARD OF REVENUE (SEPARATE REVENUE), *Madras, the 18th January* 1890.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that the following gentlemen have been elected at the recent general election as members of the several Local Boards in the district of Moorshedabad :—

Local Boards.	Thannas.	Names of persons elected.
Sudder ...	Gowas ...	Baboo Hari Kristo Mazumdar.
		„ Kanai Lal Banerjee.
	Jellinghi ...	Baboo Hari Lal Goswami.
		„ Radha Krishna Singh.
	Hariharpara ...	Baboo Jogendranarain Choudhuri.
Lalbagh ...	Nobogram ...	Baboo Kedarnath Mukerjee.
	Bhagwangola ...	Baboo Chundra Sikhar Roy.
Kandi ...	Bharatpur	Munshi Zillar Rahman, *alias* Rajamian.
		Maulavi Muhiuddin Hosain.
		„ Mehendi Hosain.
	Barwan ...	Baboo Shib Kristo Ghosh.
		„ Benode Lal Chakrabarty.
	Gokarna ...	Baboo Madhu Sudan Roy Choudhuri.
Jungipur ...	Dewansarai ...	Baboo Harish Chundra Roy.
	Raghunathgunge ...	Baboo Sitanath Roy.
		Munshi Mobaruk Hosain.
	Suti ...	Baboo Kissen Lal Singha.
		„ Bisweswar Miser.
	Shumsergunge ...	Baboo Bhogobutty Churn Roy.
		„ Potiram Banerjee.
	Mirzapur ...	Baboo Anath Bandhu Chattarjee.

A. SMITH, *Commissioner.*

COMMR.'S OFFICE, PRESY. DIVN., *the 21st January* 1890.

NOTIFICATION.

WHEREAS under Government notification of the 29th March 1887, the thanna of Kandi and its outpost Burwan, in the district of Moorshedabad, have been converted into two thannas, respectively, known as Kandi and Burwan, it is hereby notified, in modification of the notification of the 18th May 1886, published at pages 808 and 809 of Part II of the *Calcutta Gazette* of the 19th idem, that the three members assigned for election in the Kandi thanna of the Kandi Local Board have, under paragraph 19 of the Election Rules under the Local Self-Government Act, 1885, been re-distributed as follow :—

Thanna Kandi	...	1
Burwan	...	2
Total	...	3

A. SMITH, *Commissioner.*

NOTIFICATION.

IT is hereby notified for general information that at the election held under section 27 of Act III (B.C.) of 1884 on Saturday, the 28th December 1889, Baboo Kali Prosunno Chatterjee has been elected a Commissioner for Ward No. II of the Cutwa Municipality, in the district of Burdwan, *vice* Baboo Golap Chand Shaha, deceased.

N. S. ALEXANDER, *Commissioner.*

BURDWAN COMMR.'S OFFICE, *the 24th January* 1890.

NOTIFICATION.

IT is hereby notified for general information that at the election held under section 27 of Act III (B.C.) of 1884 on Monday, the 30th December 1889, Baboo Bhupati Bhattacherjee has been elected a Commissioner for Ward No. V of the Chandrakona Municipality, in the district of Midnapore, *vice* Baboo Barada Prosad Sarker, deceased.

N. S. ALEXANDER, *Commissioner.*

BURDWAN COMMR.'S OFFICE, *the* 17*th January* 1890.

NOTIFICATION.

IT is hereby notified for general information that the following gentlemen have been appointed to be members of the Managing Committee of the second class Charitable Dispensary at Chattra, in the district of Hazaribagh:—

Baboo Aughore Nath Chatterjee. | Baboo Bisun Chand Saha.

RAI CHURN GHOSE, *Personal Asst. to the Commr., for Commr. of Chota Nagpore.*

DATED RANCHEE, *the* *January* 1890.

The Calcutta Gazette.

WEDNESDAY, JANUARY 29, 1890.

PART IA.

ers and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following orders issued by the Government of India in the Home Department are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATIONS—ESTABLISHMENTS.

Calcutta, the 20th January 1890.

No. 36.—Mr. C. T. Metcalfe, C.S.I., has been permitted to resign Her Majesty's Bengal Civil Service, with effect from the 29th October 1889.

POLICE.

The 22nd January 1890.

No. 69.—The services of Mr. S. N. Walker, Assistant Superintendent of Police, Bengal, were placed at the disposal of the Chief Commissioner of Assam, with effect from the 30th December 1889.

A. P. MACDONNELL,
Secretary to the Govt. of India.

The following orders issued by the Government of India, Department of Finance and Commerce, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATIONS.

ACCOUNTS AND FINANCE.
LOANS, &C.

The 24th January 1890.

No. 417.—In exercise of the powers conferred by section 5 of the Local Authorities Loan Act XI of 1879, the Governor-General in Council directs the cancellation of the following words in rule 2 of the Rules for the grant of loans to Local Authorities by the Government, published in the Notification in this Department, No. 15, dated the 1st January 1889, namely, "and (6), 'Local Board' includes a District Board and District Council, and any body having like authority beyond the local limits of municipalities and cantonments"

Rule 5 of the same Rules is also cancelled.

The 23rd January 1890.

No. 396.—Mr. I. C. Bose having been relieved of the office of Assistant Comptroller-General in charge of the Outside Audit Department by Mr. R. N. Ray, is re-transferred to the office of the Accountant-General, Bengal.

E. J. SINKINSON,
Secretary to the Government of India.

The following order issued by the Government of India in the Military Department is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

Fort William, the 24th January 1890.

FURLOUGH AND LEAVE.

No. 76.—The undermentioned Warrant Officer is granted leave to proceed out of India on medical certificate under the Leave Rules published in clause 187, India Army Circulars, 1889; the leave to have effect in India from the date of being struck off duty till the date of sailing; the specified period to count from date of leaving India :—

First grade Apothecary W. A. Williams, for one year.

E. H. H. COLLEN,
Secretary to the Govt. of India.

The Calcutta Gazette.

WEDNESDAY, JANUARY 29, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 22nd January 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election, by the members of the Mozufferpore Local Board, in the district of Mozufferpore, under section 29 of Act III (B.C.) of 1885, of Baboo Ram Prokash Lal to be their Chairman, *vice* the Executive Engineer, Tirhoot State Railway, Open Line, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 22nd January 1890.—It is hereby notified that, under section 9, Act III (B.C.) of 1885, the following gentlemen have been elected to be members of the Local Boards in the district of Rajshahye :—

Local Board of	Thana for which elected.	Names of members.
Rampore Beauleah ...	Sudder or Beauleah	Baboo Brojo Gopal Bagchi, M.A., B.L.
		„ Srinath Mandal.
	Pateah ...	Baboo Umesh Chandra Talapatra.
		„ Sarat Chandra Chowdhury.
	Charghat ...	Mr. G. W. A. Coxon.
		Baboo Radhica Mohan Gossami.
	Godagari ...	Baboo Dinabandhu Sanyal.
	Tanore ...	Baboo Kishori Mohun Chowdhury, M.A., B.L
	Bagmara ...	Baboo Grish Chandra Dutt.
		„ Grish Chandra Chowdhury.
Nattore ...	Nattore ...	Baboo Kalikamal Maitra.
		„ Kedarnath Acharjea.
	Singra ...	Baboo Mohim Chandra Maitra.
		„ Radha Govinda Roy.
	Lalpore ...	Baboo Barada Govinda Sen.
		„ Kumad Nath Roy.
	Boraigram ...	Baboo Jadub Chandra Bishi.
		„ Hari Madhub Sarkar.
Nowgong ...	Nowgong ...	Baboo Krishna Dhon Bagchi.
		„ Trailakyanoth Dass.
	Manda ...	Baboo Trailakhyanoth Ghatak.
		„ Kali Prasad Roy.
	Panchoopore ...	Baboo Beni Madhub Saha.
		„ Dwarka Kant Chowdhury.

2. The following gentlemen are appointed, under section 11 of the Act, to be members of the above Local Boards :—

Local Board of	Names of members.
Beauleah ...	Shah Zohural Hossein. Baboo Kalinath Chowdhury. „ Nanda Lal Lalla. Mohomed Abdul Hamid Meah. Baboo Taran Krishna Mandal. Mr. E. A. Lang.
Nattore ...	Baboo Umesh Chandra Mittra. „ Kedar Nath Chowdhury. Moulvie Abdul Karim Khan Chowdhury.
Nowgong ...	Baboo Shashi Bhusan Rai. Moulvie Moojir Uddin Ahmed. Baboo Kedar Prasanna Lahiri.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 24th January 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Sayed Ahmad Hussein Khan to be a Commissioner of the Tikari Municipality, in the district of Gya, *vice* Mr. F. B. Hampton, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

ERRATUM.

The 24th January 1890.—In the notification dated 6th January 1890, published at page 5, Part IB of the *Calcutta Gazette* of the 8th idem, containing the names of the gentlemen appointed to be members of the several Local Boards in the district of the 24-Pergunnahs, *for* Baboo Khettra Gopal Das, an appointed member of the Baraset Local Board, *read* Baboo Khettra Pal Dass.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th January 1890.—It is hereby notified for general information that the Lieutenant-Governor intends, in the exercise of the power conferred on him by section 1 of Act V (B.C) of 1880, to extend the provisions of the said Act to the Hajipore Municipality, in the district of Mozufferpore, unless good reasons are shown to the contrary within six weeks from the date of the publication of this notification within the aforesaid Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th January 1890.—It is hereby notified that, under section 16, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Gopal Chunder Mookerjee to be a Commissioner of the Berhampore Municipality, in the district of Moorshedabad, *vice* Baboo Sri Nath Pal, who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 28th January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Comillah Municipality for a public purpose, viz., for the improvement of the Charitable Dispensary, in the village of Gangchur, pergunnah Meherkul, zillah Tipperah, it is hereby declared that for the above purpose a piece of land measuring, more or less, 1 beegah 9 cottahs and 1 chittack of standard measurement, is required. The land is bounded on the North by the dispensary tank and a ditch; on the East by a municipal road; on the South by the Gumti embankment; and on the West by a ditch on the east of Hari Nath Da's house.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 28th January 1890.—Under rule 9 of the rules framed under section 5 of the Local Authorities Loan Act. 1879, it is hereby notified for general information that the Lieutenant-Governor intends to sanction the following application from the Commissioners of the Rampore Beauleah Municipality for a loan of Rs. 15,000 from Government, bearing interest at 4½ per cent. per annum, unless good reasons are shown to the contrary within one month from the date of the publication of this notification within the said municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

APPLICATION FROM THE MUNICIPAL COMMISSIONERS OF RAMPORE BEAULEAH FOR A LOAN OF Rs. 15,000.

1	2	3	4	5 (a)	5 (b)	5 (c)	5 (d)
The work or works for the construction or repair of which the loan is required, and an estimate of the cost thereof.	The amount which it is proposed to borrow.	The fund or funds on the security of which it is proposed to borrow.	The law or laws under which the said fund or funds is or are levied, received or held.	The period for which the loan is required.	The number of the instalments, if any, in which it is proposed that the loan shall be taken.	The amount of the instalments.	The dates proposed for receiving such instalments.
	Rs.			Years.		Rs.	
The construction of pucca saucer-shaped drains in wards Nos. I. II and III of the Bauleah Municipality to improve the surface drainage. Rs.	15,000	The Municipal Fund.	Act III (B.C.) of 1864.	20	3	1st instalment 5,000	1st April 1890 ... 5,000
Cost of 19,000 r.ft. of drain... 14,440						2nd do. 5,000	1st April 1891 ... 5,000
Contingencies at 5 per cent. 722						3rd do. 5,000	1st April 1892 ... 5,000
Total ... 15,162						Total ... 15,000	Total ... 15,000

5(e) THE INSTALMENTS IN WHICH IT IS PROPOSED TO REPAY THE LOAN.

Principal.		Interest at 4½ per cent.			Total.		
	Rs.	Rs.	A.	P.	Rs.	A.	P.
1st Oct. 1890,	375	112	8	0	487	8	0
1st April 1891,	375	104	1	0	479	1	0
1st Oct. ,,	375	208	2	0	583	2	0
1st April 1892,	375	199	11	0	574	11	0
1st Oct. ,,	375	303	12	0	678	12	0
1st April 1893,	375	295	5	0	670	5	0
1st Oct. ,,	375	284	14	0	641	14	0
1st April 1894,	375	278	7	0	653	7	0
1st Oct. ,,	375	270	0	0	645	0	0
1st April 1895,	375	261	9	0	636	9	0
1st Oct. ,,	375	253	2	0	628	2	0
1st April 1896,	375	244	11	0	619	11	0
1st Oct. ,,	375	236	4	0	611	4	0
1st April 1897,	375	227	13	0	602	13	0
1st Oct. ,,	375	219	6	0	594	6	0
1st April 1898,	375	210	15	0	585	15	0
1st Oct. ,,	375	202	8	0	577	8	0
1st April 1899,	375	194	1	0	569	1	0
1st Oct. ,,	375	185	10	0	560	10	0
1st April 1900,	375	177	3	0	552	3	0
1st Oct. ,,	375	168	12	0	543	12	0
1st April 1901,	375	160	5	0	535	5	0
1st Oct. ,,	375	151	14	0	526	14	0
1st April 1902,	375	143	7	0	518	7	0
1st Oct. ,,	375	135	0	0	510	0	0
1st April 1903,	375	126	9	0	501	9	0
1st Oct. ,,	375	118	2	0	493	2	0
1st April 1904,	375	109	11	0	484	11	0
1st Oct. ,,	375	101	4	0	476	4	0
1st April 1905,	375	92	13	0	467	13	0
1st Oct. ,,	375	84	6	0	459	6	0
1st April 1906,	375	75	15	0	450	15	0
1st Oct. ,,	375	67	8	0	442	8	0
1st April 1907,	375	59	1	0	434	1	0
1st Oct. ,,	375	50	10	0	425	10	0
1st April 1908,	375	42	3	0	417	3	0
1st Oct. ,,	375	33	12	0	408	12	0
1st April 1909,	375	25	5	0	400	5	0
1st Oct. ,,	750	16	14	0	766	14	0
Total ..	15,000	6,235	5	0	21,235	5	0

6 A DETAILED ACCOUNT OF THE REVENUE AND EXPENDITURE OF THE LOCAL AUTHORITY FOR THE THREE LAST PRECEDING YEARS.

Heads of Receipts.	For 1886-87.	For 1887-88.	For 1888-89.	Heads of Expenditure.	For 1886-87.	For 1887-88.	For 1888-89.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Balance in hand ..	3,877	3,329	1,401	Office Establishment (including contingencies, cost of stationery, cost of audit and banking.)	1,866	2,042	2,191
Taxes on houses and lands.	9,937	10,871	10,561				
Taxes on carriages	929	948	996				
Do. on animals	488	492	488				
Cart registration fees.	2,053	2,605	2,743	Collection of taxes	1,552	1,905	1,850
				Public safety (fire and lighting).	759	801	848
Tolls on ferries ...	1,636	1,237	1,095				
Latrine rate under section 320.	3,653	4,923	4,901	Buildings and other works.	.....	32	.....
Hackney Carriage Act.	418	422	431	Repairs	.....	.....	19
				Dispensary charges	2,122	3,988	3,618
Cattle Trespass Act	521	1,066	1,302	Vaccination ..	163	147	157
Vaccination fees...	8	8	11	Registration of Births and Deaths	375	573	632
Proceeds of land...	.....	1	8				
Income derived from markets and slaughter-houses.	36	50	179	Road watering ...	1,049	1,018	447
				Conservancy and road cleaning.	985	944	1,400
Municipal fines ...	411	339	593	Drainage works ...	1,410	723	2,779
Dispensary receipts	700	1,383	1,420	Other measures (improvement of tanks, &c.)	514	1,388	.....
Rents of municipal lands, tanks, &c.	25	58	60				
Payment by private persons.	327	228	1,261	Markets and slaughter-houses and public gardens	168	154	244
Receipts from public garden.	.....	.....	14	Works undertaken for private persons.	42	97	1,823
Other receipts (including burial-ground fees).	372	536	1,338	Contribution to schools.	333	392	424
Total receipts ...	21,564	25,166	27,491	Construction and maintenance of roads, bridges, office-building and godown shed.	5,196	5,539	4,237
Debt	.....	.....	.....				
Advances recovered	.....	1,603	4,064				
GRAND TOTAL ...	25,442	30,098	32,956	Survey of land ..	.....	22	236
				Other charges (ferry, cattle-pound, printing and reward).	384	663	590
				Cleansing of latrines	3,942	4,040	4,680
				Miscellaneous (including refund of over assessment).	809	664	799
				Compensation for land.	446	754	142
				Total Expenditure	22,113	25,854	27,005
				Advances made ...	.....	2,746	4,331
				GRAND TOTAL ...	22,113	28,600	31,336

7 All existing prior charges upon the funds of the local authority.

Nil.

NOTIFICATION.

The 28th January 1890.—It is hereby notified that, under section 9, Act III (B.C.) of 1885, the following gentlemen have been elected to be members of the Local Boards in the district of Hooghly :—

Local Board of	Thana for which elected.	Names of members.
Hooghly	Hooghly	Baboo Sriram Chander Sircar.
	Pandooah	Baboo Upendra Nath Bose.
		„ Bamdeb Dutta.
	Balagurh	Baboo Chandra Narain Roy.
		Munshi Rajab Ali Mea.
	Dhoniakholi	Baboo Nerode Coomar Singh.
		„ Bani Madhub Mozumdar.
	Polba	Baboo Gokul Krishna Singh.
Serampore	Chanditalah	Baboo Srinath Koar.
		„ Harendra Krishna Mukerjea.
		„ Purumeswar Mukerjea.
	Haripal	Sheikh Mollah Jessarutulla.
		Baboo Giris Chunder Mukerjea.
		„ Kali Prasunno Mukerjea.
	Kristonagore	Moulvie Mohomed Kheber.
		Baboo Dharma Das Sing Roy.
Jehanabad	Goghat ...	Baboo Ishan Chunder Koar.
		„ Bhajo Hari Ghose.
	Jehanabad	Baboo Kedarnoth Nath.
		„ Charu Chundra Mitra.
	Khanacool	Baboo Harish Chundra Bhuttacharjee.
		„ Mokhum Lall Roy.

2. The Lieutenant-Governor is pleased to appoint the following gentlemen, under section 10 of the Act, to be members of the Local Boards named below :—

Local Board of	Names of members.
Hooghly	Baboo Sitanath Mookerjea.
	„ Kedarnath Sen, L.M.S.
Serampore	Munshi Hesaruddin.
	Baboo Bishnu Pada Banerjea.

3. The following gentlemen are appointed, under section 11 of the Act, to be members of the Local Boards named below—

Local Board of	Names of members.
Hooghly	The Senior Uncovenanted Deputy Collector, *ex officio*.
	Baboo Giris Chunder Kar.
	Syed Abdul Mozaffar.
	Munshi Golam Mehidi.
	Baboo Jageswar Singh.
Serampore	Kumar Ramendra Krishna Deb, Deputy Magistrate and Deputy Collector.
	Baboo Kangali Churn Sircar.
	„ Narendranoth Mookerjea.
	Sheikh Golam Reisul.
	Baboo Khetranoth Roy.
Jehanabad	Baboo Hari Narain Banerjee.
	Munshi Golam Hossein Chowdhory.
	Baboo Koilas Chundra Bose.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.



The Calcutta Gazette.

WEDNESDAY, JANUARY 29, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

PUBLIC WORKS DEPARTMENT,—BENGAL.

DISTRICT ROAD FUND.

NOTIFICATION No. 18.

Dated the 21st January 1890.

THE subjoined annual accounts and reports of the Road Cess Committees of the districts of Hazaribagh, Lohardugga, Manbhoom and Singbhoom for the year 1888-89, together with the remarks thereon of the Commissioner of Chota Nagpore, are published for general information.

W. B. BESTIC,

Under-Secy. to the Govt. of Bengal.

No. 58D.R., dated Hazaribagh, the 7th June 1889.

From—LIEUT.-COL. C. H. GARBETT, Chairman, District Road Cess Committee, Hazaribagh,

To—The Commissioner of Chota Nagpore.

I HAVE the honour to submit herewith a detailed account of receipts and expenditure of the District Road Fund for the year ending 31st March 1889, together with the following report on the administration of the fund for the same period.

2. During the year under report the District Committee, consisting of 24 members, held five meetings for the transaction of business, a summary of which is given below. A quorum was obtained at all the meetings.

* * * * * * * *

(1) Preparation of the schedule of all public works under sections 141 and 143 of Act IX (B.C.) of 1880 which are subject to the control of this committee for submission to Government.

(2) Distribution of village road allotments for the year 1888-89.

(3) Passing the estimate of gravelling the Ramgurh and Gola Road.

(4) Preparation of the budget estimates of receipts and expenditure for the year 1889-90.

(5) Passing the annual accounts and reports for the year 1887-88.

3. The accounts were, as usual, audited monthly by a sub-committee appointed under section 174 of the Road Cess Act.

4. *Branch Committee.*—There is only one branch committee at Giridih, which held five meetings during the year, and in which the average attendance of members was 4·2.

5. The year commenced with an arrear balance of Rs. 10,665. This, together with Rs. 46,476, the demand for the year, less the sum of Rs. 514 paid in advance in previous year, gave a total of Rs 56,627 for collection within the year under report. The collections of the year, amounted to Rs. 47,025, leaving a balance of Rs. 9,602 uncollected at its close. In addition to the above a sum of Rs. 1,437 was collected as advance collection on account of future years. The percentage of collection on current demand was 79·1. The cause of this percentage being below the standard rate was the same as reported last year, viz., the default of the Ramgurh estate to pay its last instalment of cesses, amounting to Rs. 17,614-10-5, on the 28th March 1889. This amount has since been realized.

6. *Original works.*—The only original works taken up in hand during the year under review were the construction of a third class inspection bungalow at Gola, and the gravelling of the eight miles of the road between Ramgurh and Gola. The sum of Rs. 400 shown as expended on the Burheo and Gawan road was on account of payment of arrears due to contractors for works done last year.

7. The funds at the disposal of the committee being insufficient even to keep up all the existing district roads, not to mention village roads, very little could be done by way of original works.

8. *Repairs.*—Five metalled roads, aggregating about 58 miles, have been maintained and are generally in good condition. Seventeen fair weather roads, about 302 miles, have been fairly maintained throughout the year and are fit for cart traffic. The steep gradients are gradually being improved, and the approaches down to beds of unbridged rivers and nullahs cased for wheeled traffic.

9. *Village roads.*—Thirty village roads, aggregating about 134 miles, have been repaired and made feasible for cart traffic. For want of funds no new village communications were taken up.

10. *Arboriculture.*—With the exception of filling up vacancies and maintaining existing plants, no new trees were planted during the year. The number of trees already planted (viz., 14,150) is comparatively large considering the means of this committee.

11. *Nursery garden.*—There is only one nursery in the compound of the Road Cess office, containing the following plants:—Mango, jamun, jack, neem, carounge and date, They are well looked after and are doing well.

12. *Staying bungalows and serais.*—There is only one staging bungalow at Ramgurh it yielded Rs. 291 during the year, and its maintenance cost Rs. 564-8-2, including arrear payments of last year.

There is a cart serai at Bagodar on the Grand Trunk Road. It yielded Rs. 91-10-8, and cost Rs. 268-9-9 for its maintenance. As the committee gain nothing by keeping up this serai, but pay more than what it yields, it is desirable that it be closed to prevent further loss in its maintenance. The same may be said of the Ramgurh staging bungalow.

13. The scarcity of labour in the district increases every year, and is mostly felt in the Chatra subdivision, where it has become almost impossible to procure coolies to do road work. Save in the Chatra sub-division, most of the earthwork on the roads was done during the rainy season. In the Chatra subdivision very little of the earthwork was done during the wet season, principally by reason of the dearth and difficulty of procuring labour, and partly owing to the laches of contractors.

14. A sum of Rs. 7,465-11-8 was placed at the disposal of the branch committee at Giridh. Of this sum Rs. 5,997-6-3 were spent in repairing the village roads and Rs. 199-8 in paying the cost of establishment under it, leaving a balance of Rs. 1,268-13-5 unexpended at the end of the year.

HAZARIBAGH DISTRICT ROAD FUND.

Account of Income and Expenditure for the year ending 31st March 1889.

Receipts.		Amount.	Total.	Expenditure.		Amount.	Total.
		Rs. A. P.	Rs. A. P.			Rs. A. P.	Rs. A. P.
Balance on 31st March 1888		.....	26,612 12 9	Provincial rates ...	Establishment and contingencies of the office of collection	977 15 5	977 15 5
Receipts.				Administration ...	Establishment and contingencies of the Committee's office	1,151 11 6	
Provincial rates ...	Cess on lands	44,356 11 6			Percentage cost of establishment for offices of accounts and control ...	574 13 9	1,726 9 3
	Cess on mines	4,104 6 8	48,461 2 2	Stationery ...	Stationery and printing	292 13 1	292 13 1
Miscellaneous ...	Rents of serais and bungalows ...	423 10 8		Public Works ...	Original works	4,000 0 0	
	Fees, fines, and forfeitures ...	29 4 0			Repairs	32,261 5 0	
	Interest	197 15 11			Establishment	7,801 9 4	
	Miscellaneous	126 1 3	776 15 10		Tools and plant	1,319 8 6	45,382 6 10
Grant from Government		2,609 15 10	2,609 15 10	Miscellaneous ...	Staging bungalows—establishment and contingencies	141 1 0	
					Do.—petty construction and repairs ...	692 0 11	
					Miscellaneous	14 0 0	833 1 11
							14 0 0
	Total Revenue ...	.....	51,848 1 10		Total Expenditure ...	.....	49,226 14 6
Suspense Accounts	Advances	5,264 11 7		Suspense accounts	Advances	7,716 15 3	
	Deposits	338 0 0	5,602 11 7		Deposits	1,472 8 0	9,189 7 3
	Total Receipts ...	.....	57,450 13 5		Total Disbursement ...	.....	58,416 5 9
				Balance on 31st March 1889		.....	25,647 4 5
	Grand Total ...	.....	84,063 10 2		Grand Total ...	.....	84,063 10 2

Passed for Rs. 58,416-5-9 (fifty-eight thousand four hundred and sixteen, annas five and pies nine) only.

Hazaribagh,
The 5th June 1889.

Jadu Nath Mookerjee,
Bhabani Charan Mittra, } *Members, Sub-Committee.*

H. C. Mitter,
Vice-Chairman.

C. H. Garbett,
Chairman.

No. 6.—Part II.

HAZARIBAGH DISTRICT ROAD FUND.

Details of Income and Expenditure for the cess year ending 31st March 1889.

Sub-head of estimate.	Amount as per budget estimate.	PARTICULARS.	Amount.	Total.
	Rs.	INCOME.	Rs. A. P.	Rs. A. P.
Provincial rates	42,379	Cess on lands	44,356 11 6	
	3,289	Cess on mines	4,104 6 8	
				48,461 2 2
Miscellaneous	250	Rents of serais and bungalows—		
		Collection from the Ramgurh dák bungalow on the Ramgurh and Gola road	332 0 0	
		Collection from Bagodar cart serai	91 10 8	
				423 10 8
	150	Fees, fines, and forfeitures—		
		Record-searching fees	23 4 0	
		Fees for opening separate accounts in revenue-free estates ...	6 0 0	
				29 4 0
	175	Interest on arrear collections	197 15 11	
				197 15 11
	201	Miscellaneous—		
		Sale proceeds of the Mirzagunge inspection bungalow	40 0 0	
		Ditto of unserviceable tools	84 11 0	
		Ditto of empty stationery boxes	0 12 0	
		Pay of mohurir summoned to give evidence in a civil court ...	0 10 3	
				126 1 3
Grant from Government.	500	Share of cost of establishment for collection of revenue by Government.	500 0 0	
		3-20ths of 10 per cent. collection in Government estates	2,109 15 10	
				2,609 5 10
Suspense Accounts.	.....	Advance—		
		Branch committee at Giridih	4,694 1 9	
		Deputy Collector, Cess Department	570 9 10	
	.....	Deposits—		5,264 11 7
		Taruk Nath Banerjee	59 0 0	
		Issur Chunder Dey	56 0 0	
		Rangoo Sahu	38 0 0	
		Bhookhoo Ram	98 0 0	
		Nando Mistry	25 0 0	
		Gunput Ram	25 0 0	
		Sheikh Ghowsey	37 0 0	
				338 0 0
		Total Receipts ...	... ...	57,450 13 5
		EXPENDITURE.		
Provincial rates	1,200	*Establishment and contingencies of the office of collection.*		
		Establishment—		
		1 Head clerk at Rs. 70 per month for 2 months and 11 days ...	164 13 4	
		1 Ditto ,, 50 ,, for 9 months and 20 days ...	482 4 1	
		1 Mohurir ,, 20 ,, for 12 months ...	240 0 0	
		1 Peon ,, 5 ,, for 11 months and 5 days ...	55 14 0	
				942 15 5
		Contingencies—		
		1 Punkha-puller	3 0 0	
		1 Sweeper	3 12 0	
		Postage	1 2 0	
		Municipal tax on office building	22 8 0	
		Cost of proclaiming notices	4 10 0	
				35 0 0
Administration	1,170	*Establishment and contingencies of the Committee's office.*		
		Establishment—		
		1 Clerk at Rs. 35 for 12 months	420 0 0	
		Allowance to cess head clerk for performing the accountant's duties at Rs. 30 per month for 12 months.	360 0 0	
		Rs. A. P.		
		1 Clerk at Rs. 15 for 12 months 180 0 0		
		Deduct fine ... 0 8 0		
		179 8 0		
		1 Orderly peon at Rs. 5 for 12 months	179 8 0	
			60 0 0	
				1,019 8 0
		Contingencies—		
		Municipal tax on office building	22 8 0	
		Sweeper	5 4 0	
		Punkha-puller	17 8 2	
		Postage stamps	41 2 0	
		Receipt stamps	22 0 0	
		Subscription to the *Calcutta Gazette*	20 0 0	
		Ground rent of the office building for 1888-89	3 9 4	
		Price of dusters	0 4 0	
				132 3 6
	715	Percentage cost of establishment for offices of accounts and control.	574 13 9	
				574 13 9
Stationery ...	.....	Stationery and Printing—		
		Stationery	62 8 9	
		Printing	230 4 4	
				292 13 1

Number of roads.	*Original Works.*	Total sanctioned cost.	Outlay to end of the year.		
		Rs.	Rs. A. P.		
Public works	7 Burhee and Gawan road—				
	Earthwork, including dressing	19,631	18,471 13 3	400 0 0	
	Culverts		288 11 3	.....	
	Kodurmah bungalow ...		393 8 3	.....	
	8 Ramgurh and Golah road—				
400	Construction of a third class inspection bungalow at Golah	400	400 0 0	400 0 0	
3,200	Gravelling the Ramgurh and Golah road	3,200	3,200 0 0	3,200 0 0	
	Total Original Works ...	.....	.....	.....	4,000 0 0
	Carried over ...	.....	.....	.....	6,997 5 9

Sub-head of estimate.	Amount as per budget estimate.	Number of roads.	Particulars.	Amount.	Total.
	Rs.		EXPENDITURE—*continued.*	Rs. A. P.	Rs. A. P.
			Brought forward ...	.....	4,997 5 9
			Repairs.		
Public Works —(*contd.*)	6,288	1	Chuttra and Chowparan road—	Rs. A. P.	
			Road	3,255 0 11	
			Inspection bungalow at Pitiz ...	48 0 0	
			Ditto at Chuttra ...	61 8 0	
			Trees	5 0 0	
					3,369 8 11
	1,726	6	Baloomath and Sherghotty road—		
			Road	162 12 10	
			Jubra inspection bungalow	48 7 0	
			Huntergunge inspection bungalow ...	48 0 0	
			Trees	107 6 3	
					366 10 1
	1,973	3	Hazaribagh and Chuttra road—		
			Road	1,183 8 8	
			Lopo inspection bungalow	48 0 0	
			Trees	133 11 0	
					1,365 3 8
	1,567	7	Burhee and Gawan road—		
			Road	719 7 4	
			Kodermah inspection bungalow ...	275 13 9	
					995 5 1
	186	22	Pohurpur and Bagodar road—		
			Bhurkutta inspection bungalow ...	163 3 4	
					163 3 4
	4,185	4	Giridih and Khurruckdiha road—		
			Road	3,685 2 10	
			Khurruckdiha inspection bungalow ...	114 10 3	
			Pachumba ditto ditto ...	48 0 0	
			Trees	112 7 2	
					3,960 4 3
	1,406	8	Ramgurh and Golah road—		
			Road	1,223 6 5	
			Trees	93 5 9	
					1,316 12 2
	806	9	Golah and Puttridih road—		
			Road	715 6 3	
			Trees	83 1 3	
					798 7 6
	1,762	2	Hazaribagh station roads—		
			Road	1,077 0 6	
			Trees	486 14 9	
					1,563 15 3
	1,015	5	Old Benares road—		
			Road	949 2 11	
			Trees	59 0 0	
					1,008 2 11
	674	10	Gya and Deoghur pilgrim road—		
			Road	427 13 11	
					427 13 11
	2,348	11	Golah and Gobindpore road—		
			Road	1,464 3 7	
			Paterbar inspection bungalow ...	82 6 7	
			Mujhdih ditto ditto	61 12 5	
			Trees	165 14 3	
					1,774 4 10
	890	13	Etkhoori and Pudma road—		
			Road	550 11 9	
					550 11 9
	203	14	Moheshmoonda and Bengabad road—		
			Road	148 2 3	
			Trees	43 13 6	
					191 15 9
	2,222	15	Bishengurh and Goomia road—		
			Road	2,206 1 1	
			Trees	38 8 0	
					2,244 9 1
	1,206	16	Giridih and Toondi road—		
			Road	605 13 1	
			Trees	49 13 6	
					655 10 7
	1,238	17	Old Ranchi road—		
			Road	747 3 0	
			Tandwa inspection bungalow ...	63 14 6	
					811 1 6
	483	18	Koderma and Jamuggur road—		
			Road	325 3 7	
			Trees	66 0 3	
					391 3 10
	427	28	Pachumba and Buddiha road—		
			Road	254 12 10	
			Trees	49 13 0	
					304 10 4
	461	19	Dhanwar and Jamoe Road	57 4 8	
					57 4 8
	217	5	Road cess office building	183 4 0	
					183 4 0
			Village road—		
	6,561	...	Head-quarters sub-division	5,296 8 10	
	7,466	...	Giridih sub-division	4,464 8 9	
				9,761 1 7	
			Total Repairs ...	.....	32,261 5
	7,760		*Establishment.*		
			Establishment—		
			1 District Engineer for 12 months at Rs. 330 per month, viz., Rs. 300 salary and Rs. 30 contribution to Government for pension.	3,960 0	
			1 Sub-Overseer for 12 months, at Rs. 50 per month	600 0 0	
			2 Sub-Overseers for 12 months, at Rs. 30 each per month ...	720 0 0	
			1 Sub-Overseer for 9 months and 30 days at Rs. 30 per month.	299 0 6	
			1 Ditto for 15 days at Rs. 30 per month	14 8 3	
			1 Clerk and Accountant for 12 months at Rs. 50 per month ...	600 0 0	
			1 Orderly peon for the District Engineer for 12 months at Rs. 5 per month.	60 0 0	
			1 Office peon for 12 months at Rs. 5 per month	60 0 0	
					6,313 3
			Carried over ...	.....	43,572 3

Sub-head of estimate.	Amount as per budget estimate.	PARTICULARS.	Amount.	Total.
	Rs.	EXPENDITURE—*concluded.*	Rs. A. P.	Rs. A. P.
		Brought forward ..	.....	45,572 3 6
Public Works —(*concld.*)		*Establishment*—concld.		
		Travelling Allowance—		
		District Engineer	535 8 0	
		1 Sub-Overseer for 13 months at Rs. 20 per month, and one month at Rs. 15	275 0 0	
		2 Sub-Overseers for 13 months at Rs. 15 each per month	390 0 0	
		1 ditto for 9 months and 30 days at Rs. 15 per month...	149 8 3	
		1 ditto for 1 month and 15 days at Rs. 15 per month ...	22 4 1	
				1,372 4 4
		Contingencies—		
		1 Punkha-puller for 6 months and 28 days at Rs. 3 per month ..	20 11	
		1 ditto for 6 months and 27 days at Rs. 2 per month .	13 11 9	
		1 Sweeper	7 8 0	
		Money-order commission	29 10 0	
		Postage stamps	44 3 3	
				115 1 3
	1,430	*Tools and Plant*		
		New Tools—		
		396 Griffin's kodalis, No. 5, at Rs. 14 per dozen	462 0 0	
		1 Griffin's kodali, No. 6, at Rs. 15 ditto	1 4 0	
		353 Pickaxes, Steel faced, of sorts	366 6 0	
		239 Ballast hammers	94 8 0	
		3 Stone rollers	524 1 3	
		15 Iron rammers at Rs. 2 each	30 0 0	
		Repairs and Conveyance—		
		Repairing pickaxes, sharpening kodalies and repairing of tents, &c., including charges for conveyances	41 5 3	
				1,319 8 6
		ESTABLISHMENT AND CONTINGENCIES OF STAGING BUNGALOWS AND SERAIS.		
Miscellaneous	153	*Ramgurh Staging Bungalow.*		
		Establishment—		
		1 Khansama for 12 months at Rs 6 per month	72 0 0	
		1 Sweeper for 12 months at Rs. 3 per month	36 0 0	
			108 0 0	
		Contingencies—		
		2 Copper deckchies at Rs. 1-8 each	3 0 0	
		1 Frypan	1 0 0	
		4 Bathing towels at As. 8 each	2 0 0	
		8 Turkish towels at Rs. 11 per dozen	2 12 0	
		8 Ditto at „ 10 „	2 8 0	
		1 Dozen dusters at „ 1-8 „	1 8 0	
		1 Iron kettle	5 0 0	
		Tinning cooking utensils and washing bed clothes	15 5 0	
			33 1 0	
		Total Staging Bungalow Establishment and Contingencies ...	.. ...	141 1 9
	754	*Staging Bungalow—Petty Construction and Repairs.*		
		Repairs to the Ramghur dák bungalow	423 7 2	
		Ditto to the Bazodar cart serai	268 9 9	
				692 0 11
	100	*Miscellaneous.*		
		Travelling allowance to the Assistant Sub-Deputy Opium Agent, Burhi, for attending meeting	14 0 0	
				14 0 0
Suspense Accounts.	.....	Advances—		
		Branch committee at Giridih	6,196 15 3	
		Deputy Collector, Cess Department	520 0 0	
		Sheikh Bahadoor Ali	500 0 0	
		Sheikh Shahamut Ali	500 0 0	
				7,716 15 3
	.....	Deposits—		
		Hiralal Shaw	170 0 0	
		Issur Chander Dey	56 0 0	
		Sadik Hossein	115 0 0	
		Bhoopendra Kumar Gupta	435 0 0	
		Bhoopendra Kumar Gupta and Shew Sahailal	381 0 0	
		Sohun Mistry	10 0 0	
		Saheb Dad Khan	16 0 0	
		Lal Sambar Singh	27 0 0	
		Sohun Chaggut	40 8 0	
		Nando Mistry	25 0 0	
		Gunput Ram	25 0 0	
		Branch committee, Giridih	172 0 0	
				1,472 8 0
		Total Disbursement ..	.....	58,416 5 9

Memorandum showing in detail the actual Cash Balance on the 31st March 1889.

PARTICULARS	Amount. Rs. A. P.	TOTAL. Rs. A. P.
Balance at credit of Hazaribagh District Road Fund in the treasury as per pass-book	28,788 3 9	
Less—		
Amount of cheques charged in the accounts, but not paid from the treasury	3,240 15 4	
		25,547 4 5
Imprest in the hands of the District Engineer ...	... ...	100 0 0
Net balance as per District Road Fund cash-book	... ...	25,647 4 5

Memorandum showing in detail the amount of Outstanding Advances on the 31st March 1889.

PARTICULARS.	Amount. Rs. A. P.	Total. Rs. A. P.
Chairman, Branch Committee, Giridih... ...	... 1,502 13 6	
Deputy Collector, Cess Department	... 52 15 6	
Bahadoor Ali, contractor	... 500 0 0	
Shahamut Ali „	... 500 0 0	
		2,555 13 0

Memorandum showing in detail the Balances of Deposits of Contractors on the 31st March 1889.

PARTICULARS.	Amount. Rs. A. P.	Total. Rs. A. P.
Taruk Nath Banerjee, contractor	... 144 0 0	
Shekh Bahadoor Ali „	... 34 0 0	
Shekh Shahamut Ali „	... 39 0 0	
Shekh Moonsiff Ali „	... 54 0 0	
Rungoo Shaw „	... 38 0 0	
Bhookhoo Ram „	... 106 0 0	
Shekh Ghowsey „	... 37 0 0	
Branch Committee, Giridih	... 600 0 0	
		1,052 0 0

H. C. MITTER,
Vice-Chairman.

No. 94DR., dated Ranchi, the $\frac{31\text{st May}}{13\text{th June}}$ 1889.

From—E. G. LILLINGSTON, ESQ., Chairman, District Road Cess Committee, Lohardugga,

To—The Commissioner of the Chota Nagpore Division.

I HAVE the honour to submit herewith the annual accounts and report on the working of the Road Cess Act, IX (B. C.) of 1880, for the year ending 31st March 1889.

* * * * * * * *

3. * * * * * The attendance of the official members of the District Committee during the year under report was only satisfactory, for out of four officials three attended six meetings, and one attended two meetings, but out of eight non-official members two attended four meetings, and the other six one or two meetings only. Regarding Palamow Branch Road Cess Committee * * * the attendance of the non-official members was unsatisfactory.

4. A summary of the business transacted at the meetings of the District Road Cess Committee is given below:—

(*a*) Passing the budget estimates.
(*b*) Fixing the rate of road cess to be levied during the year.
(*c*) Passing the annual accounts for 1887-88.
(*d*) Passing estimates submitted by the District Engineer for the repairs of different roads during 1887-88.
(*e*) Appointing contractors for the construction and repairs of different roads for 1888-89.
(*f*) Disposing of other miscellaneous business.

5. Mr. C. F. Manson, Deputy Magistrate, held the office of Vice-Chairman from April 1888 to December 1888, and Officiating Joint-Magistrate, G. W. Place, Esq., C.S., from January to February 1888, on account of there being no senior assistant from March 1889. The office of the Vice-Chairman was under my direct supervision. The cheques were signed by the Executive Engineer in place of the Vice-Chairman as *ex-officio* member of the Committee

6. The demand on account of cess on lands and mines during the year, including arrears of last year, amounted to Rs. 53,467. Of this Rs. 609 was collected as advance during the previous year, and Rs. 51,738 has been collected within the year under report, thus leaving a balance outstanding on the 31st March 1889 of Rs. 1,120. In addition to the above a sum of Rs 564 was collected in advance on account of the ensuing year 1889-90.

7. The cess was levied at the maximum rate. There was no difficulty in collecting it at head-quarters in the Palamow subdivision; also the payments appear now to be more punctually made than before.

8. The accounts of the year were duly examined and audited by a sub-committee consisting of the Vice-Chairman and two other English-knowing members.

9. *Original works.*—Three bridges of rubble stone and brick masonry abutments, piers, and wing walls and masonry arched roadway were constructed on Ranchi and Lohardugga road—one over the Kurruk stream, having two spans of 25 feet each; another over the Bara river with three spans of 20 feet each; and the third over the Baratpore stream of two spans, measuring 20 feet each. A diversion on the existing road for the purpose of selecting better sites for these bridges was also under construction, which is expected to be completed by the next rains. Another bridge was intended to be constructed close to Lohardugga, in order to replace a timber-topped bridge, which is much damaged, and provision for this

was made in the budget, but it could not be taken in hand, as it was all but settled that an embankment would be constructed stopping the stream over which the bridge was to be built, with the amount sanctioned for the bridge, in order to improve the water-supply of the locality.

10. A bridge 20 feet span, with rubble stone and brick masonry abutments and wing walls and sal-timber roadway, was constructed over a nulla close to the village of Jhoree on Majwan and Jupla road in the Palamow subdivision.

11. *Survey.*—Survey was taken of Lohardugga-Chattra road, Kuru to Orenga stream road, and Daltongunge and Maharajgunge roads, and plan prepared of them. Some drawing of plans and sections for the preparation of a project for Ranchi and Chandil road were made.

12. *Arboriculture.*—Nine hundred new seedlings of mango, jack and kurrung were planted along the last five miles of Ranchi and Lohardugga road, and protected by bamboo gabions. Plants along 75 miles of the roads were maintained in good condition. Several new gabions were supplied. Some of the plants died and were replaced by fresh seedlings.

13. *Repairs—Ranchi-Lohardugga Road.*—This very important road, which has considerable cart traffic, was maintained in fair order throughout the year. About eight miles of the road between Ranchi and Brambey in the 12th mile were gravelled during the year. This gravelling has been finished in the road up to Mandur thana on the 17th mile, with the exception of a little over two miles in all at places on high ground. A timber bridge in the 16th mile was thoroughly rebuilt. A parapet with a portion of arch in a culvert in the 20th mile, which was seriously damaged, was thoroughly repaired, and flooring renewed in case of two bridges on the 20th and 21st miles. Wheel guards were put up to protect the parapet walls in almost all the bridges and culverts.

14 *Lohardugga and Chattra Road.*—A temporary bridge, 25 feet span, with dry rubble, abutments and wing walls and timber roadway was constructed. Sal-wood roadways in three bridges were thoroughly repaired. The road was maintained in good order by surface repairs.

15. *Kuru to Orenga Stream Road.*—A temporary bridge of rubble masonry abutment and wing walls and sâl timber roadway with a span, measuring 20 feet, was thoroughly reconstructed, and another 45 feet long was under construction. Road was kept in a fair order.

16. *Orenga to Daltongunge Road.*—The road was much improved upon as regards the gradients at the Charwadih ghât by cutting and filling. Side-drains were renewed along some six miles of road taken altogether. Two bridges of rubble and brick masonry abutments and timber roadway, and another of masonry arched roa[illegible] were thoroughly reconstructed. The road was maintained in good order throughout its len[illegible]

17. *Daltongunge-Maharajgunge Road.*—About five miles of mere track were converted into road this year. The road which is one of the most important roads in the Palamow sub-division, and has much traffic from Gya district, has now been made practicable for carts throughout its length, specially during the fair weather. Several temporary bridges were renewed. Road was kept passable throughout the year by surface repairs.

18. *Daltongunge and Gurwa Road.*—Road was kept in good order. Some temporary bridges were constructed, and others thoroughly repaired.

19. *Ranchi-Bundgaon Road.*—Some repairs consisting in cutting the road to improve its gradients and those to bridges were effected, as well as some earthwork in petty repairs were done. The maintenance of the road was taken over at the end of the last rainy season by the Public Works Department.

20. *Ranchi-Palkote Road.*—That section of it which extends from Bussia to Palkote, about 12 miles in length, was converted into a properly raised road, with seven temporary culverts, in place of the mere tracks unfit for wheeled traffic. The entire length of the road was maintained in passable condition for purposes of cart traffic.

21. *Khunti-Kamdera Road.*—Earthwork consisting in embankments through the rice lands, at three places were finished during the year. Some temporary bridges were constructed. The road was opened for cart traffic throughout its length, and was maintained in good order.

22 *Ranchi-Chandil Road.*—Reconstruction of the road from Bundu to Penaidih, which was commenced, and in a portion of which work had been done the year before last, was completed Several culverts of temporary nature were constructed. The rubble masonry and jungle wood temporary bridge over Nailgurrah nullah was under reconstruction. The road was maintained in good order.

23. *Ranchi and Palma Road.*—Sal wood platforms of all the three bridges repaired this year were reconstructed. The road was maintained in good order.

24. *Anundi to Gola Road.*—Road was maintained in fair order by patch repairs.

24½. *Ranchi-Pithoria Road.*—The road was kept in passable condition by petty repairs. Some temporary bridges were rebuilt.

25. *Daltongunge-Behar Road; Gurwa to Untari Road; Lesligunge-Pankey Road.*—No contractor was available for repairing these roads. The entire allotments could not be spent. Some jungle-cuttings and petty repairs were executed departmentally.

26. *Gurwa and Majwan Road.*—A little over one-third of the allotment, which was sufficient for reconstruction of the entire length of the road, could only be spent, as the contractors to whom the works were let out on regular contract neglected their works much. In about half the length side drains were renewed and embankments reconstructed.

27. *Majwan and Jupla Road.*—The allotment was almost sufficient for the reconstruction of the whole length of the road, which was a mere track, quite unfit for cart traffic. The work was let out to the same contractors as in case of Gurwa-Majwan road, who failed to complete the work. Only about four miles were renewed.

28. *Lohardugga-Sumbulpore Road.*—About 12 miles of the road were reconstructed during the year. The road was kept in passable condition.

29. *Ranchi-Jhalda Road.*—It was kept passable by patch repairs. Several temporary bridges were constructed.

30. *Daltongunge station roads.*—They were kept in good order by petty repairs, and renewal of gravelling here and there.

31. *Palma to Lohardugga Road vid Bhandra.*—Two temporary bridges of sâl bullah platform abutments, a span measuring 18 feet, and another having a 20 feet span, were built; a third bridge, partly sâl timber and partly sâl bullah platform, having rubble masonry abutments, with three spans, 55 feet long altogether, was also constructed during the year. The road was kept in fair order throughout the year.

32. *Petty roads in the head-quarters subdivision.*—All the roads were maintained in good order during the year under report.

33. *Village roads.*—In the head-quarters subdivision some 69 miles of new road have been constructed, and 100 miles properly maintained, and many temporary bridges constructed. In the Palamow subdivision reconstruction was effected in Daltongunge-Patan road and Kechki road. Some six roads were repaired.

34. *Staging bungalows.*—All the bungalows were maintained in fair order by petty repairs.

35. Generally it may be said that more attention has been paid this year to securing good and lasting works rather than quantity. Drainage is being especially looked after, and care taken that the bad portions of roads are completed before work is done on the better parts. A system has been introduced to finish off such portions of roads as are to be put in order first, and until these are completed the contractors and subordinates employed under the District Engineer are not given credit for any other works executed.

36. *Accounts.*—The monthly accounts of the road fund and of the District Engineer's office were examined by the Vice-Chairman and two other English-knowing members of the committee, who were appointed for the purpose.

37. The local auditor inspected this and the District Engineer's office on the 13th December 1888, and the result was very satisfactory.

* * * * *

42. The roads, bridges and culverts mentioned in the budget estimate for 1889-90 (sanctioned by Government) are the works proposed to be taken in hand during the ensuing year 1889-90.

43. The works have all been executed by contracts during the year under report, and the small sums advanced to the contractors have been adjusted.

No. 6.—Part I.

LOHARDUGGA DISTRICT ROAD FUND.

Annual account of income and expenditure from 1st April 1888 to 31st March 1889.

Receipts.	Amount.	Total.	Expenditure.	Amount.	Total.
	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
Balance on 31st March 1888	.....	36,195 15 3	Refunds ... Of cesses	.....	.....
			„ other receipts	.....	
Provincial rates ... Cess on lands	52,319 3 8		Provincial rates ... Establishment and contingencies of office of collection	2,577 0 10	2,577 0 10
„ on mines and railways ...	2 11 0		Administration ... Establishment and contingencies of Committee's office	550 7 10	
„ on houses	.....		Percentage cost of establishment for offices of account and control ...	757 7 7	1,307 15 5
One per cent road cess ...	.....	52,321 14 8	Stationery ... Stationery and printing	579 7 3	579 7 3
Public Works ... Road tolls	.....		Public Works ... Original works	10,585 2 3	
Ferry „	.....	.....	Repairs	37,453 3 6	
			Establishment	9,157 6 10	
Irrigation ... Canal tolls	.....		Tools and plant	528 3 0	
		.....	Toll and ferry establishment and contingencies	.....	57,723 15 7
Miscellaneous ... Rent of serais and bungalows ...	32 0 0		Irrigation ... Canal toll establishment and contingencies	.....	.....
Fees, fines and forfeitures ...	406 8 0		Miscellaneous ... Staging bungalow establishment and contingencies	185 8 0	
Interest	140 3 9		Staging bungalow, petty construction and repairs	628 14 1	
Miscellaneous	6 1 9	584 13 6	Miscellaneous	124 4 0	938 10 1
Grant from Government	1,937 10 9	1,937 10 9	Contribution to Provincial Government	.....	.....
Total Revenue of the year ...	.....	54,844 6 11	Total Expenditure of the year ...	.....	63,127 1 2
Suspense Account ... Advances	3,193 0 0		Suspense account Advances	3,053 0 0	
Deposits	3,223 1 4		Deposits	2,319 1 4	5,372 1 4
		6,116 1 4	Total Disbursement of the year ...	.....	68,499 2 6
Total of the year ...	.....	61,260 8 3	Balance on 31st March 1889 as detailed on the memorandum of balance overleaf	.....	28,957 5 0
Grand Total ...	.....	97,456 7 6	Grand Total ...	.....	97,456 7 6

E. G. Lillingston,
Chairman, D. R. Committee, Lohardugga.

No. 6.—Part II.

LOHARDUGGA DISTRICT ROAD FUND.

Details of income and expenditure for the year from 1st April 1888 to 31st March 1889 to accompany the annual account for the year.

Sub-head of Estimate.	Amount as per budget estimate.	Particulars.	Amount.	Total
	Rs. A. P.	**INCOME.**	Rs. A. P.	Rs. A. P.
Provincial rates	51,445 2 9	Cess on lands	52,319 3 8	
	3 1 0	Cess on mines and railways	2 11 0	
	... ..	Cess on houses	... .	
	.. ..	One per cent. road cess	.	
				52,321 14 8
Miscellaneous.	24 0 0	Rents of serais and staging bungalow—		
		Collection of rent from the occupant of the Road Cess inspection bungalows at head-quarters sub-division by District Engineer	9 8 0	
		Ditto ditto by the Chairman, Branch Road Committee... ...	22 8 0	
				32 0 0
	263 0 0	Fees, fines, and forfeitures —		
		Record searching fees	41 12 0	
		Copying fees	226 12 0	
	5 0 0	Fines realized from sub-overseer and mohurir	10 0 0	
	.....	Fines realized by forfeiting security deposits of the contractors for non-execution of works	1 4 0 0	
				466 8 0
	50 0 0	Interest on lands	110 3 9	110 3 9
		Miscellaneous—		
		Sale proceeds of roadside mangoes	5 2 0	
		Ditto of one old tin box	0 15 9	
				6 1 9
Grant from Government.	1,100 0 0	Contribution paid by Government from public work cess fund, being one-third cost of the establishment employed for collection of revenue	360 0 0	
		Contribution paid by the Deputy Commissioner of Lohardugga out of Estate Improvement Fund for improvement of Government estates	1,017 10 9	
				1,377 10 9
Suspense Account.	300 0 0	*Advances.*		
		Recovery of advance from Accountant, Baboo Nundo Lal Chatterjee, by adjustment of his pay	175 0 0	
		Recovery of advance from contractor Annoda Prosad Dutta by adjustment of expenditure on works	460 0 0	
		Recovery of advance from contractor Jodu Nath Gangoolee by adjustment of expenditure on works	300 0 0	
		Recovery of advance from contractor Motoor Ram by adjustment of expenditure on works	250 0 0	
		Recovery of advance from Kali Kumar Bagish by adjustment of expenditure on works	100 0 0	
		Recovery of advance from contractor Bakro Nath Bhuttacharjee by adjustment of expenditure on works	150 0 0	
		Recovery of advance from Overseer Baboo Hari Charun Mookerjee by adjustment of expenditure on works	300 0 0	
		Recovery of advance from contractor Shaik Latto by adjustment on works	300 0 0	
		Recovery of advance from contractor Tara Prosunno Roy Chowdhoni by adjustment of expenditure on works	500 0 0	
		Recovery of advance from contractor Giridhari Ram and Sreekissen Pattuck by adjustment of expenditure on works	150 0 0	
		Recovery of advance from contractor Nagore Mudey by adjustment of expenditure of works	100 0 0	
		Recovery of advance from contractor Kassi Nath Bhuttacharjee by adjustment of expenditure on works	200 0 0	
		Recovery of advance from Mr. Peppe, Planter, by adjustment of expenditure on works	50 0 0	
		Recovery of cost of court-fee stamps issued in certificate cases in cash	28 0 0	3,193 0 6
		Deposits.		
		Security deposit received from contractor Bakro Nath Bhuttacharjee by deduction from his bill	125 0 0	
		Security deposit received from contractor Jodu Nath Gangoolee by 10 per cent. deduction from his bill	225 0 0	
		Security deposit received from contractor Tara Prosunno Roy Chowdhoni by deduction from his bills	883 4 1	
		Security deposit received from contractor Motoor Ram by deduction from his bills	179 0 0	
		Security deposit received from contractor Nagore Moodey by deduction from his bills	162 0 0	
		Security deposit received from contractor Annoda Prosad Dutta by deduction from his bills	316 0 0	
		Security deposit received from contractor Shaik Latto by deduction from his bills	109 0 0	
		Security deposit received from contractor Brajo Nath Dutt by deduction from his bills	15 0 0	
		Security deposit received from contractors Nund Kissore Lal by deduction from his bills	31 0 0	
		Security deposit received from contractor Kedar Nath Bhuttacharjee by deduction from his bills	63 0 0	
		Security deposit received from contractor Giridhari Ram and Sreekissen Pattuck by deduction from their bills	109 0 0	
		Security deposit received from contractor Mowa Lal by deduction from his bills	216 0 0	
		Security deposit received from contractor Ramjeebun Chatterjee by deduction from his bills	166 0 0	
		Security deposit received from contractor, Jogendra Kumar Sircar, by deduction from his bills	214 0 0	
		Security deposit received from contractors Asutosh Boral, &c., by deduction from their bills	403 13 3	
		Security deposit received from contractor Jodu Nath Chatterjee by deduction from his bills	21 0 0	
		Security deposit received from contractor Kasi Nath Bhuttacharjee by deduction from his bills	35 0 0	
				3,223 1
	53,190 3 9	Total of the year ...	.....	61,260 8

Sub-head of estimate.	Amount as per budget estimate.	PARTICULARS.	Amount.	Total.
	Rs. A. P.	EXPENDITURE.	Rs. A. P.	Rs. A. P.
Refunds ...	.....	Of cess	.....	
	.....	Of other receipts	.....	.....
Provincial rates.	2,366 0 0	*On collection of Revenue.*		
	+600 0 0	Head-quarter—		
		Baboo Nundo Lal Chatterjee, head-clerk and accountant, from 1st March 1888 to 28th February 1889, at Rs. 70 per month ...	840 0 0	
		One clerk from 16th April to 27th May 1888 to officiate for Nundo Lal Chatterjee, head-clerk and accountant, at Rs. 18 per month	24 10 9	
		One assistant clerk from 1st March 1888 to 6th June 1888, at Rs. 25 and from 7th June 1888 to 28th February 1889, at Rs. 26 per month	308 12 3	
		One temporary clerk sanctioned in Board's No. 306A, dated 22nd October 1887, from March to May 1888, at Rs. 15 ...	45 0 0	
		One mohurir from March 1888 to 28th February 1889, at Rs. 20 per month	240 0 0	
		One peon from March 1888 to 28th February 1889, at Rs. 6 per month	72 0 0	
		Palamow sub-division—		
		One assistant clerk from 1st March 1888 to 28th February 1889, at Rs. 36 per month	432 0 0	
		One peon from 1st March 1888 to 28th February 1889, at Rs. 5 per month	60 0 0	
		Travelling allowance to the assistant clerk for coming to Ranchi on duty	37 8 0	
		Revaluation establishment sanctioned in Board's letter No. 79A., dated 19th February 1889.		
		Baboo Jodu Nath Sirkar, Special Deputy Collector, his pay for February 1889	200 0 0	
		Baboo Nundo Lal Chatterjee, head-clerk, his allowance for supervising revaluation work from 24th January to 28th February 1889, at Rs. 30 per month	37 11 10	
		One clerk from 26th January to 28th February 1889, at Rs. 30 per month	35 12 10	
		One clerk from 9th to 28th February 1889, at Rs. 25 per month ...	19 10 3	
		One mohurir from 26th January to 28th February 1889, at Rs. 15 per month	17 14 5	
		Two peons from 24th January to 28th February 1889, at Rs. 5 each per month	12 9 4	
		One peon from 26th January to 28th February 1889, at Rs. 5 per month	5 15 6	
		Five peons from 3rd to 28th February 1889, at Rs. 5 each per month	23 3 3	
		One peon from 5th to 28th ditto at ,, 5 per month ...	4 4 6	
		Three peons from 11th to 28th ditto at ,, 5 each per month	9 10 3	
		Four peons from 13th to 28th ditto at ,, 5 ,, ,, ,,	11 6 8	
		Three peons from 14th to 28th ditto at ,, 5 ,, ,, ,,	8 0 6	
		Two peons from 15th to 28th ditto at ,, 5 ,, ,, ,,	5 0 0	
		Two peons from 17th to 28th ditto at ,, 5 ,, ,, ,,	4 4 6	
		Two peons from 17th to 18th ditto at ,, 5 ,, ,, ,,	0 11 6	
		Travelling allowance of Revaluation Deputy Collector to join his appointment	55 10 6	
		Contingencies.		
		Service stamps	16 0 0	
		Cloth for busts	1 0 0	
		Country stationery	3 9 0	
		Binding note and towjee books	3 11 0	
		Belt for badges	19 8 0	
		Pay of sweeper for four months	4 0 0	
		One rubber self-inking machine	17 8 0	
		Total establishment and contingencies of Office of Collection ...	.....	2,577 0 10
Administration	485 0 0			
	+100 0 0	Allowance of Baboo Nundo Lal Chatterjee, present accountant, from March 1888 to 28th February 1889, at Rs. 20 per month ...	240 0 0	
		Contingencies.		
		Pay of sweepers for eight months	8 0 0	
		Pay of punkha-puller at head-quarters	18 0 9	
		Ditto ditto of the Palamow sub-division	18 0 0	
		Pay of duftry for 12 months, at Re. 1 per month...	12 0 0	
		Country stationery	9 1 0	
		Municipal tax	36 0 0	
		Service stamps	19 0 0	
		Receipt stamps	20 12 0	
		Cost of guard file	1 4 0	
		Cost of one copy Local Self-Government Act	5 6 0	
		Cloth for busts	3 0 0	
		Miscellaneous	10 4 0	
		Cost of conveyance of records	6 8 0	
		Cost of one padlock	1 8 0	
		Cost of one rubber stamp	17 12 0	
		Cost of publication of annual accounts and reports in the *Calcutta Gazette*	124 0 1	
		Total establishment and contingencies of Committee's office ...	.....	390 7 10
	800 0 0	Percentage cost of establishment for Offices of Account and Control	757 7 7	757 7 7
Stationery ...	500 0 0	Value of stationery articles supplied by the Superintendent of		
	+300 0 0	Stationery, including conveyance	193 10 6	
	−100 0 0	Value of printed forms supplied by the Superintendent of Stationery, including conveyance	385 12 9	
		Total stationery and printing ...	.....	579 7 3
	4,151 0			
	+900 0 0	Carried over ...	.....	4,464 7 6

Sub-head of estimate.	Amount as per budget estimate.	Number of roads.	PARTICULARS.	Total estimated cost.	Total outlay to end of the year.	Amount.	Total.
	Rs. A. P.		EXPENDITURE—*contd.*	Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.
	4,151 0 0		Brought forward ...	.....	.....	.....	4,464 7 6
	+900 0 0		*Original Works.*				
Public Works	8,461 0 0	1	Ranchee and Lohardugga road (estimate sanctioned in Government No. 1219L.F., dated 3rd May 1888)—				
	+5,639 0 0		Brick masonry		10,715 8 10	2,815 7 9	
			Earthwork		2,499 15 0	540 11 7	
			Rubble masonry		9,112 5 10	1,956 5 3	
			Plastering		398 9 5	.....	
			Centering		3,648 5 4	1,320 0 0	
			Planting trees		1,502 10 5	127 11 6	
			Contingencies		1,235 15 10	.....	
			Concrete		2,111 5 1	645 5 0	
			Pointing		896 5 5	277 7 3	
			Surveying		109 8 3	.....	
			Compensation	46,696	20 0 0	.....	
			Turfing		4 8 6	.....	
			Rock-cutting		513 6 0	329 4 7	
			Wood-work		92 6 0	.....	
			Bailing out water		717 8 5	85 0 0	
			Trenching		17 11 8	.....	
			Other items		109 10 4	.....	
			Cut stones		381 14 0	348 14 0	
			Gravelling		233 5 10	.....	
			Blasting stones		32 6 4	.....	
			Inspection bungalow ...		1,502 2 10	.....	
				46,696	44,930 8 10	8,555 2 11	
	250 0 0	2	Lohardugga and Chattra road (estimate for culverts sanctioned in Government No. 753, dated 28th March 1887)—				
			Brick masonry		777 12 0	.....	
			Rubble ditto		1,089 3 2	.....	
			Plastering		102 11 4	.....	
			Earthwork	53,867	249 8 6	.....	
			Centering		16 0 0	.....	
			Surveying		489 5 5	205 0 0	
			Planting trees		.....	.....	
				53,867	3,405 8 5	205 0 0	
	400 0 0	3	Kuru and Orenga Stream on boundary of head-quarter sub division—				
	—100 0 0		Surveying		544 5 0	197 14 11	
			Earthwork	33,818	1,231 2 0	.....	
			Contingencies		10 15 0	.....	
				33,818	1,786 6 0	197 14 11	
	150 0 0	4	Boundary of head-quarter sub-division to Daltongunge.	.....	.....	.....	
	—150 0 0						
	+250 0 0	5	Daltongunge and Moharajgunge road—				
			Brick masonry		795 7 0	.....	
			Rubble ditto		441 3 11	.....	
			Earthwork		1,071 15 7	.....	
			Centering		11 11 0	.....	
			Pointing		24 0 0	.....	
			Terrace flooring	...	11 14 0	.....	
			Rock-cutting...		12 12 6	.....	
			Jungle-cutting		21 12 9	.....	
			Plastering		8 0 0	.....	
			Surveying		1,185 15 10	225 0 0	
			Planting trees		155 12 9	.....	
	.....			.....	3,740 9 4	225 0 0	
	.....	15	Daltongunge-Behar road—				
			Rubble masonry		407 0 9	.....	
			Brick ditto		390 10 9	.....	
			Centering		9 14 10	.....	
			Earthwork	.....	163 4 0	.....	
			Surveying		221 8 8	.....	
			Planting trees		20 0 0	20 0 0	
				.....	1,218 7 0	20 0 0	
	5,400 0 0	10	Ranchi and Chandil road—				
	—5,000 0 0		Brick masonry		847 12 3	.....	
			Plantation		725 13 1	.....	
			Rubble masonry		277 9 9	.....	
			Surveying	.....	2,744 6 10	390 10 9	
			Plastering		86 10 0	.....	
			Earthwork		254 11 3	.....	
			Inspection hut		74 15 1	.....	
	.....			.....	4,611 14 3	390 10 9	
	+1,100 0 0	.....	Majhiwan and Jupla Road—				
			Earthwork		17 15 5	17 15 5	
			Rubble masonry		581 11 2	581 11 2	
			Brick masonry		87 10 4	87 10 4	
			Bailing out water		8 0 0	8 0 0	
			Ironwork	.....	19 7 4	19 7 4	
			Pointing		9 0 7	9 0 7	
			Woodwork		6 10 6	6 10 6	
			Contingencies		260 14 4	260 14 4	
	.....			.....	991 5 8	991 5 8	
	16,400 0 0	.....	Total original works ...	... ..	.....	.....	10,585
	20,551 0 0						
	+900 0 0		Carried over ...	.....	.....	...	15,049

Sub-head of estimate.	Amount as per budget estimate.	Number of roads.	PARTICULARS.	Amount.	Total.
	Rs. A. P.		EXPENDITURE—*continued.*	Rs. A. P.	Rs. A. P.
	20,551 0 0				
	+900 0 0		Brought forward ...	.....	15,049 9 9
Public Works —(*contd.*)			*Repairs.*		
	5,000 0 0	1	Ranchi and Lohardugga road	4,996 10 3	
	2,000 0 0	2	Lohardugga and Chattra ,, ...	2,093 15 10	
	+100 0 0				
	800 0 0	3	Kuru to Orenga stream boundary of head-quarter sub-		
	+900 0 0		division	1,661 5 9	
	2,000 0 0	4	Boundary of head-quarter sub-division to Dalton-		
	+1,000 0 0		gunge	3,019 2 2	
	1,500 0 0	5	Daltongunge and Moharajgunge road	2,024 10 6	
	+500 0 0				
	400 0 0	6	Daltongunge and Gurwa road	361 7 3	
	1,500 0 0	7	Ranchi and Bundgaon road	989 6 1	
	—500 0 0				
	3,000 0 0	8	Ranchi and Palkote road	2,993 9 1	
	800 0 0	9	Khunti and Kamdera ,, ...	792 3 11	
	2,000 0 0	10	Ranchi and Chandil ,, ...	2,999 7 10	
	+1,000 0 0				
	400 0 0	11	Ranchi and Palma ,, ...	698 14 6	
	+300 0 0				
	250 0 0	12	Ranchi (Anundi) and Gallar road	238 15 7	
	400 0 0	13	Ranchi and Pithoria road	400 0 0	
	.....	14	Baloomath and Jhanju road	.. ...	
	300 0 0	15	Daltongunge and Behar ,, ...	226 6 9	
	200 0 0	16	Gurwa and Untari ,, ...	78 10 0	
	1,500 0 0	17	Gurwa and Majhiwan ,, ...	702 3 8	
	+400 0 0				
	1,500 0 0	18	Majhiwan and Jupla ,, ...	443 13 7	
	+500 0 0				
	100 0 0	19	Lesligunge-Pankey ,, ...	50 9 6	
	750 0 0	20	Lohardugga towards Sumbulpore	746 9 8	
	.....	21	Pankey and Jhanju Road	.....	
	2,000 0 0	22	Palma to Lohardugga *viâ* Bhandra	2,949 15 5	
	+1,000 0 0				
	400 0 0	23	Bundu and Jhalda road	389 6 6	
	300 0 0	24	Daltongunge Sub-divisional Station roads	288 10 11	
	500 0 0	25	Petty roads lying in the Sudder station	159 10 7	
	1,200 0 0	26	Village roads in the Palamow sub-division	920 8 5	
	+600 0 0				
	8,000 0 0	27 & 28	Village roads in the Sudder sub-division	7,059 5 7	
	+5,700 0 0				
	205 0 0	.....	Road Cess Office godown	113 8 2	
	43,505 0 0		Total Repairs ...	.....	37,498 3 6
			Establishment.		
			Head-quarter sub-division.		
	9,144 0 0		Baboo Jugadish Chander Roy, District Engineer, his pay from 1st March 1888 to 28th February 1889, at Rs. 300 per month	3,600 0 0	
			One Sub-overseer from 1st March 1888 to 28th February 1889, at Rs. 45 per month	540 0 0	
			One Sub-overser for March 1888, at Rs. 35	35 0 0	
			One Sub-overseer from April 1888 to 28th February 1889, at Rs. 40 per month	440 0 0	
			One Sub-overseer for March 1888, at Rs. 25 per month and from April 1888 to 28th February 1889, at Rs. 30 per month	355 0 0	
			One clerk from March 1888 to 28th February 1889, at Rs. 40 per month	480 0 0	
			One peon from March 1888 to 28th February 1889, at Rs 6 per month	72 0 0	
			Palamow sub-division.		
			Baboo Hari Charan Mookerjee, Overseer, his pay and sub-divisio al allowance from 1st March 1888 to 28th February 1889, at Rs. 120 per month	1,440	
			One peon from 1st March 1888 to 28th February 1889, at Rs. 5 per month	59 10 10	
			Travelling allowance of Baboo Jugadish Chander Roy, District Engineer, from 1st March 1888 to 28th February 1889, at Rs. 100 per month	1,200 0 0	
			Travelling allowance of 1st Sub-overseer from 1st March 1888 to 28th February 1889, at Rs. 15 per month	180 0 0	
			Travelling allowance of 2nd Sub-overseer from 1st March 1888 to 28th February 1889, at Rs. 15 per month	180 0 0	
			Travelling allowance of 3rd Sub-overseer from 1st March 1888 to 28th February 1889, at Rs. 15 per month	180 0 0	
			Travelling allowance of Baboo Hari Charan Mookerjee from 1st March 1888 to 28th February 1889, at Rs. 30 per month	360 0 0	
			Contingencies.		
			Cost of ordinary postage stamps	14 0 0	
			Receipt stamps	0 2 0	
			Money-order commission	1 12 0	
			Postage of bearing parcels and covers	0 9 0	
			Cost of conveyance of records	0 4 0	
			Value of one rubber stamp	10 8 0	
			District Engineer's office rent	8 9 0	
			Total Establishment and contingencies ...	.....	9,157 6 10
	1,200 0 0		*Tools and Plant.*		
	—500 0 0				
			Eleven country-made kodalies	7 15 0	
			Three tapes	14 4 0	
			Three glazed almirahs	105 0 0	
			One diamond, glazed	11 12 0	
			One aboney level	27 6 0	
			One sledge hammer	7	
			Three stone-cutting chisel		
			One crowbar	3 5 6	
			Two steel jumpers	5 13 6	
			One enamelled kettle	2 14 0	
			One frying pan	2 8 0	
			One deckchee	3 12 0	
			One dozen hotwater plates	12 0 0	
			One dozen soup plates	2 0 0	
			One ,, half ,, ...	1 12 0	
			One ,, flat ,, ...	2 0 0	
			One ,, quarter ,, ...	1 4 0	
			Six hot-water side dishes	24 0 0	
			Six vegetable dishes	0 0	
	74,800 0 0			240 5 6	66,600 4 1

Sub-head of estimate.	Amount as per budget estimate.	Particulars.	Amount.	Total.
	Rs. A. P.	EXPENDITURE—*concluded.*	Rs. A. P.	Rs. A. P.
	74,800 0 0	Brought forward ...	... ...	61,660 4 1
Public Works—(*concld.*)		*Tools and Plant*—concld.		
		Brought forward ...	240 5 6	
		Three baking dishes	3 0 0	
		Three roast dishes	4 8 0	
		Ditto ditto	3 12 0	
		One dozen cups and saucers	5 0 0	
		Three tea plates	6 0 0	
		Three sugar plates	4 8 0	
		Three milk jugs	3 0 0	
		Three slop basins	2 4 0	
		One dozen egg cups	3 0 0	
		Three sets chamber services	15 0 0	
		Three chamber pots	3 0 0	
		One dozen sodawater tumblers...	6 0 0	
		One dozen tumblers	3 0 0	
		One dozen wine glasses	4 8 0	
		Six salt cellars	2 4 0	
		One dozen finger bowls	6 0 0	
		Six pairs canners	15 0 0	
		One dozen table knives	8 0 0	
		One dozen dessert knives...	6 8 0	
		One dozen table spoons	10 0 0	
		One dozen dessert spoons	8 0 0	
		One dozen table forks	10 0 0	
		One dozen dessert forks	8 0 0	
		One dozen tea spoons	4 0 0	
		Six salt spoons	2 0 0	
		Six egg spoons	2 0 0	
		Three candle lamps	4 8 0	
		Three duphy wall lamps...	15 0 0	
		Three hurricane lanterns	7 8 0	
		Carriage of tools and plant	21 4 0	
		Repairing store godown, tents, &c.	64 13 6	
		Pay of Palamow godown chowkidars	50 8 3	
		Do. Ranchi ditto	28 0 0	
		Municipal tax of the godown	4 8 0	
		Total ...	593 11 3	
		Deduct value of tools recovered from the Contractors by adjusting their deposits	65 8 3	
Miscellaneous	371 0 0	Staging Bungalow Establishment and contingencies in the Head-quarters Sub-division	144 0 0	528 3 0
		Ditto in the Palamow Sub-division	41 8 0	
				185 8 0
	1,350 0 0	Staging Bungalow petty construction and repairs—		
	—500 0 0	Repairing Opa Staging Bungalow	218 8 5	
		Purchasing Manka Staging Bungalow	60 0 0	
		Repairing Baloomath ditto	15 0 0	
		Ditto Lohardugga ditto	58 13 4	
		Ditto Brambey ditto	39 7 4	
		Ditto Zalim ditto	74 8 6	
		Ditto Paluki ditto	74 8 6	
		Ditto Jamchooa Inspection hut	28 2 4	
		Ditto Bhandra ditto	29 11 6	
		Ditto Gambaria ditto	30 2 2	
	107 0 0	Miscellaneous—		628 14 1
		Remuneration to English and vernacular copyists, being half the fees credited by the parties from March 1888 to 28th February 1889	124 4 0	
Suspense Account.	300 0 0	*Advances.*		124 4 0
		Amount advanced to Sub-divisional Officer of Palamow on account of process fees	183 0 0	
		Amount advanced to accountant Baboo Nundo Lal Chatterjee ...	135 0 0	
		Ditto ditto to Sub-Inspector of Khunti	90 0 0	
		Ditto ditto ditto of Kurra	45 0 0	
		Ditto ditto to contractor, Motoor Ram	250 0 0	
		Ditto ditto ditto Annoda Prosad Dutt...	400 0 0	
		Ditto ditto ditto Bokro Nath Bhattacharjee	150 0 0	
		Ditto ditto ditto Nagore Mooley	100 0 0	
		Ditto ditto to Overseer, Hari Charun Mookerjee	300 0 0	
		Ditto ditto to contractor, Sheik Lattoo	300 0 0	
		Ditto ditto ditto Kashi Nath Bluttacherje	200 0 0	
		Ditto ditto ditto Tara Prosunno Roy Chowdhur ...	500 0 0	
		Ditto ditto to Executive Engineer	200 0 0	
		Ditto ditto to Kally Kumar Barish	50 0 0	
		Ditto ditto to contractors Giridhari Ram and Sreekissen ...	150 0 0	
		Deposits.		3,058 0 0
	.....	Deposit refunded to contractor, Kedar Nath Bhuttacherjee, in cash	130 0 0	
		Ditto to ditto Ramjeebun Chatterjee, in cash	95 0 0	
		Ditto to ditto Bakro Nath Bhuttacharjee ,, ...	185 0 0	
		Ditto to ditto Shaik Lattoo, in cash	65 0 0	
		Ditto to ditto Mewa Lal, in cash	280 0 0	
		Di to to ditto Giridhari Ram and Sreekissen, in cash	70 0 0	
		Ditto to ditto Motoor Ram, in cash	100 0 0	
		Rs. A. P.		
		Ditto to ditto Jodu Nath Gangooly, in cash 125 0 0		
		Ditto to ditto ditto by adjustment . 15 0 0	140 0 0	
		Ditto to ditto Durga Charun Dutta, in cash 201 0 0		
		Ditto to ditto ditto by adjustment 10 0 0	211 0 0	
		Ditto to ditto Annoda Prosad Dutta in cash 562 7 9		
		Ditto to ditto ditto by adjustment ... 45 8 3	608 0 0	
		Ditto to ditto Nagore Mooley, in cash 230 1 4		
		Ditto to ditto ditto by adjustment... 30 0 0	260 1 4	
		Ditto to ditto Brojo Nath Dutta, in cash 75 0 0		
		Ditto to ditto ditto by adjustment ... 5 0 0	80 0 0	
		Ditto to ditto Sree Nath Bhoomick, by adjustment	65 0 0	
		Ditto to ditto Joyhurry Sirkar, by adjustment ...	10 0 0	
		Ditto to ditto Giridhari Lall, by adjustment ...	19 0 0	
				2,319 1 4
	76,329 0 0	Total Disbursement of the year ..	... ...	68,499 2 5

Memorandum showing in detail the actual cash balance on the 31st March 1889.

PARTICULARS.	Amount. Rs. A. P.	Total. Rs. A. P.
Balance at credit of Lohardugga District Road Fund in the treasury as per pass-book ...	40,498 5 6	
Less amount of cheques charged in account, but not yet cashed	11,733 13 4	
		28,764 8 2
Imprest in hands of Engineers and others ...	.....	192 12 10
Net balance as per Road Fund cash-book ...	.....	28,957 5 0

Memorandum showing in detail the amount of outstanding advance on 31st March 1889.

PARTICULARS.	Amount. Rs. A. P.	Total. Rs. A. P.	REMARKS.
Sub-divisional Officer of Palamow ...	100 0 0		Permanent advance for cer
Road Cess Deputy Collector	6 4 0		ficate cases.
Process fees	—281 3 6		
Sub-Inspector of Khunti thana	90 0 0		Will be adjusted in Apri
Ditto of Kurra thana	45 0 0		account.
Executive Engineer	200 0 0		
		160 0 6	

Memorandum showing in detail the balances at credit of deposit on 31st March 1889.

PARTICULARS.	Amount. Rs. A. P.	Total. Rs. A. P.
Contractor Jodu Nath Gangooly	225 0 0	
Ditto Snaik Lattoo	109 0 0	
Ditto Ganoda Prasad Mookerjee	6 0 0	
Ditto Bepin Chander Bal	115 0 0	
Ditto Moti Lal Mittra	35 0 0	
Ditto Bakro Nath Bhuttacharjee	125 0 0	
Ditto Tara Prosunno Roy Chowdhuree	1,003 4 1	
Ditto Kedar Nath Mookerjee	50 0 0	
Ditto Matoor Ram	79 0 0	
Ditto Nagore Moodey	62 0 0	
Ditto Annoda Prosad Dutta	316 0 0	
Ditto Brojo Nath Dutta	15 0 0	
Ditto Nund Kissore Laul	31 0 0	
Ditto Kedar Nath Bhuttacharjee	63 0 0	
Ditto Giridhari Ram and Srikissen Pattuck ...	109 0 0	
Ditto Mewa Lal	216 0 0	
Ditto Ramjeebun Chatterjee	166 0 0	
Ditto Jogendra Kumar Sirkar	214 0 0	
Ditto Asutosh Baral, K. N. Mookerjee and B. C. Bal	403 13 8	
Ditto Jodu Nath Chatterjee	21 0 0	
Ditto Kashi Nath Bhuttacharjee	35 0 0	
		3,399 1 4

E. G. LILLINGSTON,
Chairman, District Road Cess Committee, Lohardugga

Annual Report of the District Road Committee of Manbhoom for the cess year 1888-89.

1. *Working of Cess Act IX (B.C.) of* 1880—Statement A shows the demands, collections and balances of cesses for 1888-89 as compared with the year previous.

The outstanding balance for 1887-88 was Rs. 43,897, and the demand for the year under report was Rs. 87,762, against Rs. 51,567 and Rs. 89,820, respectively, for the previous years, thus—

	Rs.
Arrears of cesses on lands for 1886-87	47,397
Ditto on mines and quarries	2,539
Ditto on jungles	1,631
Total ...	51,567
Demands of cess on lands for 1887-88	80,044
Ditto on mines and quarries	7,180
Ditto on jungles	2,596
Total ...	89,820

There was a decrease of Rs. 2,058 in the demand owing to reduced assessments on some coal mines, quarries, and jungles. The balance left unrealised at the end of the year was further reduced to Rs. 27,463. The collection of the year was Rs. 1,04,073, against Rs. 97,431 the year previous, showing an *increase* of Rs. 6,642.

Out of the balance, Rs. 27,586, shown in column 10 of the statement, Rs. 123 have been remitted by orders of the Deputy Commissioner and Commissioner of Chota Nagpore. The net balance to be realized is Rs. 27,463, of which Rs. 18,065 represents the arrears of the kist falling due on the 28th March 1889, the payment of which could not be enforced till after the lapse of 15 days; deducting the amount of March kist, the balance is reduced to Rs. 9,398, of which Rs. 6,802 are due from the Pachet Raja alone for the last January kist. Certificates have been filed for realization of the January kist in all cases, and applications have been made for sale of the immoveable property of zemindars and lakhirajdars.

The following mines and quarries were assessed during the year as compared with the previous year—

	Coal mines.	Stone quarries.	Ghooting quarries.	Amount of assessment.
1887-88	12	15	7	7,179
1888-89	19	15	6	6,328

The cesses were not paid regularly in all cases. The people of this district generally wait till after the certificate procedure is put in force. The practice of giving intimation to the owners of mines, quarries, and jungles by means of printed post-cards has been found to be useful, as it obviated the necessity of issuing certificates in many cases. The operation of the Cess Act has led to the improvement of roads and communications.

2. *Working of the Committee.*—The Committee met 12 times during the year under report, and there was no meeting without a quorum.

* * * * *

The following is a summary of work done by the Committee during the year :—

(1) Passing monthly Road Fund accounts every month, audited by a standing Sub-Committee.

(2) Considering the plans and estimates for widening and re-aligning portions of the Purulia-Bankura and Purulia-Manbazar roads within the town of Purulia to a width of 24 feet.

(3) Discussion over the Commissioner's letter regarding the appointment of a Superintendent of Works, as well as over the Chairman's draft resolution on the same subject.

(4) Passing Annual Accounts and Reports of the Cess year 1887-88.

(5) Nominating three additional members for the Sudder Committee.

(6) Passing of the budget estimates of receipts and expenditure for the cess year 1889-90, and proposal for an application to be made for sanction to levy cess on the Bengal-Nagpore Railway when opened for traffic.

(7) Discussion over the Government enquiry as to whether the Committee are prepared to take over the Purulia-Burrakur Road and Committee's resolution to undertake the same, provided Government takes over as a provincial work the construction and maintenance of the Bolorampore-Burrabazar-Koilapal Roads.

3. *Branch Committees.*—A Branch Committee was established at Govindpore during the year under report, and Baboo Akhoy Kumar Ghose was appointed sub-overseer.

4. *Working establishment.*—There have been no changes during the year.

* * * * * * * *

5. *Works done during the year.*—Abstract of all works done during the year and the respective cost is shown in Appendix B.

(*a*). *Sudder Sub-division.*—The provision under head *original works* consisted of (1) construction of the Bolorampore-Burrabazar road; (2) metalling some of the Purulia station roads with quartz stone metal; and (3) improving and widening portions of the Manbazar and Bankura roads within the town of Purulia. These works have been finished very satisfactorily, excepting the construction of the Bolorampore and Burrabazar road, which is in progress.

Repair works—In the Sudder sub-division consisted of the following :—The roads from Purulia towards Chybassa and Bankura have been repaired and improved with quartz stone metal and screened gravel. The Roghoonathpore and Ranigunge road, Roghoonathpore-Bankura road, Charrah Branch road, first and second sections of the Jhapra and Govindpore road have been maintained in fair order generally by earthwork, turfing and gravelling. A good deal of earthwork has been done in the Hura-Manbazar section of the Roghoonathpore-Manbazar road, and five temporary culverts constructed in it. The road is now fit for cart traffic all along. The Roghoonathpore-Hazaribagh road has been extended as far as Chandra. The Ledhoorka and Gourandi road (an old famine road) was taken up for repairs last year only. A good deal of earthwork has been done in this road, and it is quite fit for cart traffic as far as Kassipore, and somewhat passable for carts all the way to Gourandi. The Damdah-Burrabazar and Burrabazar-Koilapal roads have been maintained in very fair order, and the latter extended to some extent. The construction of the Chota Talpat bundh, the embankment of which now forms part of Burrabazar and Koilapal road, is

No. 6.—Part I.

MANBHOOM DISTRICT ROAD FUND.

Annual Accounts of Receipts and Disbursements from 1st April 1888 to 31st March 1889.

Receipts.	Amount.	Total.
	Rs. A. P.	Rs. A. P.
Balance on 1st April 1888 as per cash-book	24,824 8 4	24,824 8 4
Receipts of the year.		
Provincial rates ... Cess on land	36,593 15 5	
Cess on mines, quarries, jungles, &c. ...	5,001 10 4	
Cess on houses	.....	
One per cent. road cess	.....	41,595 9 9
Public Works ... Road tolls	.....	
Ferry tolls	.....	.....
Irrigation ... Canal tolls	.....	.....
Miscellaneous ... Rents of serais and bungalows ...	4,179 10 11	
Fees, fines, and forfeitures ...	.....	
Interest (on arrears of cess on lands, mines, &c.)	789 8 3	
Miscellaneous	716 4 9	5,685 7 11
Grant from Government	500 0 0	500 0 0
Total Revenue ...	.....	47,781 1 8
Advances	2,227 12 3	
Deposits	1,450 0 0	3,677 12 3
Total Receipts ...	.....	51,458 13 11
Grand Total ...	.....	76,283 6 3

Expenditure.	Amount.	Total.
	Rs. A. P	Rs. A. P.
Refunds ... Of cess	.....	
Of other receipts	372 15 6	372 15 6
Provincial rates ... Establishment and contingencies of office of collection	997 14 1	
Cost of service of notices, &c., not recoverable	192 2 10	
Travelling allowance of establishment for making local enquiry about profits of jungles, &c.	.....	1,190 0 11
Administration ... Establishment and contingencies of Committee's office	1,482 6 4	
Percentage cost of establishment for offices of account and control ...	692 14 7	2,175 4 11
Stationery ... Stationery and printing	299 6 2	299 6 2
Public works ... Original works	6,265 5 10	
Repairs	30,465 9 8	
Establishment	6,402 11 2	
Tools and plant	214 2 3	
Toll and ferry establishment and contingencies	.....	43,347 12 11
Irrigation ... Canal toll establishment and contingencies	.....	.....
Miscellaneous ... Staging bungalow establishment and contingencies	...	
Staging bungalow petty construction and repairs	2,594 12 9	.....
Miscellaneous	.....	2,594 12 9
Contribution to Provincial Government	.....	.....
Total ...	.....	49,980 5 2
Advances	2,615 11 9	
Deposits	1,300 0 0	3,915 11 9
Total expenditure to be passed ...	.....	53,896 0 11
Cash-book balance on 31st March 1889	.....	22,387 5 4
Grand Total ..	.....	76,283 6 3

Rs. 53,896 0 11 (fifty-three thousand eight hundred and ninety-six rupees and eleven pies) only.

No. 6.—Part II.

MANBHOOM DISTRICT ROAD FUND.

Details of Receipts and Disbursements for the cess year 1888-89, *from* 1*st April* 1888 *to* 31*st March* 1889, *to accompany the annual account for that year.*

Sub-head of estimate.	Amount as per budget estimate.	Particulars.	Amount.	Total.
	Rs. A. P.		Rs. A. P.	Rs. A. P.
		Balance on 1st April 1888 as per cash-book	24,824 8 4	24,824 8 4
		Receipts.		
Provincial rates	31,808 0 0	Cess on lands	36,583 15 5	
	4,530 0 0	,, on mines, quarries, jungles, &c.	5,001 10 4	
	.....	,, on houses	.....	
	.....	One per cent. road cess	.....	41,595 9 9
Public works	.....	Road tolls	.....	
	.....	Ferry ,, ...	.....	.....
Irrigation ...	.....	Canal ,, ...	.....	.....
Miscellaneous	4,404 0 0	*Rents of serais and bungalows.*		
		Govindpore serai	278 0 0	
		Mirsha do.	3 2 12 0	
		Rajaunj do.	180 0 0	
		Topchanchi do.	147 12 0	
		Thoolin do.	288 4 0	
		Jhalidah do.	167 14 6	
		Jeypore do.	419 2 6	
		Nodiora do.	370 5 9	
		Jamagar do.	338 12 0	
		Hura do.	283 12 0	
		Jhapra do.	338 12 0	
		Raghunathpore do.	205 1 0	
		Bortoria do.	431 1 3	
		Kantani do.	30 0 0	
		Satsori do.	79 7 9	
		Bolorampore do.	50 4 0	
		Doobra do.	92 10 3	
		Lakhanpore do.	25 0 0	
		Chand on Kuri do.	24 8 0	
		Chass Chutty do.	28 4 0	
		Chandil do.	60 12 0	
		Ditto bungalow	42 8 0	
		Bolorampore do.	7 12 0	
		Manbazar do.	.....	
		Kendah do.	.....	
		Hura do.	0 8 0	
		Kurgally do.	.....	
		Govindpore do.	5 0 0	
		Doobra do.	0 4 0	
		Barrabazar do.	1 4 0	
	.....	Fees, fines and forfeitures	.....	4,179 10 11
	600 0 0	Interest (on arrears of cess on lands, mines, &c.)	789 8 3	.....
				789 8 3
	.....	*Miscellaneous.*		
		Sale proceeds of fruits from the compound of the Barrabazar inspection bungalow	1 1 3	
		Refund of the balance of advances made on account of compensation for houses for widening the Purulia, Bankura, and Manbazar roads through the town of Purulia	9 3 3	
		Sale proceeds of fallen trees	3 10 0	
		Amount credited to reconcile the discrepancy of 2 annas and 3 pies as directed by the local auditor	0 2 3	
		Sale proceeds of ceiling cloth, &c., of the Barrabazar inspection bungalow	2 4 0	
		Miscellaneous receipts on account of Jherria estate for gravelling the Jherria village road	700 0 0	
				716 4 9
Grant from Government	500 0 0	Contribution from Government for joint road and public works cess establishments, as per Board's No. 214A, dated 20th February 1879	500 0 0	500 0 0
	41,892 0 0	Total revenue ...	.....	72,605 10 0
	1,200 0 0	Advances	2,227 12 3	
	.....	Deposits	1,450 0 0	
				3,677 12 3
	43,092 0 0	Total receipts, including opening balance	.....	76 283 0 3
		Expenditure.		
Refunds ...	.....	Refunds of cess	.....	
	.....	Ditto of other receipts	372 15 6	
				372 15 6
Provincial rates	1,413 0 0	*Establishment and contingencies of office of collection.*		
		1 Head clerk on Rs. 70 a month for 12 months	840 0 0	
		1 Moharir on Rs. 30 for 1 month and 21 days	51 0 0	
		1 Duftry on Rs. 6 a month (after deduction of fine of 6 annas and 3 pies)	71 9 9	
		Pay of one punkha-puller on Rs. 3 for half month	1 8 0	
		Ditto ditto for six months on Rs. 3	18 0 0	
		Ditto ditto for eight days on Rs. 3	0 12 4	
		Cost of service of notices, &c., not recoverable under sections 97 and 98 of the Act IX of 1880 (including remissions)	192 2 10	
		Cost of service labels	15 0 0	
				1,190 0 11
	1,413 0 0	Carried over ...	.....	1,563 0 5

Sub-head of estimate.	Amount as per budget estimate.	Distinguishing number.	PARTICULARS.	Total sanctioned cost.	Total outlay to end of the year.	Amount	Total.
	Rs. A. P.			Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
	1,413 0 0		EXPENDITURE—*continued.*				
			Brought forward ...			.....	1,863 0 5
Administration	1,648 0 0		*Establishment and contingencies of Committee's office.*				
			1 Accountant on Rs. 110 a month for 12 months			1,320 0 0	
			1 Chaprassi on Rs. 5 for 9 months			45 0 0	
			Ditto ditto for 28 days (of April)			4 10 8	
			Ditto ditto for 29 days (of December)			4 10 8	
			Ditto ditto (after deduction of fine of 8 annas)			4 8 0	
			Punkha-pullers			54 4 6	
			Municipal tax on District Engineer's office and store godown ...			5 4 0	
			Postage on bearing covers			0 12 6	
			Postage stamps for District Engineer's office			2 2 6	
			Cost of service labels			9 0 0	
			Cost of receipt stamps for cheques above Rs. 20			11 0 0	
			Railway freight, including cart-hire for a box of stationery			2 8 0	
			Postage on bearing parcels containing printed forms, &c.			14 6 6	
			Cost of repairs of dumpy level, including cooly-hire			9 0 0	
			Petty miscellaneous charges			12 3 0	
							1,462 6 4
	637 6 11		Percentage cost of establishment for offices of account and control			692 14 7	692 14 7
Stationery ...	261 0 0		Cost of printing day-books, contract and petty contract forms, and road fund account forms			63 13 3	
			Cost of country stationery, cloth, &c., for cess office			13 1 9	
			Do. of printed forms for cess office			58 5 0	
			Do. of binding registers and towji books			1 12 0	
			Do. of printing charges of annual accounts and reports for the half-year ending 31st March 1887			50 15 9	
			Cost of printing charges of annual accounts and reports for the cess year 1887-88			71 11 8	
			Cost of English stationery			39 10 9	
							299 2 2
Public Works	.....	1	*Original Works.* Diverting approach to the Subarnarekha road	2,067 4 8	1,915 2 3	553 1 6	
	.....	.....	Cost of surveying, &c., some of the railway feeders, &c., &c.	.....	972 11 5	180 2 1	
	400 0 0	.....	Cost of preparing projects, Railway feeders	400 0 0	221 8 0	221 8 0	
	1,858 0 0	4	Metalling some of the station roads in Purulia	1,858 0 0	1,857 9 3	1,857 9 3	
	1,550 0 0	6	Improving and widening portions of the Purulia-Manbazar road ...	1,550 0 0	1,387 0 11	1,387 0 11	
	1,800 0 0	2	Improving and widening portion of the Purulia-Bankoora road	1,800 0 0	1,486 13 2	1,486 13 2	
	3,000 0 0	24	Earthwork, &c., on the Bolaramcore-Barrabazar road	3,000 0 0	.....	... ...	
	.....	3	Reconstructing a pucca culvert of 6 feet span on the Roghunathpore-Ranigunge road	600 0 0	579 2 11	579 2 11	
	8,608 0 0		Total Original Works ...	.....	... ..	... ...	6,765 5 10
			Repairs.				
	1,581 13 8	1	Maintenance, Purulia-Chyebassa road			1,581 13 8	
	2,647 2 6		Spreading and consolidating stone metal and screened gravel.			4,635 7 8	
	755 9 2		Repairs to bridges and culverts on Purulia-Chyebassa road			399 6 3	
	563 4 2		Ditto to inspection bungalows on ditto ...			541 2 0	
	900 0 0	2	Maintenance, Purulia-Bankura road			870 1 4	
	2,500 0 0		Spreading and consolidating screened gravel collected last year.			1,417 7 11	
	250 0 0		Repairs to bridges and culverts on Purulia-Bankura road			... ...	
	140 0 0		Ditto to inspection bungalows on ditto ...			36 0 0	
	1,200 0 0	3	Maintenance, Roghunathpore-Ranigunge road ...			1,199 12 11	
	100 0 0		Repairs to bridges and culverts on Roghunathpore-Ranigunge road.			.....	
	120 0 0		Repairs to inspection bungalows, Roghunathpore-Ranigunge road.			24 0 0	
	600 0 0	4	Maintenance, Purulia station roads			599 15 1	
	50 0 0		Repairs to culverts on Purulia station road			47 1 7	
	300 0 0	5	Maintenance, Charrah branch road			299 6 3	
	25 0 0		Repairs to bridges and culverts on Charrah branch road			25 0 0	
	1,160 0 0	6	Maintenance, Purulia-Manbazar road			1,153 14 5	
	150 0 0		Repairs to bridges and culverts on Purulia-Manbazar road.			.....	
	150 0 0		Repairs to inspection bungalows on Purulia-Manbazar road.			42 0 0	
	800 0 0	7	Maintenance, Roghunathpore-Bankura road			799 13 8	
	50 0 0		Repairs to bridges and culverts on Roghunathpore-Bankura road.			.....	
	150 0 0		Repairs to inspection bungalows, Roghunathpore-Bankura road.			36 0 0	
	1,560 0 0	9	Maintenance, &c., Roghunathpore-Hazaribagh road, 1st, 2nd, and 3rd sections.			1,237 13 4	
	200 0 0		Repairs to culverts on Roghunathpore-Hazaribagh road, 1st, 2nd, and 3rd sections.			...	
	950 0 0	10	Maintenance, Damdah-Burrabazar road			501 15 5	
	100 0 0		Repairs to bridges and culverts on Damdah-Burrabazar road.			.....	
	200 0 0		Repairs to inspection bungalows, Damdah-Burrabazar road.			42 0 0	
	17,202 13 6						
	12,507 6 11		Carried over ...			15,490 5 6	10,303 1 4

Sub-head of estimate.	Amount as per budget estimate.	Distinguishing number.	PARTICULARS.	Amount.	Total.
	Rs. A P. 12,567 6 11		EXPENDITURE—*concluded.*	Rs. A. P.	Rs. A. P.
			Brought forward ...	... ..	10,303 1 4
Public Works—(*concld.*)	17,202 13 6		*Repairs*—concld.		
			Brought forward ...	15,490 5 6	
	1,350 0 0	11	Maintenance, &c., Ledhoorka-Gourangdi road ...	1,553 8 8	
	600 0 0	12	Ditto Jhapra-Govindpore road (1st and 2nd sections).	599 15 3	
	50 0 0		Repairs to bridges and culverts on Jhapra-Govindpore road (1st and 2nd sections).	.....	
	250 0 0		Repairs to inspection bungalows, Jhapra-Govindpore road (1st and 2nd sections).	48 0 0	
	1,500 0 0	15	Maintenance, &c., Manbazar-Roghunathpore road (Hura Manbazar section).	1,552 0 10	
	150 0 0		Repairs to inspection bungalows, Manbazar-Roghunathpore road, (Hura Manbazar section).	138 4 8	
	840 0 0	18	Maintenance, including construction of temporary culverts, Purulia-Chass road.	480 0 8	
	400 0 0	19	Maintenance, &c., Manbazar-Bankoora road	389 8 10	
	2,000 0 0	20	Ditto Barrabazar-Koilapal road	1,286 1 11	
	150 0 0		Repairs to inspection bungalows on Barrabazar-Koilapal road.	24 0 0	
	4,000 0 0	23 to 27	Maintenance, village roads (in Sudder subdivision) ..	1,761 2 7	
	400 0 0		Ditto of trees on the station roads	398 10 0	
	700 0 0	12	Ditto Jhapra-Govindpore road (3rd and 4th sections).	690 9 8	
	100 0 0		Repairs to bridges and culverts on Jhapra-Govindpore road (3rd and 4th sections).	95 8 0	
	100 0 0		Repairs to inspection bungalows, Jhapra-Govindpore road (3rd and 4th sections).	103 0 0	
	1,140 0 0	13	Maintenance, &c., Govindpore-Toondi road	2,057 13 1	
	400 0 0	16	Ditto, Nirsha-Jamtara road	347 10 6	
	100 0 0	8	Maintenance, Govindpore station roads	100 0 6	
	2,200 0 0	28 to 31	Ditto village roads (in Govindpore subdivision)	3, 39 5 0	
	33,632 13 6		Total Repairs ..	.....	30,465 9 8
	6,900 0 0		*Establishment.*		
			1 District Engineer on Rs. 250 for 12 months	3,000 0 0	
			1 Office Assistant on Rs. 30 for 12 months	360 0 0	
			1 Sub-Overseer on Rs. 60 for 12 months	720 0 0	
			1 Ditto on Rs. 40 ditto	480 0 0	
			2 Chaprassees on Rs. 5 each for 10 months	100 0 0	
			1 Chaprassee on Rs. 5 for 13 days of May	2 1 6	
			1 Ditto offg. on Rs. 5 for 18 days of do.	2 14 6	
			1 Ditto on Rs. 5 for 1 month	5 0 0	
			1 Ditto on Rs. 4 for 2 months	8 0 0	
			1 Store-godown chowkidar on Rs. 5 for 12 months	60 0 0	
			Travelling allowance of the District Engineer	376 3 2	
			Horse allowance of the District Engineer on Rs. 30 for 12 months	360 0 0	
			Ditto of Sub-Overseers	360 0 0	
			1 Sub-Overseer for the Govindpore Branch Committee on Rs. 45 for 11 months and 13 days.	514 8 0	
			1 Clerk for the Branch Committee on Rs. 5	60 0 0	
					6,402 11 2
	300 0 0		*Tools and Plant.*		
			Purchase of 48 steel-pointed pickaxes	60 0 0	
			Ditto of 12 sledge hammers	30 9 3	
			Ditto of 100 iron rammers	106 4 0	
			Cost of carriage of the tools, &c., including railway freight	17 5 0	
					214 2 3
	50 0 0		Toll and ferry establishment and contingencies	.....	... ..
Miscellaneous	2,400 0 0		*Petty construction and repairs.*		
			Repairs to and construction of cart serais (in sudder subdivision)	1,365 2 3	
			Repairs to bandhs	160 3 11	
			Ditto to cart serais (in Govindpore subdivision)	830 4 7	
			Ditto to Rajgunge bungalow (in Govindpore subdivision)	239 2 0	
					2,594 12 9
			Total ..	.....	49,480 5 2
Suspense Accounts.	1,900 0 0		Advances	2,615 11 9	
			Deposits	1,300 0 0	
					3,915 11 9
	57,750 4 5		Total Expenditure ...	.....	53,396 0 11
			Cash-book balance on 31st March 1889	.....	22,387 5 4
			GRAND TOTAL ...	.....	76,283 6 3

Memorandum showing in detail the actual Cash Balance on 31*st March* 1889.

PARTICULARS.	Amount. Rs. A. P.
Balance at credit of the Manbhoom District Road Fund in the treasury as per pass-book	22,354 6 1
Imprest in hand of the District Road Accountant	32 15 3
Balance as per cash-book ...	22,387 5 4

Memorandum showing in detail the amount of Outstanding Advances on 31st March 1889.

PARTICULARS.	Amount. Rs. A. P.	Total. Rs. A. P.
Amount of advances made to Road Cess Deputy Collector for costs of processes	1,142 11 1	
Amount repaid by the Cess Deputy Collector under sections 97 and 98 of Act IX of 1880 (B.C.) ...	775 2 2	
		367 8 11
Deduct amount as per details at foot	.....	134 7 9*
Total ...	... ...	233 1 2
Advanced to District Engineer on account of works, &c.	1,473 0 8	
Recovered in works, &c., from the District Engineer ...	1,452 10 1	
		20 6 7
Total ...	.....	253 7 9
Amount refunded by District Engineer on a account of works, &c.		—9 3 3*
Total ...		244 4 6

	Rs. A. P.
* Balance due from defaulters at the close of October 1887, omitted	280 15 9
Cash balance in the hands of the Cess Deputy Collector at the close of October 1886, omitted.	13 4 0
Total ...	303 3 9
Deduct amount of remission, &c., at close of October 1889, omitted	301 12 3
Total ...	92 8 6
Add amount recovered as shown in last year's statement	41 15 3
Total ...	134 7 9
Add amount of advance refunded by District Engineer on account of works, &c.	9 3 3
Total ..	143 11 0

Memorandum showing in detail the Balance at credit of Deposit on 31st March 1889.

PARTICULARS.	Amount. Rs. A. P.	Total. Rs. A. P.
Amount of security deposits made by contractors for execution of road works	1,450 0 0	
Balance outstanding on 31st March 1888	250 0 0	
		1,700 0 0
Amount of security deposits refunded to contractors ...	.....	1,300 0 0
Total ...	.....	400 0 0

H. W. HILL,
Vice-Chairman

Audit Certificate.

We hereby certify that the books and accounts specified below,* prescribed for the Road Cess Office and for the office of the District Engineer, are duly kept up, and that they have been posted for the year 1888-89, and they have been duly scrutinized by the sub-committee.

Also that the treasury officer's abstract of the account of the committee for the year has been duly received and checked with the cash and pass-books, and found to agree therewith, except in respect of the amount of imprest in the hands of the accountant, which has been duly noted in the cash-book.

That the vouchers for the payments of the year have been cancelled, that none but duly sanctioned expenditure has been incurred, and that in the case of original works the register of monthly expenditure shows clearly the amount of sanctioned estimate, the grant for the year, and generally that the work of the office has been performed with a due observance of the rules prescribed by Government.

* Road Cess office—(1) Cash book ; (2) Cash abstract book ; (3) Register of monthly receipts and expenditure ; (4) Account of deposits ; (5) Account of advances.
District Engineer's office :—I—Accounts, viz (1) Files of contract certificates ; (2) Files of bills for purchases or purchase lists ; (3) Files of day-book ; (4) Files of establishment bills ; (5) Files of acquittance rolls ; II—Books, viz : (2) Register of bills passed ; (3) Register of works and repairs ; (4) Register of tools and plant ; (6) Account of advances ; (7) Account of deposits.

Explanatory Note.

1. The excess expenditure of Rs. 55-7-8 under head *Percentage cost of establishment* is on account of the payment made during the year for the previous year.

2. The excess expenditure under head *Stationery and Printing* is on account of the extra demand of printed forms for the Committee's and that of the District Engineer's offices.

3. The excess expenditure in some of the items of *repair works*, and under head *Petty construction and repairs* is apparent, but not actual, as the budget provision shown is for the year under report, whereas the expenditure includes payments for works provided for in the previous year.

H. W. HILL,
Vice-Chairman.

Annual Report on Road Cess Operations for the cess year 1888-89.

Midnapore road—Is a second class road. This is the only communication between Midnapore and Chybassa. It extends from Chybassa to district boundary in Bend, or more properly Kopun nullah, and is 71 miles in length. The surface of the road received petty repairs. Portions of road in the 20th, 21st, and 32nd to 37th miles have been gravelled. It has been found that the portions gravelled remain in a very good condition throughout the year, especially during the rains, when, owing to the peculiar plastic nature of the soil, the roads become very miry. The culverts and bridges have also been maintained. New mileposts have been fixed.

Original work.—One inspection bungalow has been erected at Ghatsilla on the 50th mile.

Nursinggurh to Bhairagora road—Branches off from the Midnapore road on the 56th mile. It is a fifth class road, and is 21 miles in length. Petty repairs were done to the surface of the road, and the wooden culverts and bridges have been maintained.

Chybassa to Subornorekha river (Burrakur road)—Leads to Purulia. This is a third class road, 30 miles in length. Till the opening of the Bengal-Nagpore Railway, it will continue to be the most important road in this district. Surface dressing has been done throughout the road. Earthwork was also executed to improve the most rugged portions. Gravelling has been done in portions of the 9th to 16th miles, where the road becomes muddy during the rains. Side drains have also been cut to carry the drainage from the hills. The old metalled parts that got out of orders have also been repaired. This road crosses two big hill-streams—Rorho in the 5th and Sanjoy in the 20th miles. Besides the above, there are three more unbridged nullahs, and there should be bridges, as during heavy floods all sorts of traffic get stopped. Waterways of a number of culverts are insufficient, and there had been scours on the down stream sides. Stone pitching has been done in these places to prevent the foundation of the culverts being undermined. The bridges and culverts, almost all of which are of masonry, were in a good condition, and no repairs were necessary. New mileposts have also been fixed on the road.

Original works.—Subornorekha Ghât improvement.—(*a*) Nearly the whole of the earthwork on the south side of the hill is finished. The rock-cutting on the top of the hill remains to be done, and when completed the new road will be fit for use. The work is in progress.

(*b*). *Thulko shelter-house.*—A bungalow at Thulko on the 8th mile has nearly been furnished.

Chybassa to Khursowan road—Is a fourth class road, 16 miles in length. The surface of the road and the culverts therein have received petty repairs. Portions of road in the 2nd and 3rd and 9th miles have been gravelled.

Chybassa to Fooljuri (Bandgaon road)—Is a second class road according to the road list lately received from Government, and is in length 44 miles. This road leads to Ranchi, the head-quarters of the division. The surface of the road received petty repairs throughout. A portion of the road in the 8th mile was under flood during the last rain, and the same has been raised. Two new platform culverts have also been made at that p ace for passage of drainage. Portions of road in the 7th to 14th miles have been gravelled. The culverts were in good condition, and no repairs were necessary. New mileposts have been fixed.

This road crosses Sanjoy nullah on the 13th mile, and during the rains a ferry is kept at the crossing for passage of traffic.

The portion between Bandgaon and the district boundary, a length of two miles, is being improved by the Public Works Department, and the improvement of the portion up to Chuckradhurpore will be taken up shortly.

Bridge over Rorho nullah.—The platform bridge over Rorho nullah was in a dilapidated condition, and to prevent any accident it has been dismantled. Fifteen rolled iron joists have also been brought from Calcutta for using instead of wooden beams. The repairs are being pushed on vigorously. Finding the sum available from the current year's budget inadequate to complete the work, an application for an additional grant of Rs. 1,500 has been made by me in my letter No. $\frac{\text{R.C.}}{23}$, dated the 12th May 1889, to the address of the Commissioner of the Division, and I hope Government will grant this amount, considering the importance of the work.

Original work.—An inspection bungalow has been constructed at Chuckradhurpore.

Chuckradhurpore to Keksinga road—Is a fourth class road, and is in length 51 miles. The portion of the road up to Dalaikola, a length of 18 miles, has been maintained during the year under review. The surface of the road and a few of the timber culverts received only petty repairs. The whole of the timber culverts could not be rapaired owing to the dearness of local labour caused by the great demand on the railway.

Chybassa to Joyntigurh road—Is a second class road, and is in length 35 miles. Surface dressing was done throughout. Necessary repairs were also done to the wooden culverts. Portions of the road in 2nd to 6th miles were improved by gravelling. Some rugged portions of the road were also improved by spreading earth. Some urgent petty repairs were done to the following village roads:—

(1) Chybassa to Katbary. | (2) Gamaria to Jamda.

(3) Gamaria to Mujgaon.

Road Cess and Municipal Office building.—The office building, half the cost of which is to be borne by the Municipality here, has nearly been finished. The account will be closed with the Municipality, when the final payment will be made to the contractor for the works done by him.

Arboriculture.—Some new plants have been planted in the Burrakur, Bandgaon, Midnapore, and Joyntigurh roads. Fencings for trees planted in previous years have been repaired. Some dead plants have been replaced by new ones.

The general feature of the maintenance works that are being done at present is the introduction of gravelling portions of the roads every year instead of putting earth (surface dressing). This system improves generally the muddy nature of the soil, and have been tried in the worst portions with success. During my last cold weather tour, I inspected some of the roads, and came to the conclusion that money spent on gravelling is money well spent, and that on roads where there is constant traffic an additional portion should be gravelled every year until the whole road is gravelled. On the ungravelled portions of those roads, and on other roads which are not important enough to be gravelled, surface dressing should be done after the close of the rains by gangs of coolies under a road sircar, and not by giving out the work at so much per mile to contractors, as in the latter case no check can be exercised over the work. Only earthwork repairs, which are more than what would be called surface dressing, should be given out on contract. There was no District Engineer for the last five months of the year, and the works suffered much in consequence.

Considering the mileage extent of the roads in this district, the income available for expenditure annually is quite inadequate to meet the necessary wants. Nearly the whole of the income is taken up for maintenance, and in consequence very little can be done towards repairing or replacing broken culverts or constructing new ones, and on the principal roads there are many works required of this kind, but which for want of funds cannot be undertaken.

* * * * * * *

W. L. SAMUELLS,

Chairman, District Road Cess Committee, Singbhoom.

No. 6.—Part I.

SINGBHOOM DISTRICT ROAD FUND.

Annual Accounts of Income and Expenditure from 1st April 1888 to 31st March 1889.

Receipts.		Amount.	Total.	Expenditure.		Amount.	Total.
		Rs. A. P.	Rs. A. P.			Rs. A. P.	Rs. A. P.
Balance on 1st April 1888 as per cash-book		.....	6,000 9 5	Refunds ...	Of cess	.....	
Provincial rates ...	Cess on lands	3,705 9 6			„ other receipts	.....	
	„ on mines and railways ...	0 3 9		Administration ...	Establishment and contingencies of Committee's office	546 6 9	
	„ on houses	.....		Stationery ...	Stationery and printing	166 9 2	
Public Works ...	Road tolls	.....		Public Works ...	Original works	1,316 5 9	
	Ferry „	.....			Repairs	7,705 3 5	
Irrigation ...	Canal tolls	.....			Establishment	2,142 9 0	
Miscellaneous ...	Rent of serais and bungalows ...	14 0 0			Tools and plant	296 5 6	
	Fees, fines, and forfeitures ...	8 8 0			Arboriculture	130 2 9	
	Miscellaneous	.....		Irrigation ...	Canal toll establishment and contingencies	.....	
Government grant for 1888-89		10,000 0 0		Miscellaneous ...	Staging-bungalow establishment and contingencies	66 0 0	
	Total Receipts ...	13,728 5 3			Do. petty construction and repairs	164 12 0	
					Miscellaneous	118 3 0	
				Contribution to Provincial Government		.....	
					Total Expenditure ...	.....	12,652 9 4
Advances		1,937 10 0		Advances		2,247 0 0	
Deposits		1,050 0 0		Deposits		50 0 0	
Cash from treasury		1,390 2 6		Cash from treasury		1,390 2 6	
	Total Receipts ...	.....	18,106 1 9				3,687 2 6
					Total Disbursements ...	.....	16,339 11 10
				Balance as per road cess cash-book on 31st March 1889 ...		.....	7,766 15 4
	Grand Total ...	.....	24,106 11 2		Grand Total ...	.....	24,106 11 2

S. J. MANOOK,

Vice-Chairm

L. SAMUELLS,

Chairı ʼrict Rı Cess Committee, Singbhoo

No. 6.—PART II.

SINGBHOOM DISTRICT ROAD FUND.

Details of Income and Expenditure of the year from 1st April 1888 to 31st March 1889 to accompany the annual accounts for the year.

Sub-head of estimate.	Amount as per budget estimate.	Particulars.	Amount.	Total.
	Rs. A. P.	**INCOME.**	Rs. A. P.	Rs. A. P.
		Balance on 1st April 1888 as per cash-book	6,000 9 5	
Provincial rates	3,705 14 0	Cess on lands	3,703 9 6	
	64 0 0	Do. on mines and railways	0 3 9	
	.....	Do. on houses	.....	
Public Works	.....	Road tolls	.....	
	.....	Ferry do.	.....	
Irrigation ...	.....	Canal do.	.....	
Miscellaneous	.....	Rent of serais and bungalows	14 0 0	
	.....	Fees, fines, and forfeitures	8 8 0	
	.....	Miscellaneous	.....	
Government grant.	10,000 0 0	Government grant for 1888-89	10,000 0 0	
		Total Revenue ...	19,728 14 8	
	.....	Advances	1,937 10 0	
	.....	Deposits	1,050 0 0	
	.....	Cash from treasury	1,390 2 6	
		GRAND TOTAL ...	.....	24,106 11 2
		EXPENDITURE.		
Administration*	510 0 0	*Establishment and Contingencies of Committee's office.*		
		One accountant for one month at Rs 25 a month	25 0 0	
		One ditto for eleven months, at Rs. 30 a month	330 0 0	
		One peon for 12 months, at Rs. 5 per month, less deduction on account of fines	58 5 3	
		Committee's office, rent for 11 months, at Rs. 2 per month	22 0 0	
		District Engineer's office, rent for 8½ months at Rs. 7 per month ...	59 8 0	
		Purchase of service stamps	8 0 0	
		Ditto of ordinary postage stamps	8 9 3	
		Ditto of receipt stamps	5 2 0	
		Postage charge on bearing covers	1 7 6	
		Petty contingencies	7 8 3	
		Purchase of country stationery	20 14 6	
			———	546 6 9*
Stationery ...	120 0 0	Price of stationery articles supplied by the Superintendent of Stationery, Calcutta	43 14 3	
		Price of note and measurement books supplied by the Superintendent of Stationery, Calcutta	21 3 9	
		Price of forms supplied by the Superintendent of Stationery, Calcutta	32 1 9	
		Printing charges of annual accounts for the half-year ending 31st March 1887, and for the cess year 1887-88	69 5 5	
			———	166 9 2†

		Distinguishing number of roads.	*Original Works.*	Amount of estimated cost.	Total outlay to end of previous year.		
		1	*Midnapore Road (Chyebassa to Bend).*	Rs. A. P.	Rs. A. P.		
Public Works...	250 0 0 +61 2 0		Constructing three new culverts on the 66th and 67th and 69th miles of Midnapore road	900 0 0	649 5 0	311 2 0	
		3	*Burrakur Road (Chyebassa to Suborno rekha).*				
	950 0 0 —450 0 0		Subornorekha ghât improvement work	5,398 0 0	599 10 9	7 15 0	
	500 0 0		2 Shelter-houses at Roghunathpore and Dugni	500 0 0	204 14 6	244 0 0	
	150 0 0		1 Shelter-house at Thalko ...	150 0 0	.....	9 12 0	
		5	*Bandgaon Road (Chyebassa to Fooljhuri).*				
	425 0 0		2 Shelter-houses at Chokrodhurpore and Milepir ...	425 0 0	17 7 9	353 3 0	
		7	*Jaintgurh Road (Chyebassa to Jaintgurh.)*				
	250 0 0		2 Shelter-houses at Gamaria and Jorapukhuria	250 0 0	11 8 9	157 7 3	
	1,000 0 0	.....	Road cess and municipal combined office building at Chyebassa, half cost	1,000 0 0	Nil	233 9 6	
			Total Original Works ...	.....	.....	.....	1,316 5 9
			Carried over ...	.....	.....	.....	2,029 5 8

* The excess is by Rs. 36, which is due to the office rent paid for three months at Rs. 9 a month over and above the sanctioned estimate and country stationery bought about Rs. 9 over the estimated amount.

† The excess of Rs. 46 under this head is partly due to the purchase of measurement and note books not provided for in the budget, and partly due to the printing charges of annual accounts for which provision was made for only one year

Sub-head of estimate.	Amount as per budget estimate.	Distinguishing number of roads.	PARTICULARS.	Amount.	Total.
	Rs. A. P.		EXPENDITURE—*concluded.*	Rs. A. P.	Rs. A. P.
			Brought forward ...	.....	2,029 5 8
Public Works—*concld.*			*Repairs.*		
		1	*Midnapore Road (Chyebassa to Bend).*		
	2,422 0 0		Maintenance of 71 miles	2,220 12 9	
		3	*Burrakur Road (Chyebassa to Subornorekha).*		
	1,465 0 0		Maintenance of 80 miles	974 5 2	
		4	*Kharsowan Road (Chyebassa to Kharsowan).*		
	130 0 0		Maintenance of 16 miles	232 3 0*	
		5	*Bandgaon Road (Chyebassa to Fooljhuri).*		
	2,045 0 0		Maintenance of 44 miles	1,218 6 9	
	1,700 0 0		Repairs to Roro bridge	1,674 5 6	
		6	*Gurjon Road (Chokrodhurpur to Koksinga).*		
	333 8 6		Maintenance of 51 miles	169 1 0	
		7	*Jaintgurh Road (Chyebassa to Jaintgurh.)*		
	450 0 0		Maintenance of 35 miles	733 3 0†	
		8	*Bamonhatty Road (Chyebassa to Katbari).*		
	150 0 0		Maintenance of 20 miles	256 3 0‡	
		.....	*Village Roads.*		
	100 0 0		Maintenance of village roads	237 10 3§	
					7,705 3 5
	3,000 0 0		*Establishment.*		
			1 District Engineer for one month, at Rs. 150 a month, less income-tax deduction	147 8 0	
			1 District Engineer for seven months, at Rs. 120 a month, less income-tax deduction	823 8 0	
			1 District Engineer for nine days of November 1888, at Rs. 120 a month	36 0 0	
			Travelling allowance of the District Engineer	420 0 0	
			Income-tax deduction from the pay of the District Engineer ...	20 0 0	
			1 Sub-overseer for twelve months at Rs. 25 a month	300 0 0	
			1 Clerk for eleven months at Rs. 20 a month	220 0 0	
			1 District Engineer's office peon for twelve months at Rs. 5 a month, less Re. 1 fine	50 0 0	
			2 Road sircars for one month at Rs. 15 a month	30 0 0	
			1 Road sircar for one month and one day at Rs. 15 a month ...	15 7 6	
			1 Ditto for one month at Rs. 15 a month	15 0 0	
			1 Ditto for three months and twenty-five days at Rs. 15 a month	57 1 6	
					2,142 9 0
	280 0 0		*Tools and Plant and Furniture.*		
			Purchase of 2 lanterns at Re. 1 each, Rs. 2; and 2 at Rs. 2-8 each, Rs. 5.	7 0 0	
			50 Pickaxes at Rs. 15 per dozen	62 8 0	
			5 Crowbars...	9 10 0	
			25 Kodalies	29 2 9	
			1 Spirit level	6 8 0	
			12 Chairs at Rs. 3 each	36 0 0	
			3 Chairs	7 0 6	
			9 Tables at Rs. 6 each	54 0 0	
			Carriage and packing of ditto from Calcutta to Chyebassa	44 14 0	
			2 Stools at 12 annas each	1 8 0	
			7 Khatias	10 12 0	
			1 Filter-stand	1 0 0	
			Carriage of ditto	0 8 6	
			Repairs of tools and plant	25 13 9	
					296 5 6‖
	135 0 0		Arboriculture	130 2 9	
					130 2 0
Irrigation ...	.....		Canal tolls	.....	.....
Miscellaneous	433 12 0		Staging-bungalow establishment	66 0 0	
			Ditto petty construction and repairs	164 12 0	
			Miscellaneous	118 3 0	
					348 15 0
Contribution to Provincial Government.	.....		Contribution to Provincial Government	.....	.....
	.....		Advances	2,247 0 0	
	.....		Deposits	50 0 0	
	.....		Cash from treasury	1,390 2 6	
					3,687 2 6
			Total Disbursements ...	.....	16,339 11 10
			Balance as per road cess cash-book on 31st March 1889	.....	7,766 15 4
			GRAND TOTAL ...	.....	24,106 11 2

* The excess is due to the adjustment of advance of Rs. 124 made in 1887-88.
† Ditto ditto ,, 380 ditto.
‡ The excess is very slight when the fact of adjustment of advance of Rs. 100 made in 1887-88 is taken into consideration.
§ No excess when the fact of adjustment of advance of Rs. 200 made in 1887-88 is taken into consideration.
‖ The excess is due to the purchase of 50 pickaxes and 25 kodalies at a higher rate than what was originally estimated for.

Memorandum showing in detail the balance of cash at the close of the year 1888-89.

Particulars.	Amount. Rs. A. P.
Balance of cash as per treasury pass-book	7,566 15 4
Add amount of imprest in the hand of the District Engineer	200 0 0
Total ...	7,766 15 4
Deduct amount of outstanding cheques ...	.....
Net balance as per road cess cash-book ...	7,766 15 4

Memorandum showing in detail the outstanding advances on the 31*st March* 1889.

Date of advances.	Nature of advance.	Amount.	Explanation why the advances are outstanding.
		Rs.	
December 1882	Village road repair	38	I have ordered the amount to be written off this account, as the amount was advanced for petty repairs on a village road. The man to whom it was advanced is dead.
October 1884	Beams for bridges on the Midnapore road.	130	Orders have been sent to the man to whom the amount was advanced either to adjust by account or refund the amount.
January 1887	Juggurnathpore to Jamda road repair.	100	Works have been measured up, and the amount is under adjustment.
May 1888	Carriage of iron joists from Calcutta to Chyebassa *vid* Midnapore.	300	The amount has since been adjusted.
July ,,	Repair of Bamonhatty village road	150	The same remarks as against Rs. 100.
November ,,	Repairs of Bandgaon road ...	50	The work is under measurement.
November ,,	Do. of Gurjon road ...	20	Ditto ditto.
November ,,	Do. of Bandgaon road ...	250	Ditto ditto.
November 1888 and March 1889.	Road cess and municipal combined office building.	1,200	The work is nearly completed, and the amount will be adjusted shortly.
	Total ...	2,238	

Memorandum showing in detail the balances of deposits outstanding on the 31*st March* 1889.

Date.	Nature of deposit.	Amount.	Remarks.
		Rs.	
3 th March 1889	Chairman, Chyebassa Municipality, on account of payment in part for the combined road cess and municipal office building.	1,000	The amount is to be transferred to the District Road Fund, as soon as the final payment for the work is made.
	Total ...	1,000	

S. J. Manook,
Vice-Chairman.

W. L. Samuells,
Chairman, District Road Cess Committee, Singbhoom

No. 125D.R., dated Chota Nagpore, the 12th August 1889.

From—W. H. Grimley, Esq., C.S., Offg. Commr. of the Chota Nagpore Divn.,
To—The Secretary to the Government of Bengal, Public Works Department.

I have the honour to submit, in original, the annual accounts and reports of the several District Road Committees of this division for the year ending 31st March 1889.

* * * * * * * *

3. The aggregate receipts amounted to Rs. 2,81,910-3-1, inclusive of Rs. 93,633-13-9, the closing balance of the previous year, and of Rs. 20,684-3-5, the receipts under the heads of "Advances" and "Deposits." The total expenditure, including advances and re-payments, amounted to Rs. 1,97,151-5. There was thus a balance of Rs. 84,758-14-1 when the year ended.

4. *Original works.*—In Hazaribagh, original works were limited to the construction of an inspection bungalow at Golah and the gravelling of eight miles of the Ramgurh-Golah road. In Lohardugga, three rubble stone and brick masonry bridges of two or three spans each were constructed on the Ranchi-Lohardugga road. In the Palamow sub-division a small bridge of rubble stone and brick masonry abutments and wing walls with sâl timber roadway was constructed. The survey, including the preparation of the plans and sections of the Lohardugga-Chuttra, Ranchi-Chandil, Kuru-Orenga and Daltongunge-Moharajgunge roads was completed. In Manbhoom, the original works consisted of (1) the construction of the Balarampore-Burrabazar road, (2) the metalling of some of the Purulia station roads with quartz, and (3) improving and widening portions of the Manbazar and Bankoora roads within the town of Purulia. In Singbhoom, some masonry culverts were built on the Midnapore road; the work of improving the Subornorekha ghât on the Purulia road was continued and some inspection bungalows were constructed.

5. *Repairs.*—In Hazaribagh, 58 miles of five metalled roads, 302 miles of 17 fair-weather roads, and 134 miles of village roads have been maintained and kept in fair order. Approaches to beds of rivers and nullahs crossed by all village roads have been sloped and rendered passable for wheeled traffic. In Lohardugga most of the district roads have been thoroughly maintained by the renewal of wooden platform bridges, the renewal of culverts and the re-excavation of side drains. In some cases the rubble stone and brick masonry abutments of bridges with timber-topped roadways have been thoroughly renewed. Surface repairs have been made wherever necessary. Most of the roads in the Sudder sub-division of the Manbhoom district were repaired and maintained in very fair order. In Singhboom, only surface repairs of the district roads have been made, as owing to the very limited resources of the District Road Committee and the large extent of the roads to be maintained nothing more could be done.

6. Village roads in all the districts have been maintained so far as funds permitted.

7. Attention seems to have been given by every District Committee to arboriculture. New trees have been planted along road sides and those planted in previous years have, in most cases, been maintained.

LAND SALE NOTICES.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates, or shares of estates, in the district of Chittagong, will be put up for sale at the Collector's Office of that district on the 31st January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and perganah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
	Thanas Town and Ranzan—							
2 / 2	Taruf Ajoidha Ram, Fattiabad.	723 13 0	Yes: the whole estate is to be sold.	.....	Pran Kristo Das, Ram Shabak Das and others.	.....	49 8 8	.....
	Thanas Patya, Futtickcherry, Hathazari, and Satkania—							
25 / 51	Taruf Alcarkhan ...	1,606 0 9	No: only shares are to be sold.	Separate accounts having been opened under Act XI of 1859, share No. I, Asad Ali Khan; share No. II, Akber Ali Khan; share No. III of the remaining proprietors.	Share No. 1, proprietor Anwar Ali Khan.	408 7 5	.....	139 1 6
					Share No. 2, Asharaf Ali Khan and Jandah Bibi and others.	811 6 3	.....	240 14 2
					Share No. 3, Uzir Ali and Anwar Ali Khan.	386 3 1	.....	96 13 0
								476 12 8
	Thanas Futtickcherry, Hathazari, Patya, Ranzan, Town, and Zowargunge—							
28 / 54	Taruf Anandi Ram, Kanongoe.	849 6 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 10, Ram Joy Mohazan; share No. 11, Ram Joy Mohazan; share No. 13, Sudder Ali, and share No. 24, Bishambur.	Share No. 10, Kali Kumar, Durgakripa De.	12 11 0	.....	3 12 3
					Share No. 11, Kali Kumar, Durgakripa De.	14 14 0	.....	4 6 6
					Share No. 13, Asharaf Ali Aminolla, *alias* Gurun Meah.	11 0 0	.....	3 4 3
					Share No. 24, Kali Kumar and Durgakripa De.	53 15 5	.....	16 0 6
								27 7 6
	Thanas Hathazari, Ranzan, and Town—							
29 / 55	Taruf Aziz Nasarat ...	791 12 0	Yes: the whole estate is to be sold.	.....	Sheik Karam Ali Meah.	.....	235 0 1	.....
	Thana Futtickcherry—							
37 / 64	Taruf Annundy Manollah	1,160 0 3	Ditto ...	.....	Nemai Charan Nandi, Gunashila.	.....	59 1 6	.....
	Thana Ramzan—							
83 / 391	Taruf Basanta Ram, Fatehabad.	557 14 3	Ditto ...	.....	Anunda Mohon, Samad Ali and Sreemati Meherjan Bibi and others.	.....	31 1 0	.....
	Thanas Hathazari, Futtickcherry, Patya, Town, and Satkania—							
92 / 401	Kismut Balaram Sircar Baboit, taruf Sonoullah Khan.	1,063 11 3	Ditto ...	.....	Gris Chandra Rakhit and Guru Das Rakhi	.....	315 12 6	.....
	Thanas Bhatiari, Hathazari, Ramoo, Zorwargunge, Patya, and Satkania—							
116 / 523	Kismut Bissessari Baboit, taruf Gouri Sankur.	1,228 12 9	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 13 of the remaining proprietors.	Share No. 13, Mohabat Ali, Mahamed Hossen, Kali Charan and others.	404 13 11	.....	3 13 6
	Thanas Futtickcherry, Hathazari, Patya, Town, Satkania, and Ramoo—							
257 / 1282	Taruf Jubber Dust Khan...	6,538 11 9	Ditto ...	Separate accounts having been opened under Act XI of 1859, share No. 1, Fazal Ahamud.	Share No. 1, Fazal Ahamud and Bazal Samad.	2,043 14 5	.....	299 13 5
	Thanas Futtickcherry, Hathazari, Patya, and Satkania—							
284 / 1467	Taruf Karim Khan ...	715 12 0	Yes: the whole estate will be sold.	.....	Anwar Ali Khan ...	.....	210 0 0	.....
	Thanas Patya and Satkania—							
286 / 1469	Taruf Komur Kulli ...	1,015 13 0	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 10, Dwarka Nath Kundo.	Dwarka Nath Kundo	68 10 5	.....	20 5 11
	Thana Ranzan—							
305 / 1552	Taruf Kanus Fernandez ...	1,640 5 3	Yes: the whole estate will be sold.	.....	Gris Chandra Roy Rakhit, Guru Das Roy Rakhit, and others.	.....	486 15 0	.....
	Thana Bhatiari—							
330 / 1751	Taruf Mojun Chowdhury	688 6 5	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 4, Koshalya.	Shib Prosad Shukul	141 10 0	.....	42 0 2
	Thanas Hathazari and Ranzan—							
1889	Taruf Mohomad Shafi Nazir.	558 7 3	Yes: the whole estate will be sold.	.....	Susty Charan Sen, Bhairub Chandra Chowdhury and others.	.....	155 12 8	.....

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
388 1900	Thana Zorwargunza— Taruf Mohomed Monohur	606 15 6	Yes: the whole estate will be sold.	.....	Sreemati Raiso Nissa Chowdhuria.	.....	198 0 0	.....
	Thanas Hathazari, Patya, Ranzan and Town—							
480 2432	Kismut Pran Kristo, Gopi Mohun, Guru Das and Haridas Roy Baboit, taruf Jugul Kissor Chowdhury.	3,353 14 6	No: only shares will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2, Akhil Chandra Roy, share No. 6 of the remaining proprietors.	Share No. 2, Akhil Chandra Roy.	381 8 9	.....	113 4 4
					Share No. 6, Gris Chandra Roy, on behalf of minor Bhikon Chandra and Esof Ali and others.	1,320 2 8	.....	365 4 7
								478 8 11
	Thanas Futtickcherry, Patya, Hathazari, Ranjan and Town— Taruf Pran Ballab ...	944 5 5	No: only a share will be sold.	Ditto, share No. 2, Mohesh Chandra Chowdhury.	Mohesh Chandra Chowdhury and Obhoy Charan Chowdhury and others.	118 0 8	.....	35 0 9
	Thana Ranzan—							
51 2538	Taruf Raghob Juggodish	515 0 3	Ditto ...	Ditto, share No. 12 of the remaining proprietors.	Gunga Das, Brejo Mohon and others.	132 2 1	.....	24 3 7
	Thanas Patya, Ranzan, Town, and Hathazari—							
51 2544	Taruf Ram Mohon Sen ...	884 11 3	Yes: the whole estate will be sold.	.....	Prasanna Kumar and Ali Meah.	.....	129 13 6	.....
	Thanas Chakaria, Patya, Ranzan, and Town—							
527 2554	Taruf Ram Sondur Kanongoe.	849 6 6	No: only a share will be sold.	Separate accounts having been opened under Act XI of 1859, share No. 2 of the remaining proprietors.	Srimoti Latifa Khatun.	681 6 6	.....	202 3 9
	Thanas Zorwargunge, Patya, Ranjan and Satkania—							
535 2565	Taruf Ram Kishore Kanongoe.	818 11 10	Ditto ...	Ditto, share No. 6, Ram Chandra Biswas and Bangshi Badon Biswas.	Mohesh Chandra Bhuttacharjee.	14 11 0	.....	4 5 9
	Thanas Patya and Town—							
560 2929	Taruf Sachi Roshun ...	752 11 0	No: shares will be sold.	Ditto, share No. 1, Sheek Sadak Ali; share No. 2, Keramut Ali.	Share No. 1, Sadut Ali Chowdhury.	82 5 3	.....	24 7 1
					Share No. 2, Anwar Ali Chowdhury.	188 2 9	.....	17 10 3
								42 1 4
	Thanas Bhatiari, Hathazari, Zowargunge, Patya, Ranzan, Town and Satkania—							
573 2933	Taruf Sachi Ram Kanongoe.	26 12 9	No: shares will be sold.	Separate account having been opened under Act XI of 1859, share No. 1, Lal Mohamed; share No. 16, Dwarka Nath Kanongoe; share No. 52, Ram Kumar Dey and others; share No. 63 of the remaining proprietors.	Share No. 1, Lal Mohamed.	4 14 3	.....	1 7 3
					Share No. 16, Dwarka Nath Kanongoe on behalf of Lakhi Narain Chakro.	4 4 6	.....	1 4 3
					Share No. 52, Ram Kumar Brejo Bashi	0 10 6	.....	0 3 11
					Share No. 63 of the remaining proprietors Assanullah Chowdhury and others.	233 0 3	.....	83 8 9
								86 7 2
	Thanas Hathazari, Patya, Ranzan and Town—							
580 3054	Taruf Shib Durga Sharan...	3,942 8 9	No: only a share will be sold.	Ditto, share No. 8, Shoobal Chandra Das.	Shoobal Chandra Das.	25 14 5	.....	
	Thana Chakaria—							
606 3113	Taruf Shermast Khan Chowdhuri.	527 6 6	Ditto ...	Ditto, share No. 1, Fazal-ahamed.	Share No. 1, Fazal-ahamed, Bazal Samad and others.	165 10 0	49 2 8	.....

N. B.—The amounts in columns 8 and 9 represent arrears, the latest day for payment of which was 25th September 1889.

Chittagong Collectorate, the 14th December 1889.

G. H. ALLEN, for Offg. Collector

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Patna will be put up for sale at the Collector's Office of that district on 3rd February 1890, corresponding with 28th Magh 1297 F S. (Monday), for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue for the kist of 28th September 1889 :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
11	Berhna Lashkaripur Buzurg, pergunnah Bhimpur.	Rs. A. P. 1,038 0 0	Whole...	.....	Kesho Lal and Kissen Prosad and others.	Rs. A. P.	Rs. A. P. 0 5 0	Rs. A. P. .....
12	Berhna Lashkaripur Buzurg Nisf, pergunnah Bhimpur.	2,129 0 0	.....	15a. 19d.	Kesho Lal and others, non-applicants.	2,122 5 6	.....	539 13 0
17	Indowt, pergunnah Shahjonanpur.	1,015 0 0	Whole...	.....	Syed Wajid Hosain and others.	.....	9 15 0	.....
20	Bani Hissa Nisf, pergunnah Biswak.	1,255 2 8	.....	1a. 5d. 7k. 17b. 6ph. 10t.	Mussamut Naziran and others, applicants for separation of accounts.	99 13 0	.....	14 4 8
20	Ditto ...	1,255 2 8	.....	1a. 11d. 13k. 6r. 8ph. 9r. 4t. ...	Mussamut Rohiman and others, applicants for separation of accounts.	124 2 11	.....	11 10 8
21	Bhadsara, pergunnah Masaudha.	1,314 5 6	.....	Gopepur 1a. 4p.	Hardoot Narain Singh, applicant for separation of accounts.	3 2 5	.....	6 4 10
28	Chainpur Shekhopur Barhampur, pergunnah Azimabad.	913 0 0	.....	Shekhopur 3a.	Rameshwar Singh and others, applicants for separation of accounts.	57 1 0	.....	11 1 8
28	Ditto ...	913 0	.....	Shekhopur 2a.	Rambollab Singh, applicant for separation of accounts.	38 0 8	.....	0 0 1
23	Ditto ...	913 0 0	.....	Shekhopur 13a. 1d. 11k. 19b. 14ph. 16r. 17rat 10hatki. Barhampur 6a. 18d. 6k. 13b. 7ph.	Gowri Shanker and Parsash Singh and others, non-applicants.	210 6 8	.....	3 0 6
40	Bazidpur Parthu, pergunnah Telidha.	533 5 4	.....	0a. 8p.	Mussamut Jharokha Koer and others, non-applicants.	322 3 8	.....	3 0 8
47	Hissah Chawsanda, pergunnah Biswak.	906 10 8	.....	6a. 16k. 13b. 6ph. 13r.	Malik Zohurul Haq and others, non-applicants.	342 5 0	.....	0 11 8
65	Chak Rudarman, pergunnah Phulwari.	821 5 3	.....	Chak Rudarman 4a. 0d. 3k. 6b. 13ph. 7r.; Keshwarpur Digha 1a. 3d. 1k. 1b. 5ph.	Sheikh Lal Mohommad and others, non-applicants.	113 13 0	.....	9 8 8
65	Sokhulpur, pergunnah Pilich.	745 11 2	.....	10d. 14k. 4b. 0ph. 5t.	Chowdhry Harbans Narain Singh, applicant for separation of accounts.	24 15 9	.....	1 8 9
65	Ditto ...	745 11 2	.....	6a. 12d. 1k. 15b. 13ph. 19r. 5t. 7tilwari.	Bidhi Chand and others, non-applicants.	306 4 3	.....	1 13 11
69	Poona Chharyari, pergunnah Pilich.	1,008 12	Whoe ..	.....	Baboo Dwarka Nath, Manager, Court of Wards, in charge of the estates of lunatic Debi Prasad.	.....	130 11 4	.....
70	Gobindpur Berhna, pergunnah Bhimpur.	624 0 0	Do. ...	.....	Durga Singh and others.	.....	12 3 0	... ..
78	Deara Mohazee Kothi Shora, pergunnah Azimabad.	854 5 7	.....	4a.	Shoo Porsad Singh and others, applicants for separation of accounts.	213 9 5	.....	30 8 4
78	Ditto ...	854 5 7	.....	7a. 1p. 10k.	Mussamut Woluyti Jan and others, non-applicants.	380 6 11	.....	14 8 1
98	Doiya, pergunnah Biswak.	1,169 11 6	Whole...	.....	Syed Ali Hossein and others.	.....	8 7 6	.....
101	Kapsiyawan, pergunnah Pilich.	1,813 6 1	.....	14a. 8d. 12k. 13b. 15ph.	Syed Majibor Rohuman, Manager of the estate of Debi Persad, lunatic, applicant for separation of accounts.	1,635 2 0	.....	74 12 10
102	Kaila, pergunnah Pilich.	854 6 5	Whole...	.....	Mussamat Sharfan and others.	.....	7 6 2	... ...
102	Dowlatpur Deoria, pergunnah Ballia.	871 7 6	Do. ...	.....	Mussamut Bibi Makhdooman and others.	.....	19 1 3	.....
104	Eksara, pergunnah Biswak.	1,338 2 2	Do. ...	.....	Mir Enayat Hosain and others.	.....	0 13 3	.....
113	Mohammadpur, pergunnah Pilich.	538 10 8	.....	Mohammadpur 11a. 11d. 10k.; Sekandarpur 16a. Yarpur Balwa 8a.	Babu Parsidh Narain Singh and others, non-applicants.	399 10 8	.....	2 9 8
126	Ghostawan, pergunnah Biswak.	659 8 11	.....	10a. 11d. 19k. 11b. 18ph. 14r. 2t. ...	Mussamut Fakhran Nissa *alias* Nanhi Begum and others, non-applicants.	430 13 8	.....	10 9 9
128	Norari, pergunnah Pilich.	1,174 6 5	Whole...	.....	Babu Parandip Narain Singh and others.	.....	72 6 5	.....
129	Baruhi Khass, pergunnah Manair.	505 2 0	.....	11a. 19p.	Beta Singh and others, non-applicants.	415 0 3	.....	46 11 5
135	Mirzapur Berhna, pergunnah Bhimpur.	737 0 0	Whole ..	.....	Mussamut Soobanso Kuer and Ram Sahai Singh and others.	.....	60 0 9	.....
135	Khagura, pergunnah Shahjehanpur.	1,495 14 6	Do. ...	.....	Mussamut Bibi Khadija and others.	.....	100 9 3	.....

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, the specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
143	Peer Barhawna, pergunnah Pilich.	Rs. A. P. 580 2 6	.....	5a. 12d. 12k. 10b. 9ph. 2t. ...	Mussamut Sharfan and others, non-applicants.	Rs. A. P. 204 3 3	Rs. A. P.	Rs. A. P. 0 2 2
147	Qasbe Barhawna, pergunnah Pilich.	5,712 0 0	.....	Qasbe Barhowna 2a.; Kornt 2a.; Barara 2a.; Arawan 2a.; Babhaniawan 2a.; Athbalpur Parthera 2a.	Mussamut Fasehen, applicant for separation of accounts.	714 0 6	.....	0 0 6
147	Ditto ...	5,712 0 0	.....	Qasbe Barhawna 12a. 5d. 2k. 10b. 1ph. 10r.; Korut 11a. 0d. 15k. 16b. 16ph. 10r.; Barara 12a. 17d. 10k. 2b. 7ph. 10r.; Arawan 12a. 17d. 10k. 2b. 7ph. 10r; Babhaniawan 13a. 5d. 2k. 10b.; Athbalpur Parthera 12a. 5d. 10b.	Syed Ahmad Hosain, father and guardian of Syed Kefayat Hosain, and others, non-applicant.	4,430 10 10	.....	338 0 5
153	Bakawan, pergunnah Gyaspur.	724 4 3	Whole...	.....	Madipat Narain *alias* Munshi Mahto and others.	.....	4 9 6	.....
154	Rampur Imi, pergunnah Pilich.	503 7 6	Do, ...	.....	Mussamut Jagpati Kuer, mother and guardian of Ram Prasad Singh and others	.....	0 7 6	.....
156	Raipur Astha, pergunnah Pilich.	1,442 2 3	...	3a. 3d. 17k. 13b. 2ph. 10r. ...	Lall Narain Singh, applicant for separation of accounts.	138 13 6	.....	8 8 6
158	Ditto ...	1,442 2 3	.....	Raipur Astha 1a. 15d. 11k. 4b. 10ph.; Astha 1a. 7d. 11k. 15b. 7ph. 2r. 10t.	Shaik Abdul Hamid and others, non-applicants	126 4 5	.....	0 7 0
169	Rampur Berhna, gunnah Bhimpur.	998 8 0	Whole ..	.....	Sham Lal Singh and others.	.....	54 15 0	.....
172	Darveshpura, &c., pergunnah Behar.	832 0 0	.....	Purveshpura 10d. 10k.; Akhtyarpur Bareli 0a.; Gobindpur Bhedi 8a.	Darshan Lal and others, non-applicants	112 11 7	.....	14 4 10
180	Sernawan, pergunnah Pilich.	587 2 3	.....	5a. 18k. 8b. 5ph.	Permeshar Narain Singh and others, non-applicants	184 9 3	.....	6 14 2
187	Shekh Mohammadpur, pergunnah Bhimpur.	502 14 0	.....	11a.	Mussamut Saliman and others, non-applicants.	407 9 6	.....	22 3 10
188	Shekh Mohammadpur Hayatpur, pergunnah Bhimpur.	704 10 11	.....	10a. 3d. 11k. 11b. 4ph.	Harakh Narain Singh and others, non-applicants.	448 2 11	.....	68 4 8
201	Pariawna, pergunnah Biswak.	1,706 10 0	.....	12a. 13d. 6k. 12b. 10ph.	Babu Luchmi Narain and others, non-applicants.	1,351 1 9	.....	0 4 3
225	Akberpur Bhadwar, &c., pergunnah Masandha.	3,215 10 9	.....	Akhberpur Bhadwan 16a.; Darawan 4a.; Pansoohi 16a.; Shorampur 16a.; Sherpura 16a.; Mushanpur Lachaman 16a.; Mominpur Na Dawana 16a.; Masoompur Bindowli 16a.; Chak Shamsuddin 16a.; Korara 16a.; Katari Beliari 16a.; Rupapur 16a.; Paigamberpur 16a.; Shewdaspur Kurkuri 16a.; Jadapur 16a.; Moazzamabad Bali Pakur 16a; Durgapur Anant 16a.; Sekaria 16a.; Parsporampur Heer 16a.; Jalalpur Ilahi 16a.; Rampur Misraoli 16a.; Kishwarpur 16a.; Shahzadpur Mosi 16a.; Atapur Rukun 16a.; Bela Gobindpur 16a.; Alampur Jarkha 16a.; Raghunathpur Mora 16a.; Saidabad Bakram 16a.; Patranka 16a.; Ahmadabad Khoniyan 16a.; Pali Patowna 16a.; Patowna 16a.; Raghunathpur Jag Bandan 16a.; Kaurikesho 16a.; Kishopur 16a.; Masaurha Khas 16a.; Hadinagar 16a.; Nasirpur Begah 16a.; Bihta 16a.; Abdullapur Khan Qali 16a.; Ganga Chak Mai Nezampur 16a.; Dadoopur 16a.; Mohammadkhanpur Dara 16a.; Fazilpur Patan 16a.; Ibrahimpur Jurga 16a.; Rampur Gunga 16a. Parsoorampur Kanak 16a.; Bishunpur Malshahi 16a.; Sarawji 16a.; Karanpura 16a.	Baboo Shew Nandan Persad and others, non-applicants.	2,604 11 10	.....	41 0 0
227	Narendpur Kharownia, &c., pergunnah Azimabad.	5,885 5 6	.....	Hazratpur Akarya 17a. 15d. 11b. 2p.	Racheya Singh, applicant for separation of accounts.	0 4 4	.....	3 5 3
227	Ditto ...	5,885 5 6	.....	Narendapur Kharownia 2a. 8p. ...	Jagarnath Singh and Rachunath Singh, applicants for separation of accounts.	213 7 10	.....	0 0 9
229	Ditto ...	1,185 5 7	.....	Hiranandpur 16a.	Jagun Lal and others, applicants for separation of accounts.	57 9 8	.....	0 2 7
229	Ditto ...	1,185 5 7	.....	Janarjanpur 2a.; Hazratpur Akhariya 2a.	Ram Lall and others, applicants for separation of accounts.	17 1 8	.....	0 3 8
229	Ditto ...	1,185 5 7	.....	Janarjanpur 2a.; Hazratpur Akhariya 2a.	Surjoo Muhto, applicant for separation of accounts.	17 1 8	.....	1 13 6
251	Amari O, Sain, &c., pergunnah Behar.	737 0 9	.....	Akhtyarpur Pawa 5a. 2d. 10k. ..	Chirangir Singh and others, non-applicants.	207 11 0	.....	15 2 2
295	Mirzapur Gilani, pergunnah Telladha.	1,318 0 0	.....	7a. 10d.	Moulvi Jalaluddin and others, applicants for separation of accounts.	617 13 0	.....	12 12 3
315	Saidpur Gowhar Chak Madho, pergunnah Azimabad.	503 9 1	Whole...	.....	Syed Ali Ashraf *alias* Peyari Sahob.	.....	1 4 3	.....
317	Mandach Gyan Koer, pergunnah Tiladha.	1,687 0 0	.....	8a. 11d. 13k. 6b. 14p....	Shekh Feda Ali and others, non-applicants.	904 15 1	.....	5 4 2
347	Parthee, pergunnah Tiladha.	800 0 0	.....	6d. 7b. 12r.	Syed Khairat Ahmad, applicant for separation of accounts.	15 0 9	.....	0 15 0
347	Ditto ...	800 0 0	.....	8a. 17d. 7k. 5b. 5ph. 12r.	Mussamut Jharokha Koer and others, non-applicants.	190 13 3	.....	0 1 5
355	Khoda Bakhshpur, &c., pergunnah Azimabad.	3,236 0 7	.....	Pir Mohamadpur Diara 16a. ...	Jaggu Lal Upadhia and others, non-applicants.	472 10 7	.....	87 13 11
363	Akbarpur Bhadwar, &c., pergunnah Masawdha.	1,120 4 1	.....	Saidabad 16a.; Kessenpur Baigam 16a.; Abdallapur Khan Quilli 16a.	Raja Ram Singh and others, applicants for separation of accounts.	10 2 3	.....	4 6 3
363	Ditto ...	1,120 4 1	.....	Azizabad Haldha 9a. 10d. 7k. 12b.; Shahzadpur Nuri 9a. 10d. 7k. 12b.; Ghowpur Bhadwar 3a. 3d. 9k. 4b.	Ram Kewal Singh and others, applicants for separation of accounts.	38 14 8	.....	2 10 6

1	2	3	4	5	6	7	8	9
Towji No.	Name of mohal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
363	Akharpur Bhadwar, &c., pergunnah Masawdha.	1,120 4 1	.....	Dorawan 1*a.* 5*d.*; Saidabad Bekra 1*a.* 5*p.*; Shewdaspur Kurkari 1*a.* 5*d*; Sekaria 1*a.* 3*d.*; Daryapur Aunat 1*a.* 5*d.*	Ilaichi Kuer and others, non-applicants.	79 11 1	.....	26 12 5
379	Jaipur Hathea Kandh, pergunnah Manair.	811 1 0	.....	10*a.*	Gobind Persad and others, non-applicants.	506 14 11	.....	147 7 9
395	Rajapur Hassan Kurji Degha, pergunnah Phulwari.	838 0 2	.....	Kurji Digha 8*a.*	Pitambar Singh and others, non-applicants.	284 7 1	.....	3 6 11
402	Dehri, &c., pergunnah Gyaspur.	3,136 0 0	.....	Dehri Dhanrar Badal Singh 10*a.* 10*d.*; Parsawan 10*a.* 10*d.*; Sarajpura 10*a.* 10*d.*; Sarhan 10*a.* 10*d.*; Baddo Kesenpur 10*a*; Chak Bamo Hiranand 10*a.* 10*d.*; Chak Bamo Sujar 10*a.* 10*d.*; Chak Hamed Sewdah 10*a.* 10*d.*; Chando Badul Singh Hiranand 10*a.* 10*d.*; Dhauraipur 10*a.* 10*d.*; Chak Bhudeo 10*a.* 10*d.*; Gossa 10*a.* 10*d.*; Sherpur Medanpur 16*a.*; Chatarbhojpur Kesenpur 16*a.*	Mussamut Fahman and others, non-applicants.	2,192 12 9	.....	10 11 5
410	Ophansapur O. Qasbe Helsa, pergunnah Pilich.	549 14 1	.....	6*a.* 10*p.* 5*k.* 14*m.* 5*d.* 15*b.*	Ambika Persad Singh and others, non-applicants.	235 10 6	.....	6 1 8
436	Lodipur Hathia Kandh, pergunnah Manair.	739 0 0	.....	6*a.* 8*p.*	Gobind Persad and others, non-applicants.	307 14 8	.....	30 0 0
476	Sartha Manpur Sartha, pergunnah Tiladha.	662 13 7	.....	7*a.* 15*d.* 10*k.*	Jugul Kiswar Singh and others, non-applicants.	322 1 6	.....	1 15 5
478	Ditto ...	540 14 3	Whole.	.....	Mussamut Toola Kuer, mother and guardian of Chattor Singh, and others.	.....	33 12 11	.....
486	Panchitara, &c., pergunnah Behar.	1,160 9 0	.....	Panchitara 2*a.*; Mohenddinpur Deokhali Khard and Buzurg 1*a.*; Bhagpur Owkuh 6*a.*; Mozafferpur Fitowngia 2*a.*; Kaleyanpur Chistipur Azizullahpur Chistipur 10*d.*	Mohammad Sher and others, non-applicants.	70 9 10	.....	10 5 7
497	Poorah Nowan Sepao, pergunnah Behar.	1,398 13 0	.....	12*a.* 19*d.* 0*k.* 2*b.* 10*p.*	Mussamut Moriawan and others, non-applicants.	1,134 2 5	.....	6 11 7
519	Oosan, pergunnah Sandia.	957 0 0	Whole.	.....	Nawab Syed Latif Ali Khan, C.I.E., and others.	.....	7 14 5	.....
556	Kishunpur Karawha, &c., pergunnah Gyaspur.	781 0 0	.....	14*a.* 10*k.*	Khaje Syed Hassan and others, non-applicants.	685 6 5	.....	11 3 10
572	Sandh, &c., pergunnah Sandha.	796 12 10	.....	Sandh 15*a.*; Rahmatpur Pakri 14*a.* 2*d.* 10*k.*	Mussamut Sharfan and others, non-applicants.	727 11 9	.....	8 2 2
688	Anta Raghuram, pergunnah Gyaspur.	686 10 5	.....	6*d.* 8*k.* 18*b.* 17*ph.* 11*b.*	Huluman Singh *alias* Chhedi Singh, applicant for separation of accounts.	13 13 3	.....	8 9 3
688	Ditto ...	686 10 5	.....	3*a.* 8*b.* 15*ph.* 12*b.*	Shewnarain and others, non-applicants.	125 3 7	.....	26 7 7
724	Jahangirpur Magarpal, pergunnah Manair.	2,316 4 4	.....	1*a.*	Rai Monohar Lal and others, applicants for separation of accounts.	144 12 3	.....	0 4 8
724	Ditto ...	2,316 4 4	.....	15*d.*	Sitapat Sahai and others, applicants for separation of accounts.	108 10 0	.....	2 9 4
724	Ditto ...	2,316 4 4	.....	1*a.* 11*d.* 17*k.* 15*b.*	Mussamut Sriana Kuer and others, non-applicants.	230 7 1	.....	10 5 2
726	Yakubpur Toongi *alias* Futteh Ali Chak, pergunnah Behar	651 0 0	.....	9*a.* 10*p.* 8*k.* 8*b.*	Syed Mohammad Ismail and others, non-applicants.	401 8 0	.....	40 9 7
				Second kind.				
733	Erazi Towfir Rampur Ghoghpur, pergunnah Manair.	1,236 5 11	Whole.	.....	Srikewal Singh ...	.....	2,005 15 4	.....
				First kind.				
742	Erazi Beshi Dinrah Muhazi Jahangirpur Magarpal, pergunnah Manair.	1,561 8 4	.....	2*a.* 5*d.*	Kisendyal Lal and others, non-applicants.	219 11 4	.....	13 4 8
779	Saidpur Soniawan, pergunnah Gyaspur.	626 9 2	.....	7*a.* 8*d.* 5*k.* 5*b.* 14*ph.* 7*r.*	Ahmad Hosain and others, non-applicants.	290 4 4	.....	0 6 5
796	Sakaohra, pergunnah Gyaspur.	2,134 6 5	.....	Luchmanpur 2*a.* 5*p.* 17*k.* 6*b.* 13*d.*	Mussamut Girja Kuer and others, applicants for separation of accounts.	57 9 11	.....	1 0 6

Patna Collectorate, the 6th January 1890. PEARY MOHAN BANERJEE, Dy. Collr., for Offg. Collector.

NOTICE is hereby given that the undermentioned plot of the Nizamut lakhraj State lands, situate in the district of 24-Pergunnahs, will be put up to sale at the Collectorate of the 24-Pergunnahs on Friday, the 28th March 1890—

The purchaser of the plot will be subject to the following conditions :—

I.—The plot will be sold revenue-free to the highest bidder above the upset price.

II.—The sale to be subject to existing leases, and to the rights conferred by the settlement proceedings and by the laws in force, and purchaser to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the plot to be again put up for sale at the risk of the defaulting purchaser after issue of advertisement as in the case of original sale.

V.—The purchaser shall be put in possession on receipt of the orders of the Collector approving of the sale, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Name of estate.	Mousah.	Pergunnah.	Approximate area.	Annual assessment.	Upset price.	Boundaries.	Remarks.
			B K. CH.	Rs. A. P.	Rs. A. P.		
Dak Adda	Chitpore ...	Amirabad ...	0 3 6	16 14 0	506 4 0	South of the dwelling house of Jitu Dhobi, east of the tank belonging to Zebunnissa Begum, north of the dwelling house of Talemun Jemadar, and west of a public road and the sepoy post.	Dwelling-house of Kudroo Dhobi of Chitpore.

K. N. ROY, Deputy Collector, for Collector on tour.

NOTICE is hereby given, under section 6, Act XI of 1859, section 11, Act VII (B C.) of 1868, and Act II (B.C.) of 1871, that the undermentioned dependent tenures in the Town Khas Mehal, in the district of Chittagong, will be put up to public and unreserved sale at the Collector's Office of that district on the 3rd day of March 1890, for arrears of rent and cesses remaining unpaid after the latest day of payment, the 26th day of December 1889.

Khas Tehsil Office, Town Circle.

Serial No.	No. of tenures in register No. I.	Names of tenures and their situation.	Annual rental.		The amount of arrears for which the tenures to be sold.			Remarks.
			Rent.	Cess.	Rent.	Cess.	Total.	
		Thana town mouzah Bakalya, mehal Noabad.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	887	20134/559 Taluq Manindra Chandra Ghose and others. *Mousah ditto, thana ditto.*	3,373 6 0	226 9 0	343 0 0	56 11 0	399 11 0	
2	895A	20134/559(3) Taluq Khetra Moni Dasi and others. *Thana Fatikchir, mousah Jouskhala, mehal Noabad.*	1,135 11 9	44 6 0	294 0 0	11 1 0	305 1 0	The entire taluqs will be sold.
3	4818	23878/598 Taluq Obedar Rahaman Khan	2,344 0	103 9 0	693 0 0	5 5 9	698 5 9	

Chittagong, the 14th January 1890.

C. H. ALLEN, for Offg. Collector.

Statement of the Affairs of the Bank of Bengal for the week ending 21st January 1890.

LIABILITIES.

	Rs.	A.	P.
Capital paid up	2,00,00,000	0	0
Reserve Fund	58,00,000	0	0
Public Deposits at Head Office Rs. 93,39,843 8 8			
Ditto ditto at Branches ,, 98,93,460 5 0	1,92,33,308	13	8
Other Deposits at Head Office and Branches	3,33,74,620	12	6
Bank Post Bills, &c.	4,54,524	4	3
Sundries	8,43,609	9	1
Rupees	7,97,06,063	7	6

ASSETS.

	Rs.	A.	P.
Government Securities	20,29,390	0	0
Other authorized Investments	78,67,186	0	0
Loans on Government and other authorised Securities	1,80,24,728	12	1
Accounts of credit on ditto ditto	1,01,80,939	5	10
Bills discounted and purchased	2,08,35,926	13	3
Balances with other Banks	10,72,036	12	7
Bullion	3,96,856	2	6
Dead Stock	12,27,881	2	10
Stamps	13,563	11	0
Sundries	4,83,248	8	0
	6,21,31,757	4	1
Cash and Currency Notes at Head Office ... Rs. 60,21,041 9 1			
Cash and Currency Notes at Branches ,, 1,15,53,264 10 4	1,75,74,306	3	5
Rupees	7,97,06,063	7	6

BANK OF BENGAL,
Calcutta, 23rd January 1890.

R. L. BIRD, Chief Acctt.
Rate for Demand Loans 9 per cent.
Percentage 32·6.

By order of the Directors,
W. D. CRUICKSHANK,
Secy. and Treasurer.

(3475—1)

Statement of Government Promissory Notes enfaced for payment of Interest in London, under deduction of amount re-transferred to India, and outstanding in the Books of the Bank of Bengal on the 15th January 1890.

PARTICULARS.	3½ per cent. transfer loan of 1853-54.	4 PER CENT. LOANS							4½ PER CENT. LOANS				Transfer loan of 1879, seven shillings per cent. portion.	5 per cent. loan of 1856-57.	GRAND TOTAL.
		Of 1832-33.	Of 1835-36.	Of 1842-43.	Of 1854-55.	Transfer of 1865.	Reduced 4 per cent. loan of 1879.	Total.	Of 1870.	Of 1878.	Transfer loan of 1879 4½ per cent. portion.	Total.			
Balance of 31st December 1889 ...	54,700	11,29,387	25,43,800	2,48,93,600	1,04,02,000	4,06,11,700	2,06,18,900	10,01,99,387	49,700	71,45,500	11,08,16,600	11,80,11,800	1,33,800	32,200	21,84,31,887
ADD—															
Amount enfaced at Madras between 1st and 15th January 1890	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amount enfaced at Bombay between 1st and 15th January 1890	.....	.....	.....	.....	1,00,000	1,000	3,000	1,04,000	.....	.....	.....	.....	.....	.....	1,04,000
Amount enfaced at Calcutta between 1st and 15th January 1890	.....	.....	1,000	75,800	62,800	1,03,300	10,500	2,53,400	.....	12,500	1,37,500	1,50,000	.....	.....	4,03,400
	54,700	11,29,387	25,44,800	2,49,69,400	1,05,64,800	4,07,16,000	2,06,32,400	10,05,56,787	49,700	71,58,000	11,09,54,100	11,81,61,800	1,33,800	32,200	21,89,39,287
DEDUCT—															
Amount written off in the London registers	.....	.....	19,900	1,06,200	43,900	11,69,000	6,98,500	20,37,500	10,200	10,000	78,500	98,700	.....	.....	21,36,200
Balance on 15th January 1890 ...	54,700	11,29,387	25,24,900	2,48,53,200	1,05,20,900	3,95,47,000	1,99,33,900	9,85,19,287	39,500	71,48,000	11,08,75,600	11,80,63,100	1,33,800	32,200	21,68,03,087

NOTE.—From 9th June 1867 to 15th Nov. 1889—Enfaced from India 6,145 lakhs; re-transferred from London 5,313 lakhs.
" 16th Nov. 1889 " 30th " " " " 18 " " " " 12 "
" 1st Dec. " " 15th Dec. " " " " 12 " " " " 11 "
" 16th " " 31st " " " " 9 " " " " 21 "
" 1st Jan. 1890 " 15th Jan. 1890 " " " 5 " " " " "

6,189
5,379

Balance against India ... 810 lakhs.

PUBLIC DEBT OFFICE, BANK OF BENGAL,
Calcutta, the 20th January 1890.

(3472—1)

W. D. CRUICKSHANK,
Secretary and Treasurer.

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1890.			
Jan. 14	50 Cases, J W in a diamond	Order ...	S. S. "Clan Drummond."
,, 14	*1 Bundle wood, no mark	Ditto ...	Ditto.
,, 14	1 Bag, N	Ditto ...	Ditto.
,, 14	47 Rain-water pipes, M & E	Ditto ..	Ditto.
,, 16	26 Bales, J L & S in a diamond	Ditto ...	S. S. "City of Calcutta."
,, 16	1 Case, 184 in a diamond, A B & Co. outside ...	Ditto ...	Ditto.
,, 16	1 Cask, C in a double triangle, R P outside ...	Ditto ...	Ditto.
,, 16	1 Case, R. S. Elliot, Esq., Dewan, Silchar ...	Addressed ...	Ditto.
,, 16	2 Cases, G C P	Order ...	Ditto.
,, 16	17 Packages, H by Assam	Ditto ...	Ditto.
,, 16	1 Case, A. T. M. Issack, Esq., care of Messrs. M. Lean & Co, Silchar.	Addressed ...	Ditto.
,, 16	1 Bend pipe, R C G	Order ...	Ditto.
,, 16	2 Cases, L O C K E	Ditto ...	Ditto
,, 16	1 Case, Miss Lizzie Thomson, Cawnpore ...	Addressed ...	Ditto.
,, 16	1 Case, M & E	Order ...	Ditto.
,, 19	1 Case, M in an inverted triangle	Ditto ...	Ditto.
,, 16	5 Packages, no mark	Ditto ...	Ditto.
,, 16	21 Kegs, N C J in a diamond, G A & Co. outside ...	Ditto ...	Ditto.
,, 16	3 Casks, no mark, or R X X P or C in a double triangle, R K P top.	Ditto ..	Ditto.
,, 16	1 Case, 793 in a diamond, W L below	Ditto ...	Ditto.
,, 16	1 Parcel, M T in a diamond	Ditto ...	Ditto
,, 18	1 Parcel, Messrs. Mitchel Reid & Co.	Addressed ...	Ditto.
,, 18	1 Rundlet, N M	Order ...	Ditto.
,, 18	1 Rundlet, H M & Co.	Ditto ...	Ditto.
,, 16	2 Cases, C R by 832	Ditto ...	S. S. "Niobe."
,, 16	1 Case, 932 in a diamond	Ditto ...	Ditto.
,, 16	2 Cases, E by 107 in a triangle, M B top, L S & Co. below.	Ditto ...	Ditto.
,, 16	3 Cases, H A M S in a diamond	Ditto ...	Ditto.
,, 16	2 Cases, K C B	Ditto ..	Ditto.
,, 16	1 Case, P B	Ditto ...	Ditto.
,, 16	3 Cases, S J	Ditto ...	Ditto.
,, 16	1 Case, S by 45 in a diamond, C H below ...	Ditto ...	Ditto.
,, 16	1 Case, 1538 in a block within a triangle ...	Ditto ...	Ditto.
,, 16	1 Case, 1399 in a block within a triangle ...	Ditto ...	Ditto.
,, 16	1 Case, H M	Ditto ...	Ditto.
,, 16	1 Case, J W	Ditto ...	Ditto.
,, 16	1 Case, 461 in a triangle, C H L & Co. top ...	Ditto ...	Ditto,
,, 16	11 Bags, no mark or X	Ditto ...	Ditto.

Port Commrs'. Office, Calcutta, the 27th January 1890. (3484—1) G. H. SIMMONS, Vice-Chairman.

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sâl beams and scantlings supplied from this depôt will be as follows :—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 ,, ,, 2-12 ,,
23 ,, ,, 2-14 ,,
24 ,, ,, 3 ,,

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 ,, 2-4 ,,
Under 7 feet ,, 2 ,,

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates :—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates :—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

District Charitable Society.

Abstract of Accounts for the month of December 1889.

RECEIPTS.	December 1889.	From 1st January to 31st Dec. 1889.	PAYMENTS.	December 1889.	From 1st January to 31st Dec. 1889.
	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
Subscriptions—			District Committee's monthly grant ...	1,308 4 9	14,699 14 4
From Government	1,200 0 0	14,400 0 0	Native Committee, monthly grant ...	1,599 10 8	19,383 8 0
,, Port Commissioners ...	200 0 0	2,400 0 0	Ditto, refund of deposit ...	22 8 0	267 0 0
,, Calcutta Municipality ...	100 0 0	1,200 0 0	Commissioner of Police, for casual relief and Rations	318 10 0	4,219 7 3
,, the Public	633 0 0	14,337 0 0	Booking Clerk, E. I. R., Howrah, for Ry. passes	30 0 0	415 0 0
Donations	747 0 0	5,527 12 0	Casual relief through President ...	.....	45 0 0
Allowances towards cost of establishment—			Pensions paid through Central Office ...	335 0 0	4,026 0 0
From Government	250 0 0	3,000 0 0	Schooling-fees	49 0 0	675 2 0
,, Mutiny Relief Fund	50 0 0	600 0 0			
Alms House proceeds	45 5 3	772 2 8	Alms House:—Establishment	277 0 0	4,324 0 0
Interest on Invested Funds	10 0 0	680 0 0	Dieting	920 1 0	11,601 4 0
,, on Trust Funds	1,188 15 1	32,572 2 7	Contingencies	148 2 9	2,345 10 6
Legacies	.....	.....	Boots and shoes (Female Ward) ...	.....	66 0 0
Government grant for Leper Asylum medicines	.....	100 0 0	Clothing and bedding ...	30 0 0	411 8 0
Miscellaneous receipts	0 4 3	8 6 7	Municipal taxes	70 3 0	307 12 0
Mutiny Relief Fund, for pensions ...	475 0 0	5,500 0 0			
Deposits and Advances	572 13 11	2,927 6 11	Leper Asylum:—Establishment ..	158 0 0	1,856 0 0
Native Committee's Deposit ...	.....	214 0 0	Dieting	388 12 0	5,107 8 0
Government grant for Leper Asylum repairs	345 2 6	345 2 6	Medicines, contingencies and repairs	116 11 0	1,896 2 3
			Clothing and bedding ..	319 0 0	319 0 0
			Municipal taxes	23 6 6	102 10 0
			Central Office:—Establishment ...	454 8 0	5,460 0 0
			Commission on collections	28 8 10	376 15 2
			Auditing fees	.....	300 0 0
			Rent	30 0 0	360 0 0
			Contingencies ...	57 5 0	638 9 5
			Printing and advertising	21 0 0	260 2 9
			Interest on overdraft	69 8 5	504 2 9
			Bank's commission...	1 15 5	63 5 2
			Law charges	.....	.....
			Mutiny Relief Fund pensions	464 0 0	5,496 0 0
			Deposits and advances	386 1 11	2,591 12 1
Total ...	5,823 9 0	84,384 1 3	Total ...	7,622 5 3	88,998 6 3

MEMO.

	Rs. A. P.		Rs. A. P.
Receipts as above	84,384 1 3	Payments as above	88,998 6 3
Overdraft in Bank of Bengal on the 31st December 1889, Rs. 13,027-6-3 *less* Rs. 107-4-3 cash balance on that date	12,920 2 0	Overdraft in Bank of Bengal on 31st December 1888, Rs. 8,972-1-7, *less* Rs. 600-5-0 cash balance on that date	8,305 12 7
Total ...	97,304 3 3	Total ...	97,304 3 3

CALCUTTA,
The 4th January 1890.

K. MALLIKA,
Accountant.

PATRICK McGUIRE,
Secretary.

WANTED a Sub-Overseer for the District Works, Maldah, on Rs 40 pay and Rs. 10 horse allowance. None need apply who is not a passed Sub-Overseer and has sufficient practical experience in road works. All applications, with copies of testimonials, must reach the undersigned on or before the 10th February 1890.

JOGENDRO NATH GHOSH, District Engineer.

(3473—2)

Wanted.

A THIRD Clerk for the Office of the District Board, Shahabad, for 4 months, on a salary of Rs. 20 per mensem.

Candidates must write a good hand and know the ordinary office duties.

Applications with copies of testimonials to be received by the Chairman of the District Board till the 7th of February 1890.

S. M. NASSIRUDDIN, Vice-Chairman,
(3481—1) District Board, Shahabad.

Notice

IS hereby given that the post of a Mohurir of the Collectorate Munshikhanah is vacant. The pay of the post is Rs. 20, rising by biennial increments to Rs. 40. Candidates are required to submit applications with testimonials on or before the 5th February 1890.

K. P. SIRCAR, Deputy Collector,
for Officiating Collector.

Tipperah Collectorate, the 22nd January 1890.

Notice.

WANTED a Second Clerk for the Sub-divisional Office, Nattore, District Rajshahye. Salary Rs. 30 rising to Rs. 50 by a biennial increment of Rs. 2. None need apply who does not possess experience in Account Department. Applications with copies of testimonials to be sent to the undersigned before the 10th February 1890.

MOHIM CHANDRA GHOSH, Sub-divisional Officer.

Dated Nattore, the 11th January 1890.

Notice.

IT is hereby notified, under Section 5 of the Indian Treasury Trove Act (VI of 1878), that on the 26th September 1889, thirty Dasarikattur rupees were found by one Bhupati Lachumaya and others of Bhupati Lakshmipuram, on the public patta in the street of the village of Bhupati Lakshmipuram, Varanasi Khandam, Parlakemedi Taluq, Ganjam district, Madras Presidency.

All persons claiming the said treasure, or any part thereof, are hereby required to appear personally or by duly authorized agents before the Collector of Ganjam, on Monday, the 2nd June 1890, in order to the matter being enquired into and determined in accordance with the provisions of the said Act.

A. W. B. HIGGINS, Acting Collector.

CHATRAPUR, *the 18th January* 1890.

JOGENDRA NATH SEN, M. A., B. L., intends to apply for enrolment as a Vakil of the High Court.

(3444—4)

Abstract Statement of the Uncovenanted Service Family Pension Fund for the Fourth Quarter ending 30th April 1889, compared with the corresponding quarter of the year 1888.

PARTICULARS.	For the 4th quarter ending 30th April 1889.	For the 4th quarter ending 30th April 1888.	Increase.	Decrease.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Balance at credit of the Fund on the Government books at the end of the previous quarter	1,03,52,382 3 9	99,71,838 0 3	3,80,544 3 6	.....
ADD—				
Subscription from February to April in the Widows' Fund ...	1,30,141 7 3	1,27,157 2 1	2,984 5 2	.....
Ditto ditto Children's Fund ...	85,816 8 3	84,910 6 9	906 1 6	.....
Entrance fees, &c.	353 14 0	532 14 8	.....	179 0 8
Amount of fine imposed under rule 40A	6 9 9	68 6 0	.....	61 12 3
Amount of pensions received with interest from Government of India on behalf of widows and orphans who came upon the Fund during the late mutiny of 1857	2,651 7 9	2,651 7 9	.....	.....
Amount of interest drawn from the Government of India for the year ending 31st March 1889	6,19,820 3 3	5,98,986 2 6	20,834 0 9	.....
Amount of divisible surplus transferred to debit of subscribers in the Widows' Fund...	649 8 0	47 4 0	602 4 0	.....
Ditto ditto Children's Fund ...	170 4 0	340 8 0	.....	170 4 0
Total Receipts ...	8,39,609 14 3	8,14,694 3 9	25,326 11 5	411 0 11
GRAND TOTAL ...	1,11,91,992 2 0	1,07,86,532 4 0	4,05,870 14 11	411 0 11
DEDUCT—				
Pensions payable to incumbents in the Widows' Fund ...	95,668 6 4	94,904 8 8	758 13 10	.....
Ditto ditto Children's Fund ...	65,862 12 4	66,042 4 4	.....	179 8 0
Establishment, including office-rent and contingencies ...	8,909 13 5	8,697 9 7	212 3 10	.....
Loss by exchange on remittances to England	17,941 3 1	19,329 10 1	.....	1,388 7 0
Amount of fine written back	.....	91 0 4	.....	91 0 4
Amount of divisible surplus in the Widows' Fund written back	171 12 0	.....	171 12 0	.....
Ditto ditto Children's Fund ...	61 8 0	.....	61 8 0	.....
Total Payments ...	1,88,610 7 2	1,89,065 0 10	1,204 5 8	1,658 15 4
Net Balance in favour of the Fund	1,10,03,381 10 10	1,05,97,467 3 2	4,04,666 9 3	1,247 14 5
Proportion of divisible surplus payable to qualified subscribers	81,474 0 0	85,288 14 0	.....	3,814 14 0

	Widows' Fund.	Children's Fund.	Widows' Fund.	Children's Fund.	Widows' Fund.	Children's Fund.	Widows' Fund.	Children's Fund.
Number of subscribers	1,569	1,027	1,565	1,024	4	3	.....	...
Number of incumbents	455	665	451	675	4	.....	.....	10
Number of subscribers sharing divisible surplus	1,213	790	1,165	787	48	3	.....	...

	Rs. A. P.
Net increase in receipts	24,915 10 6
Net decrease in payments	454 9 8
Net increase in balance	4,05,914 7 8

E. E.
EDMUND H. LLOYD, R. A. FINK, } *Auditors, U. S. F. Pension Fund.*

Published by order of the Directors,

G. W. MACLEOD, *Accountant.* W. H. RYLAND, *Secretary.*

UNCOVENANTED SERVICE FAMILY PENSION FUND OFFICE, the 10th January 1890. (3478—1)

Tirhoot State Railway.

Account of Government Promissory Notes held as security deposit by the Examiner of Accounts on the 31st December 1889.

Name of Depositor.	Designation.	4 per cent of 1865.	REMARKS.
		Rs.	
Babu Kangali Charan Singh.	Head Cashier ...	3,500	
,, Upendra Nath Roy.	Assistant Cashier	2,000	
,, Ram Ranjan Mukherjee.	Pay Clerk	2,000	
,, Bhobo Kali Roy ...	Ditto	2,000	
,, Kamoda Nath Biswas.	Ditto	1,000	
,, Tarapodo Chowdhury.	Assistant Cashier, Sitamarhi Extension.	1,000	
		11,500	
Account of Government Promissory notes held as security deposits for temporary purposes.			
Messrs. Kedar Nath Banerjee, & Co.	Store Contractor...	200	Deposited in the Bank of Bengal for safe custody.

B. C. GHOSE, for Examiner.

Road Cess Notification.

DISTRICT PUBNA.

IT is hereby notified that under section 38 of the Cess Act, as amended by the second schedule of the Local Self-Government Act III (B.C.) of 1885, the District Board of Pubna have determined that road cess in that district for the cess year 1890-91 shall be levied at the maximum rate, viz., one-half anna on each rupee of the annual value of lands, and of the annual net profits from mines, quarries, tramways, railways and other immoveable property as enumerated in section 6 of the Cess Act.

W. FIDDIAN, Chairman.

Road Cess Notification.

IT is hereby notified for general information, that, under section 46 of the Bengal Local Self-Government Act No. III (B.C.) of 1885, the District Board of Shahabad have, by a resolution of their meeting held on the 13th of January 1890, determined to levy road cess for the year 1890-91 at the maximum rate of six pies in the rupee on the annual value of lands, mines, &c.

S. M. NASSIRUDDIN, Vice-Chairman, District Board, Shahabad.

Dated Arrah, the 18th January 1890.

Excise.

NOTIFICATION.

1. The right of retail sale of the Liquors and Drugs specified below will be put up to auction at the Opium Sale-room, Board of Revenue, 2, Bankshall Street, on Tuesday, the 11th February 1890, and subsequent days, in the following order :—

Name of article.	Date of sale.
Country Spirit	Tuesday, 11th February 1890, commencing at 11 A.M. Wednesday, 12th ditto ditto ditto. Thursday, 13th ditto ditto ditto.
Rum and Imported Liquor by glass ...	Friday, 14th ditto ditto ditto.
Ganja, Siddhi, Charas, Majum ...	Monday 17th ditto ditto ditto. Tuesday, 18th ditto ditto ditto.
Opium, Madak, Chandu	Wednesday 19th ditto ditto ditto. Thursday, 20th ditto ditto ditto.
Tari	Friday, 21st ditto ditto ditto. Saturday, 22nd ditto ditto ditto.

2. A complete list of all the shops for which licenses will be offered and a copy of each form of license are open to general inspection at the Office of the Superintendent of Excise Revenue, 4, Bankshall Street, and the number of these shops is not under any circumstances to be increased during the term of three years ending the 31st March 1893, except under the sanction of the Commissioner of Excise, Bengal, in each case. The Superintendent of Excise Revenue, however, reserves to himself the right, in case of combination, or for other cause, to transfer, before its settlement, any shop from the locality specified, to some other locality in the neighbourhood, being within a distance of 150 yards from the advertised shop or premises, provided that in cases of re-sale the transfer does not bring the shop within a quarter of a mile of any other similar shop which has been settled at any previous sale and the term of whose license is unexpired.

3. It is not at present intended to open any other shop during the term of the license; but the Superintendent of Excise Revenue does not absolutely bind himself in this respect. On special cause shown, and with the sanction of the Commissioner of Excise, Bengal, in each case, the number of shops may be increased: provided, however, that, whenever a new shop is opened, it will be optional to the holder of a similar license for the sale of Liquor or Drugs, if his shop is within a quarter of a mile of the new shop, to surrender his license without forfeiting his advance, when the Superintendent of Excise Revenue is to re-settle the shop by auction or otherwise.

4. The right of retail sale of the Liquors and Drugs is to be put up to auction at upset prices sanctioned by the Commissioner of Excise, Bengal.

5. The right of retail sale of the Liquors and Drugs is to be put up to auction in separate lots of one or more shops either in the order specified in the list, or in such other order as the officer conducting the sale may deem fit. When one lot has been sold, the next lot is not to be put up until the sum payable in advance on account of the lot already sold has been actually paid: provided, however, that where the sum payable exceeds Rs. 25, a promissory note may be taken from any respectable and well-known purchaser in lieu of cash payment.

6. The purchasers of the right of retail sale of Country Spirit, Rum, and Imported Liquors are entitled to sell Imported Liquors by the glass only, the liquor to be drunk *on* the premises

7. The auction is to be held subject to the following conditions :—

(*a*)—That the Superintendent of Excise Revenue does not bind himself to accept the highest or any bid.

(*b*)—That the settlement with each accepted purchaser will, in Calcutta and the Suburbs, be contingent on the production by him of the usual Police certificate or license as the case may be, viz.—

For Excise licenses for— Ponsta Rum ... Imported Liquors by glass Tari .. Ganja Siddhi Charas Majum	If to be held in Calcutta, a Police certificate in the form prescribed by section 36, Act IV (B.C.) of 1866, must be produced; and if to be held in the Suburbs, a Police certificate in the form prescribed by section 19, Act II (B.C.) of 1866, must be produced.
For Excise licenses for— Opium ... ... Madak ... ... Chandu	If to be held in Calcutta, a Police license in the from prescribed by section 39, Act IV (B.C.) of 1866, must be produced; and if to be held in the Suburbs, a Police license in the form prescribed by section 22 of Act II (B.C.) of 1866 must be produced.

(*c*)—That the person accepted as the purchaser is to state in writing, within seven days from the date of settlement, in what building he purposes to open his shop, and is at the same time to submit a plan showing clearly and distinctly what building or portion thereof he desires to be covered by the license, it being understood that the removal of shops to other premises than those named in the list attached to this notification will be contingent on the approval of both the Excise and Police authorities, and that any sum which has been paid as an advance of the license fee under the provisions of clause (*d*) of these conditions will be returned to any person to whom a license may be subsequently refused for Police reasons.

(*d*)—That the term of the license is to be for three years ending the 31st March 1893, and that, except in the case of Tari, the license fee for that period is to be paid in advance in the following instalments:—namely, the sum equivalent to the fee for two months, at the time of sale, and one month's fee on the date on which the currency of the license commences, and one month's fee on the 1st day of every succeeding month, until the whole of the fee due on the license shall have been paid. In the case of Tari only one month's fee is to be paid in advance at the time of sale, and fifteen days' fee on the date on which the currency of the license commences, and the rest of the fee in half-monthly instalments, viz., on the 1st and 16th day of every month, until the whole of the fee due on the license shall have been paid. This condition is to be strictly enforced in future, and failure to comply with it is to be met by immediate cancelment of the license.

(*e*)—That the purchaser is not to be entitled to receive back any portion of his advance in the event of his shop being closed before the expiration of the term of the license on violation of any of the conditions of the license, or his being convicted of a non-bailable criminal offence, or of any offence against the Excise laws or rules; and in the case of the surrender of a license under Act VII (B.C.) of 1878, the licensee is to give fifteen days' previous notice in writing to the Superintendent of Excise Revenue, and pay a sum equal to the license fee for fifteen days, over and above the amounts already paid in advance; and in the case of the surrender of a license under Act I of 1878, the licensee is to give one month's previous notice in writing to the Superintendent of Excise Revenue, and pay such fine not exceeding six months' license fees as the Superintendent of Excise Revenue may adjudge, over and above the amounts already paid in advance.

(*f*)—That the currency of the license is to commence on the 1st April 1890 on which date the purchaser is to open his shop, in all respects prepared for the accommodation of customers, to be certified by an Excise Officer—failure to comply with this condition is to be met by the immediate cancelment of the license and the forfeiture of the deposit, except in the case of delay caused by the non-issue of the Police certificate or Police license, for which a reasonable extension of time may be allowed upon application and cause shown to the Superintendent of Excise Revenue.

(*g*)—That where the amount of the sum payable in advance is required to be paid at once in cash, and the bidder fails to make such payment, the officer conducting the sale is either immediately to put up the lot again for sale, or after the other lots in the list have been disposed of, or he may postpone the sale to such future date as he shall then and there notify; and the defaulting purchaser is to be debarred from bidding for such lot or for any other lot, and he is not to be allowed to remain in the auction-room; and that the defaulting purchaser will be liable for any loss that may accrue to Government in case it becomes necessary to re-sell a lot at a lower rate either in consequence of his failure to deposit the sum payable at the time of sale, or to redeem his promissory note on or before 4 P.M. on the day following that on which the note was signed.

(*h*)—That the purchasers are to adhere to all the provisions of the Opium, Excise and Police laws, and of the rules which have been or may from time to time be prescribed by the Board of Revenue.

8. All sales subsequent to the date of the triennial sale in March are to be held subject to the conditions contained in this notification, so far as they may be applicable.

9. Any further information regarding the auction may be had on application at the Office of the Superintendent of Excise Revenue.

D. G. BONNERJEE,
Superintendent of Excise Revenue,
Calcutta, the Suburbs, Howrah, and Bally.

OFFICE OF THE SUPDT. OF EXCISE REVENUE; 4, BANKSHALL STREET, CALCUTTA, *the 15th January* 1890.

Notification.

IT is hereby notified that under section 46 of the Local Self-Government Act III (B.C.) of 1885, the District Board of Dacca have at their Special Meeting, held on the 11th January 1890, determined to levy the road cess in this district for the ensuing financial year 1890-91 at the maximum rate of one-half anna or six pies in the rupee on the annual value of lands.

L. HARE, Chairman.
Dacca District Board's Office, the 11th January 1890.

Notice.

THE Directors have made the following changes in the Bank's Establishment:—

Mr. W. D. McKewan to be Acting Agent at Bombay, *vice* Mr. Slater employed on special duty.

Mr. N. H. Y. Warren to be Acting Agent at Cawnpore, *vice* Mr. McKewan.

W. D. CRUICKSHANK, Secretary & Treasurer.
Bank of Bengal, Calcutta, the 27th January 1890.

(3480—1)

Stolen.

THE Government Promissory Note No. 160426, of the 4 per cent. of 1865, for Rs. 1,000, and the Government Promissory Note No. 205964, of the 4 per cent. of 1865, for Rs. 1,000, the former originally standing in the name of the Bank of Bengal, last endorsed to Soorendra Nath Mookerji, who in January 1889 endorsed to his wife Shrimoti Khiroda Debya, the proprietor, by whom it was never endorsed to any other person; the latter originally standing in the name of the Comptroller-General, last endorsed to Soorendra Nath Mookerji, who in January 1889 endorsed to his wife Shrimoti Khiroda Debya, by whom it was never endorsed to any other person. Payment of the above Notes, and the interest thereupon, have been stopped at the Public Debt Office, Bank of Bengal, and application is about to be made for the issue of duplicates in favour of the proprietor.

SOORENDRA NATH MOOKERJI, Resident of Berijhatty under Serampore, zillah Hooghly, at present residing at Dholy *vid* Dholy P. O., zillah Mozufferpore.

(3425—3).

Destroyed.

THE Government Promissory Note No. 029771 of the 4 per cent. loan of 1879 for Rs. 500, standing in the name of Baboo Sarbessur Mitra, the proprietor, by whom it was never endorsed to any other person. Payment of the above note and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, and application is to be made for accrued interest and for the issue of duplicates in favour of the proprietor after twoyears from date of last advertisement.

(2520—3) SARBESSUR MITRA, Asansol.

Lost.

INTEREST Warrants Nos. 229507 and 229506, dated 4th January 1890, for Rs. 20, issued in satisfaction of 49¼ years' interest on Government Promissory Notes, Nos. 238858 and 188252, aggregating Rs. 1,000 of the 4 per cent. loan of 1865 in the names of Kussick Lal Dutt and Kheero Monee Dassee respectively.

(3449—3)

Lost.

INTEREST Warrant No. 225465, dated 6th November 1889, for Rs. 200, issued in satisfaction of 49¼ years' interest on Government Promissory Notes Nos. 187095, 188231, B 140933, 251834, 223046, 228904, 232405, 238124 and 194586, aggregating Rs. 10,000 of the 4 per cent. loan of 1865 in the name of H. Hastings.

GILLANDERS, ARBUTHNOT & Co., Calcutta.

January 14th, 1890. (3450—3)

In the Court of Baboo Nuffer Chandra Bhutta, Subordinate Judge, zillah Backergunge.

EXECUTION CASE No. 258 OF 1889.

Aubenash Chandra Roy and others, decree-holders, *versus* Bindabun Chandra Chakravarti and others, judgment-debtors.

TO be sold in the above case by the Nazir of the District Judge's Court of Backergunge, in his sale-house, at 12 o'clock on the 19th day of February 1890, the right, title and interest of the judgment-debtors for the satisfaction of decree for Rs. 1,22,947-10-9, in the following properties.—

(1). Six annas 2 gundas 2 kowries share of taluq No. 1585, Radhakrishna Ray, Haranunda Ray, and Kallidas Shedhyanta, on the revenue roll of the Backergunge Collectorate, and situate in kismut Kachua within the jurisdiction of Sub-Registry Office and police station Pirijpur, pergunnah Bozergomedpur, bearing annual sudder jumma of Rs. 132-12-7 pies.

The right, title and interest of the judgment-debtors Nos. 1, 2, 3 and 4.

(2). Twelve annas share of eight annas five gundas ancestral and two annas moodafut, Guru Churn and Nobin Chandra Das of Osut taluq No. 4550 on the revenue roll of the Backergunge Collectorate, and situate within the jurisdiction of Sub-Registry Office and police station Guleshakhalli, in pergunnahs Bozergomedpur-luft-Dariabad and in mouza Kookoa and Khakdone, bearing annual sudder jumma of Rs. 4,706-10-9.

The right, title and interest of the judgment-debtors Nos. 2, 3 and 4.

(3). Four annas share moodafut, Guru Churn and Nobin Chandra Das of taluq Abad Tapura, No. 4603 on the revenue roll of the Backergunge Collectorate, and situate within the jurisdiction of Sub-Registry Office and police station Guleshakhalli, in pergunnah Jafrabad Rafianagar *samila* Chandradeep and in mouza Tapura, bearing annual sudder jumma on the advertised share Rs. 707-8 and on the whole estate Rs. 2,830.

The right, title and interest of the judgment-debtors Nos. 1, 2, 3 and 4.

NUFFER CHANDRA BHUTTA, Subordinate Judge.

The 23rd January 1890. (3482—1)

In the Court of Baboo Nuffer Chandra Bhutta, Subordinate Judge, zillah Backergunge.

EXECUTION CASE No. 218 OF 1889.

Ram Chandra Shaha and others, decree-holders, *versus* E. O. Panioty and others, judgment-debtors.

THE undermentioned properties of the judgment-debtors will be sold in the above case by the Nazir of the District Judge's Court of Backergunge, in his sale-house on the 19th February 1890, at the hour of 12 A.M., for the realization of judgment debt Rs. 8,422 :—

(1.) Twelve gundas 1 kora 1 krant 15¾ dhur out of 2 annas 13 gundas 3 koras and 3 krants of zemindari pergunnah Chundradeep and Jafrabad, Rafianagur, No. 1721 of Backergunge towji, bearing sudder jumma Rs. 13,961-5-10 pies. This 12 gundas 1 kora 1 krant 15¾ dhur has been registered as 12 gundas 1 kora 1 krant 15¾ dhur under Act VII of 1876. That is, 3 annas 13 gundas 1 kora 1 krant share of the said 2 annas 13 gundas 3 koras 3 krant, taken as an entire sixteen annas. The sudder jumma of this share is Rs. 3,169-6-8 pies. This property is situate in mouzahs Afalkati, Bhatshala, Choradi Chotua, Durgapasa, Katudia, Badalpara, and others within the jurisdiction of the Sub-Registrars of Barisal, Angaria, Backergunge, Patuakhally, Gulishakhally, Nulchitty, Jhalokatty, Palardi, Shoroopkatty, Banoripara, Pirijpur, Bowful, Patarhat and others, and the Police stations of Kotowalli, Mehendigunj, Gournaddy, Nulchitty, Kowári, Jhalokatty, Backergunge, Shahebgunge, Bowful, Kholishakhally, Golachepa, Shoroopkatty, Angurpur and others.

(2.) Twelve gundas 3 koras 1 krant 11½ til out of 2 annas 16 gundas 1 krant share of zemindari pergunnah Chandradeep and Jafrabad, Rafianagar, No. 1722 of Backergunge towji, bearing sudder jumma of Rs. 14.464 10-1½ pie. This 12 gundas 3 koras 1 krant 11½ til has been registered as 12 gundas 3 koras 1 krant 11½ til under Act VII of 1876. This is, 3 annas 13 gundas 1 kora 1 krant share of the said 2 annas 16 gundas 1 krant share of the zemindari taken as an entire sixteen annas. The sudder jumma of this share is Rs. 3.314-12-11¾ pies. This property is situate within the mouzahs Angaria, Badalpara, Afalkati and others, and within the Sub-Registrars and Police stations aforesaid.

NUFFER CHANDRA BHUTTA, Sub-Judge.

Dated 22nd January 1890. (3476—1)

In the Court of the Subordinate Judge of Rajshahye.

EXECUTION CASE No. 136 OF 1889.

Sri Nath Bagchee, Executor to the estate of Shib Chandra Bagchee, deceased, decree-holder, *versus* Raja Tarakeswar Ray, judgment-debtor.

THE right, title and interest of the above judgment-debtor in the undermentioned property will be put up to sale on the 15th February 1890, at 12 o'clock noon, by the Nazir of the District Judge's Court, Rajshahye, in the Court-house of the District Judge, for a debt of Rs. 3,867-15-3 :—

1. Two annas thirteen gundas one cowrie one kranti share of kishamut Taherpore, pergunnah Taherpore, within the jurisdiction of the Thanah Bagmarah and Sub-Registry Office Beauleah, bearing towji No. 207, and paying, in the aforesaid share of the judgment-debtor, Government revenue Rs. 5,235-3-0, and paying on the entire property Government revenue of Rs. 31,411-2.

The aforesaid share of the judgment-debtor in the above-named property is liable to following incumbrances :—

(1) A mortgage in favour of Sarada Mohan Moitra for a bond debt of Rs. 4,000 on the 8th Aswin 1291.

(2) A mortgage in favour of Syam Lal Ghose and Shook Lal Ghose for a bond debt of Rs. 3,000 on 15th Chaitra 1291.

(3) A mortgage in favour of Syama Shundari Debi, wife of Ananda Lal Sanyal, for a bond debt of Rs. 2,000 on 16th Chaitra 1294.

And the aforesaid share of the above-named property, together with other properties belonging to the judgment-debtor, is liable to—

(1) A mortgage in favour of Sarada Kanta Chowdry for a bond debt of Rs. 10,000 on the 26th Asar 1295.

(2) A charge of Rs. 200 a month in the shape of monthly allowance created by an agreement, dated 1st Sraban 1290, executed by the judgment-debtor in favour of Rani Jagadiswari Debya.

B. C. CHATTERJEE, Subordinate Judge of Rajshahye.

The 23rd January 1890. (3480—1)

In the Court of the Subordinate Judge of Beerbhoom.

EXECUTION CASE No 86 OF 1889.

Ray Dhonput Sing Bahadoor, decree-holder, *versus* Radhika Prosad Singha and others, judgment-debtors.

THE undermentioned property of the judgment-debtors will be sold by the Nazir of the Judge of Beerbhoom, at his sale-room on Saturday, the 1st March 1890, at 12 o'clock, for realization of the decretal amount Rs. 1,488-14-3 :—

The right, title and interest of the entire shares of the judgment-debtors in kishmat Kalior, division Nalhatty, entered in towji No. 612 of the Beerbhoom Collectorate, and bearing a sudder jumma of Rs. 661-7-7 held in the name of the judgment-debtors.

KEDAR NATH CHATTERJEE, Subordinate Judge.
Sub-Judge's Office, Beerbhoom, the 23rd January 1890.
(3479—1)

Holta Tea Company, Limited.

PROCEEDINGS of the Extraordinary General Meeting of the Shareholders of the above Company, held at the Registered Office, No 5, New China Bazar Street, Calcutta, on Wednesday, the 22nd January 1890, at 12 o'clock noon.

PRESENT :

Messrs. W. H. Fitze; J. Hay; C T. Wallis, by his Attorney A. H. Wallis; N. J. Valetta; G. C. Farr; A. Watkins, by his Attorney G. C Farr; and J. Reid, by his Attorney J. Hay.

Proposed by Mr. G. C. Farr, and seconded by Mr. C. T. Wallis, by his Attorney Mr. A H. Wallis—

"That Mr. W. H. Fitze take the Chair"—*Carried.*

The notice convening the Meeting was read—

1st Resolution.—Proposed by Mr. A. Watkins, by his Attorney Mr. G. C. Farr, and seconded by Mr. John Hay—

"That the purchase by the Company of the Chota Bundla Tea Estate at the price of Rs. 2 ,000 be and the same is hereby approved and confirmed"—*Carried.*

2nd Resolution.—Proposed by Mr. C. T. Wallis, by his Attorney Mr. A. H. Wallis, and seconded by Mr. N. J. Valetta—

"That the Directors of the Company be and they are hereby authorized and empowered to execute for and on behalf of the Company, and to affix the seal of the Company to an Indenture of Mortgage over the Chota Bundla Tea Estate, and also to a Promissory Note in favour of the vendor to secure the payment to him of the balance of the purchase-money thereof, viz., Rs. 19,000, within four years from the date of such mortgage, together with interest on the said sum of Rs 19,000 at the rate of five per cent. per annum, payable half-yearly, and also to do and execute for and on behalf and in the name of the Company all other acts, deeds, and things necessary for the completion of the said purchase, and the security for the balance unpaid of the said purchase money"—*Carried.*

With a vote of thanks to the Chairman the Meeting closed.

(3474—1) W. H. FITZE, Chairman.

Bishnauth Tea Company, Limited.

NOTICE is hereby given that an Extraordinary General Meeting of Shareholders of the above Company will be held at the Registered Office, No. 4, Mangoe Lane, Calcutta, on Wednesday, the 19th February 1890, at 12 o'clock noon, for the purpose of declaring an *ad interim* dividend on account of season 1889, and transacting such other business as may be brought before the meeting.

By order of the Board.
WILLIAMSON, MAGOR & Co., Secretaries.
Calcutta, 24th January 1890. (3477—2)

Arcattipore Tea Company, Limited.

NOTICE.

THE Ordinary Annual General Meeting of Shareholders of the above Company will be held at the Registered Office of the Company, No. 7, Church Lane, Calcutta, at noon of Friday, the 30th January current.

J. MACKILLICAN & Co., Secretaries
CALCUTTA, 21st January 1890. (3483—1)

Notification.

TO be peremptorily sold by the Registrar of the Calcutta High Court, Original Civil Jurisdiction, on the 1st of March, at the hour of 12 o'clock at noon, pursuant to a decree and order made in suit No. 48 of 1883 (wherein Haran Chunder Nye is plaintiff and Moulvie Zohurrul Hossein is defendant), and dated respectively the 5th March 1888 and 22nd May 1889, the following properties :—

1. No. 9, European Asylum Lane at Taltollah in Calcutta, being a parcel of tenanted land in holding No. 220, Block 2, South Division, the area of which is by estimation 1 bigha 5 cottahs 15 chittacks and 2 feet, be the same a little more or less, and the annual jumma or revenue in respect of which, payable to the Calcutta Collectorate, is Rs. 7-14-6, and which property is bounded on the north by a Government drain; on the south by the said European Asylum Lane; on the east by the house and premises of Mr Gordon, now the property of Mahomed Yussuff, and on the west by the house and premises of Mr. Bigg, now the property of Gobeer Wahid Khan.

2. Nos. 28 and 29, formerly Nos. 23 and 24, Taltollah Lane in Calcutta, being all those two messuages, tenements or tenanted houses, together with a piece or parcel of land in holding No. 152, Block No. 9, South Division, the area of which is by estimation 10 cottahs 4 chittacks and 24 feet, be the same a little more or less, and the annual jumma or revenue in respect thereof, payable to Government, is Rs. 1-14-11, and which property is bounded on the south and east by the said Taltollah Lane; on the west by the premises and land of the defendant Moulvie Zohurrul Hossein, and on the north partly by the land of Jan Khan, and partly by the land of Gour Moody, and partly by the land of Machooa Barber.

The abstract of title and conditions of sale may be seen at the Office of the Registrar of the High Court (Original Jurisdiction), and at the Office of Baboo Gonesh Chunder Chunder, Attorney for the plaintiff, on any day before the sale, and will be produced at the sale.

R. BELCHAMBERS, Registrar.

G. C Chunder, Plaintiff's Attorney.

Calcutta High Court, Original Jurisdiction, the 16th January 1890. (3485—1)

NOTICE is hereby given that Mary Stephen, who obtained a decree *nisi* on the 23rd January 1890 in the High Court for dissolution of marriage against her husband S. S. Stephen, has revoked and cancelled the power-of-attorney which she executed in his favour, and that the said S. S. Stephen has no authority to act as her attorney in any matter whatsoever. Any payment of money therefore to the said S. S. Stephen on account of the said Mary Stephen will not be recognised.

GONESH CHUNDER CHUNDER, Attorney for Mary Stephen.

Calcutta, the 27th January 1890. (3494—3)

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

In the matter of POORUN MULL and another, insolvents.

On Saturday, the 21st day of December last, it was on the petition of Ram Bux, Ram Chand, and Golap Chand, creditors of the said insolvents, adjudged that the said insolvents have committed an act of insolvency under the provisions of the Act XI Vic., Chapter XXI, and by another order of the same date the estate and effects of the said insolvents were vested in the Official Assignee.

H. C. Chick, Attorney. (3489—2)
Chief Clerk's Office, the 21st January 1890.

In the matter of GOBINDO CHUNDER MITTER and GOPAL CHUNDER MITTER, insolvents.

Notice that an application for an *ad interim* protection order has been this day made by the said insolvents, and that such application will be heard and disposed of by the Acting Commissioner of the Insolvent Court on Monday, the 3rd day of February next, at the hour of half past ten o'clock in the forenoon.

☞ "Any creditor of the said insolvents desirous of opposing such application must appear before the said Court at the time and place aforesaid."

N. G. Newgie, Attorney. (3487—1)

In the matter of GOSTOBEHARY SEAL, of No. 2, GOBIND CHAND DHUR'S Lane, Calcutta, a trader in piece-goods and also clerk, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Thursday, the 9th day of January instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

N. C. Bose, Attorney. (3488—1)

In the matter of CHUNDERCHURN DASS and another, insolvents.

On Saturday the 11th day of January instant, it was ordered that the hearing, of this matter do stand adjourned until Saturday, the 1st day of February next, and that the order made in this matter for the *ad interim* protection of the said insolvents from arrest be enlarged to the said 1st day of February next, and that the said insolvents are at liberty to amend their schedule and estate paper filed in this matter, and that the said insolvents do then attend to be examined before the said Court.

Insolvents in person. (3489—1)

In the matter of THOMAS STEWART, an insolvent.

On Saturday, the 23rd day of November last, by an order of this Court, the said insolvent was adjudged entitled to his personal discharge under the Act XI Vic., Chapter XXI as to all persons named in his schedule as creditors or claiming to be creditors respectively.

Sanderson & Co., Attorneys. (3490—1)

In the matter of AUGUSTUS WALL HOFF, an insolvent.

On Saturday, the 11th day of January instant, by an order of this Court, the said insolvent was adjudged entitled to his personal discharge under the Act XI Vic, Chapter XXI as to all persons named in his schedule as creditors or claiming to be creditors respectively.

S. J. Leslie and Son, Attorneys. (3491—1)

In the matter of RAMESSUR SHAW, an insolvent.

On Saturday, the 23rd day of November last, by an order of this Court, the said insolvent was adjudged entitled to his personal discharge under the Act XI Vic., Chapter XXI as to all persons named in his schedule as creditors or claiming to be creditors respectively.

Insolvent in person. (3492—1)

In the matter of Heera Lall Sen, an insolvent.

On Saturday, the 1st day of December 1888, by an order of this Court, the said insolvent was adjudged entitled to his personal discharge under the Act XI Vic., Chapter XXI as to all persons named in his schedule as creditors or claiming to be creditors respectively.

Insolvent in person. (3493—1)

Chief Clerk's Office, the 28th January 1890.

Insolvency Notice.

NOTICE is hereby given that the undermentioned Dividend is lying unclaimed :—

Estate JOOGUL KISSORE SEWLALL *and* FUTTEHCHAND, *insolvents.*

No.	NAME OF CREDITOR.	Amount of claim.	1st Dividend at Rs. 20 per cent.
6	Ghasiram	Rs. A. P. 3,394 0 0	Rs. A. P. 678 12 9

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White, C. W.
Willard, Clifford.

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Baxter, Mrs.
Bear, W.
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Brearey, James.
Brewster, Mrs.
Belitski, R.
Berkeley, C. M.
Boland, J.
Brown, W.
Burrows, C. J.
Burns, Alan.
Carrapaett, Mr.
Chatterton, J.
Church, R. M.
Comar, Mrs. A.
Cooper, H. J.
Cooper, W.
Courage, R.
Davis, Mrs. G.
Devitre, D. F. D.
Dickson, Mrs. E.
Douglas, G. P. H.
Drakeford, A.
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Dunlo, Viscount.
Dymond, G. F.
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Flaherty, O. H.
Fletcher, Neil.
Forshaw, H.
Fraiser, H. C.
Fraiser, Miss F.
Francis, A. M.
Franzini, Madame A.
Gellett, Cecil S.
Glover, W. E.
Godwin, George.
Gow, J. F.
Green, W. W.
Hamilton, J. R.
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Hardman, G. D.
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Horus, Miss M. L.
Jackson, T.
Johannessen, O. C.
Keane, J. J.
Kennard, F.
Kleine, Henri.
Lach, R.
Lamb, E. G.
Langer, J. O.
Lindeman, L. K.
Livesey, Thomas.
Livewright, R.
Lloyd, Willis.
Long, W.
Lyons, G. B. C.
Major, A.
Mackenzie, J.
MacBrayne, L.
Manual, A. M.
May, J. J.
Matthews, J. R.
Mathewson, F.
McAdoo, Mr.
McKenzie, Mrs. D.
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McSmith, D.
Menzies, C.
Morshead, L.
Murling, T. J. R.
Murphy, John.
Newby, C. R. A.
Ogden, J.
O'Mealy, Capt. D'Oyly.
Penn, Mrs.
Platts, Mrs. S. K.
Powell, F.
Prenter, Miss.
Ray, J.
Rawlings, E.
Rennard, J. R.
Ricket, Mrs
Robart, P.
Robinson, G.
Rogerson, Miss A.
Roskell, Richard.
Rubie, Phil C.
Sano, T.
Sevestre, J.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sissm, Rev. W. B.
Skinner, R. H.
Smith, M. O.
Soares, F. H.
Stebbing, Capt. Arthur.
Sweet, L.
Taylor, C.
Thomas, G. T.
Thomson, Captain W. A.
Thompson and Co.
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Uphill, T.
Ursite, Johan.
Waddell, Alex.
Walker, A. B.
Walter, F.
Walter, Amherst.
Webster, Mrs.
White, H. J.
Williams, J.
Young, Mrs. G.
Williamson, C.

Registered Letters.

Burrows, C. J.
Edwards, C.
Guiseppe, Celestini.
Hemming, Lt.-Col. D.
James, L. E.
MacBrayne, L.
MacLeod, D. J.
Marsland, W.
Menzies, C.
Rinlo, Harryter.
Smith, M. Oswald.
Zucker, Moses.

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Baker, E.
Balfour, H. T.
Coulter, A.
Dubery, E.
Lindsay, W. C.
Martin, Mr.
Mathuson, J.
Presgent, Mr.
Robertson, Jas.
Sullivan, Lieut.
Thomas, Major C.
Thompson, Jas.

E. HUTTON,
Presidency Postmaster, Calcutta.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	4th Feb. ...	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets).	3rd „ ...	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	10th „ ...	Ditto.
Australia, New Zealand, and Tasmania.	10th „ ...	Ditto.
Madras and Colombo ...	5th „ ...	Per P. & O. steamer *Rossetta.*
Straits, China and Japan ...	6th „ ...	Per str. *Wingsang.*
Rangoon and Moulmein ...	4th „ ...	Ditto *Kistna*
Ditto ditto ...	31st Jan. ...	Ditto *Purnea.*
Akyab, Kyaukpyu, Sandoway and Rangoon.	29th „ ...	Ditto *Pachumba.*
Port Blair	29th „ ...	*Vid Madras.*
Ditto	4th Feb. ...	*Vid Rangoon.*

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

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E. HUTTON, Presidency Postmaster.

General Post Office, the 28th January 1890.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 24th January 1890.

Name of river.	Reach of river.	Least depth of water sounding.	Remarks.
		Ft. In.	
Bhagirati.	Entrance from Ganges ...	1 3	At mouth entrance practically closed.
	Thence to Nurpur	1 0	Dhopipara.
	From Nurpur to Jungipur ...	1 6	Nurpore.
	„ Jungipur to Berhampur	1 3	Patanpara.
	„ Berhampur to Cutwa ...	2 0	Kaligunge.
	„ Cutwa to Nuddea ...	2 3	Patooly.
Bhyrab-Jelinghi.	Entrance from Ganges ...	6 0	
	Thence to Akriganj	5 6	
	Akriganj to junction of the Bhyrub and Jelinghi ...	4 6	Junction.
	Thence to Patkabari	5 9	Amtola.
	Patkabari to Nuddea	4 0	Kalinagur.
Mathabanga.	Entrance from Ganges ...	2 0	
	Thence to Chnypara ...	1 0	Ramkistopore.
	From Chnypara to Shikarpur	0 6	Pragpore.
	„ Shikarpur to Boalia ...	0 9	Shampore.
	„ Boalia to Chuadanga ...	2 6	Sialmari.
	„ Chuadanga to Kissengunj and Hanskhali...	2 6	Bastupore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A. M.	Feet.	Feet.	Below zero.
Ganges.	Sahebganj ...	25-1-90	6	0·65	67·34	
	Rampore Boalia	25-1-90	12	1·25	43 25	
	Entrance of Bhagirati ...	25-1-90	7	2·50	47·81	
	Entrance of Bhyrub-Jelinghi ...	25-1-90	...	7·42	45·78	
	Entrance of Matabanga ...	25-1-90	...	2·75	.....	
Bhagirati...	Berhampur ...	27-1-90	12	2·66	36·45	
Jelinghi ...	Kishnaghur ...	24-1-90	...	4·46	13·35	
	Saroopgunge ...	25-1-90	6	3·75	8·05	
Matabanga	Hanskhali ...	24-1-90	...	3·18	14·01	

W. BAGCHI, Head Clerk,
for Exe. Engr., Nuddea Rivers Division.

Berhampore, the 27th January 1890.

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R. H. WILSON,
Offg. Secy. to the Govt. of Bengal.

The 24th February 1886.

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Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., Cap. 67.

THE Council met at the Council Chamber on Saturday, the 18th January, 1890.

Present:

The HON'BLE SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant-Governor of Bengal, *presiding.*

The HON'BLE SIR CHARLES PAUL, K.C.I.E., *Advocate-General.*

The HON'BLE F. B. PEACOCK.

The HON'BLE P. NOLAN.

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The HON'BLE SHAHZADA MAHOMMED FURROKH SHAH.

The HON'BLE DR. RASH BEHARY GHOSE.

The HON'BLE RAJA RAMESHWAR SING BAHADUR.

RULES FOR THE CONDUCT OF BUSINESS.

THE HON'BLE SIR CHARLES PAUL moved that the Report of the Select Committee appointed to consider and amend the Rules for the Conduct of Business at the Meetings of the Council be taken into consideration.

The Motion was put and agreed to.

The HON'BLE SIR CHARLES PAUL also moved that the Rules be considered for settlement in the form recommended by the Select Committee.

The Motion was put and agreed to.

HIS HONOUR THE PRESIDENT said:—"Before putting the next question to the vote, I wish to say a few words. I am sure we are much indebted to the Select Committee for the care they have taken in considering these rules for the conduct of business.

"In going through the details there is only one point which struck me, on which I thought an alteration might possibly be made; and about that, as I am not quite sure I have understood the Rules correctly, I should like to have the opinion of the learned Advocate-General, or any other legal Member of the Council. It is a point which concerns me as President.

"In Rule 25 it is stated that 'when an amendment upon any motion is moved, or when two or more such amendments are moved, the President, when taking the sense of the Council thereon, shall read the terms of the original motion and of the amendment or amendments proposed.' So far it is all right, and I have no objection to it.

"Then the Rule goes on to say, 'and before putting any other question, shall put the question that the original motion shall stand without amendment.' After that it says:—'If that question is decided in the affirmative, the motion shall be put to the vote without amendment;' and in Rule 26 it says: 'When any one amendment is affirmed, the question shall be put to the vote and amended accordingly.'

"Now, if I have read this rule correctly, it imposes upon the President the necessity of first taking the opinion of the Council not on any one of the amendments, but upon the motion as it originally stood; that is to say, on a section of a Bill probably as amended by a Select Committee. In nine cases out of ten it would be that.

"If there is a question which strongly divides public opinion, we shall find, as a matter of practice, that a Select Committee generally takes a view which is a mean between two extremes Let us say as an illustration, though it is not likely to happen, that a Select Committee recommends that a certain appointment shall carry a salary of Rs. 500 a month. That would probably be the mean between two extremes—one extreme being that the appointment shall not be a paid appointment at all, and another extreme that the appointment shall be paid Rs. 1,000 per mensem. If I have understood this rule correctly, I shall first have to put the motion to the Council that the pay of the appointment shall be Rs. 500. The effect of that, of course, would be to combine against that motion the advocates of the two extremes that the appointment shall not be paid, and that it shall be paid Rs 1,000. Clearly the middle term would be thrown out. Whereas we know well from our own experience that when either of the extreme parties find that they cannot have their own way, they would much rather adopt the middle term than that the opposite extreme party shall have their way.

"If, on the other hand, it is at the discretion of the President to put any one of the amendments or the original term first as he chooses, it will then give an opportunity of taking the opinion of the Council as to the views of the two extreme parties without forcing them to combine against the middle term. But if you begin by voting upon the middle term, and then go to the extremes, if the two combine first against the one, and then against the other, you will be left in a dilemma, out of which you cannot possibly extricate yourself, and there will be no means of getting the views of the two opposite parties upon the recommendation of the Select Committee.

"The proposal I shall make to you will be that in Rule 25 after the first word 'proposed,' the next ten lines be left out down to the words 'amended

accordingly'; and that the following words be substituted for them, namely:—'It shall be in the discretion of the President to put first to the vote either the original motion or any of the amendments which may have been put forward.'

"I should like to have the opinion of gentlemen who are more accustomed than I am to the way of doing business at public meetings, and as to the legal effect of the words which I have proposed, before I ask you to accept them. I only throw this proposal out for discussion, and not as one which I ask you to accept on my authority."

THE HON'BLE SIR ALFRED CROFT said:—"This proposal seems to me likely to get rid of a difficulty which is presented by the amended Rules as proposed by the Select Committee. These Rules (25 and 26) are a reproduction, without any change, of the existing rules. But they present certain inconsistencies which arise, as it seems to me, from the use of the word 'amendment' in two senses. It is well known that in Parliamentary usage the word 'amendment' means one thing, while in the popular sense it means quite another. According to the usage of Parliament the word 'amendment' means a proposal to alter the terms of a question by adding certain words, by omitting certain words, or by substituting certain words for certain other words. And then in voting on that amendment, you are in fact not voting on any substantive question, but only upon the form that you wish that question to take on which you are afterwards to vote as soon as its terms are settled. Dr. Smith in his 'Handy Book on Public Meetings' describes the practice of Parliament as follows:—

> 'The object of an amendment is to change more or less the nature of the question before the House. . . . Thus, in voting upon any amendment, whichever way a man votes he does not help to carry any question, but only decides what the question shall be which he shall have an opportunity of carrying. He does not support the original question by voting against its being amended;'

to which it may be added that, in voting for an amendment, he may do so with the object of afterwards voting against the question as so amended.

"Such then is the Parliamentary usage. The popular meaning of the word 'amendment' as it is used in India, and often at public meetings in England, is different. A proposal is put before the meeting, and against that is brought forward a counter or rival proposal, which is called an amendment. Both are discussed together, and then at the close of the debate the Chairman puts one of the two propositions (generally the amendment) to the vote of the meeting. If it is carried, the substantive question is carried; if it is lost, the original proposition is put to the vote with a similar object and result. The two meanings of the term 'amendment' are perfectly clear and distinct, but the word seems to be used in these rules sometimes in one sense and sometimes in another.

"In Rule 23, which provides that 'any member may, by motion, propose for the determination of the Council any original question or any amendment of such question,' it is probable, though the point is not quite clear, that the intention is to employ the term 'amendment' in the Parliamentary sense, namely, an alteration of the terms of the question.

"Now go on to Rule 25 which says:—'When an amendment upon any motion is moved, or when two or more such amendments are moved, the President, when taking the sense of the Council thereon, shall read the terms of the original motion and of the amendment or amendments proposed, and before putting any other question shall put the question that the original motion do stand without amendment.' That clearly points to the Parliamentary usage. The President first puts the question, that the original motion do stand without amendment; in other words, he asks the Council to decide the form which the question shall take. Then the rule goes on to say:—'If that question is decided in the affirmative, the motion shall be put to the vote without amendment;' that is to say, when it has been decided that the form of the question shall not be altered, the motion is to be put to the vote in the form in which it originally stood, and at this second stage it is put of course as a substantive motion.

"If, on the other hand, the rule goes on to say, the question that the original motion do stand without amendment is decided in the negative, that is, if it is decided that the question shall be amended, you would naturally expect that the next point to be settled would be the form the question should take. But that is not so, we find; for at this point the rule changes over to the popular method of procedure. It says:—'If not (that is, if there is to be an alteration in the terms of the question) the motion shall be put to the vote as proposed to be amended;' that is to say, the motion is at once to be put to the vote in its alternative form, and the voting on it will decide the substantive question.

"But now go on to Rule 26 which says:—'When any one amendment is affirmed, the question shall be put to the vote and amended accordingly.' On neither interpretation of the word 'amendment' can I attach any sort of meaning to that clause. The question has already been amended, because the amended question has been before the meeting. More than that, the question has been put to the vote and disposed of, so that there is nothing more to be done; and consequently Rule 26 seems to me to have no meaning whatever as it stands. If, indeed, the rule means, as is probably the case, 'when any one amendment is affirmed, the question *shall be amended accordingly and put to the vote*,' this would no doubt be in accordance with Parliamentary practice, but it would be in direct contradiction with what has preceded in Rule 25, according to which the question has already been put to the vote and disposed of.

"The rules as they stand are consequently open to serious objection. It would, perhaps, not be difficult so to alter them as to bring them into consistency both with Parliamentary usage and with one another. But I am not sure that it is necessary to adopt the Parliamentary usage here; and on the whole it seems to me that the difficulty can be removed quite as effectually by the proposal which His Honour the President has made, and which is in conformity with popular practice."

THE HON'BLE SIR HENRY HARRISON said:—"The Hon'ble Sir Alfred Croft has given an excellent dissertation on the academical or theoretical side of the question before the Council, and I am glad to say that my experience of the practical side of the question bears out the wisdom of adopting the amendment proposed by His Honour the President.

"I have had considerable experience for some time of the practical way of dealing with a large number of simultaneous amendments; and I may say that the difficulty is partially insoluble, because sometimes you have amendments of such a kind that you cannot get the real view of the meeting upon them, as each party will vote for their own particular proposal. But the best solution lies in the amendment now proposed, because it is necessary when there are many amendments to select and to put them in such order that the views of the meeting may be clearly obtained; and it seems best that the power to do so should rest with the President of the assembly.

"For example, in the Municipality we had a certain rule for electing candidates to office. Each candidate whose name was proposed was put up and voted for; then the next and the next, till some one candidate got an absolute majority of votes. The result was that the candidate whose name was put up first had no chance, because the supporters of all the other candidates combined against him, and so on, each successive candidate having a better chance as he would get some support from the friends of the candidates already rejected. And therefore the candidates made careful calculations as to the order in which their applications should be sent in and appear in the lists, as upon that depended their chance of obtaining a number of votes from amongst the supporters of those whose names were put forward before. Similar manœuvring may be practised as regards amendments if they have to be put according to any hard-and-fast rule.

"Much the best remedy therefore is that which leaves it entirely to the President to decide which shall be put first, whether the first, second, or third amendment, or the original motion, in order to get at the sense of the meeting."

[His Honour the President asked Sir Charles Paul, as the oldest Member of the Council, whether in his experience Rules 25 and 26 have ever once been worked?]

THE HON'BLE SIR CHARLES PAUL said:—"I do not know about these Rules having been used in practice. The Select Committee adopted the existing rules with such modifications as presented themselves for consideration. They did not turn their attention to these Rules from the point of view which His Honour the President has put before the Council, and it appears to me that the proposal framed to amend these Rules is a perfectly correct proposal, namely, to give the President the right to put amendments to the Council in any order he thinks proper.

"There are cases in which it is necessary to put the amendment first, and that could not be done under the existing rule, but I may add that in point of practice the rule does not seem to be generally followed; and under these circumstances I have no objection to these Rules being amended as proposed, and it seems to me most expedient to do so."

His Honour the President then moved that, the words 'It shall be in the discretion of the President to put first to the vote either the original motion or any of the amendments which may have been brought forward' be substituted for the following in Rules 25 and 26:—

'And before putting any other question shall put the question that the original motion do stand without amendment.

'If that question is decided in the affirmative, the motion shall be put to the vote without amendment. If not, and there be but one amendment proposed, the motion shall be put to the vote as proposed to be amended; or if there be more than one amendment proposed, the question shall be put that the motion be put to the vote as proposed by the amendment which the President thinks may most conveniently be first disposed of, and so, if necessary, of all the others.

'When any one amendment is affirmed, the question shall be put to the vote and amended accordingly.'

The Motion was put and agreed to.

The HON'BLE SIR ALFRED CROFT moved that in Rule 13, the words 'No Member in debate shall name another Member' be omitted.

He said:—"I do not know whether it is desirable to retain these words as the rule has never been observed in practice."

The HON'BLE MR. NOLAN said:—"I submit that it will be better to alter the practice; naming a Member in a certain stage of a discussion may be objectionable."

The HON'BLE SIR HENRY HARRISON said:—"In a rowdy assembly there would be objections to naming a Member, and in such a case it would be better to preserve the rule. But if you have a well-ordered assembly, it is better to have no such rule. It all depends upon the character of the assembly. I do not think any actual inconvenience will result from naming members in this Council."

The amendment being put, the Council divided:—

Ayes.	*Noes.*
The Hon'ble Raja Rameshwar Sing Bahadur.	The Hon'ble H. Pratt.
The Hon'ble Dr. Rash Behary Ghose.	The Hon'ble T. T. Allen.
The Hon'ble Shahzada Mahommed Furrokh Shah.	The Hon'ble P. Nolan.
The Hon'ble C. H. Moore.	
The Hon'ble Dr. Mahendra Lal Sircar.	
The Hon'ble Sir Alfred Croft.	
The Hon'ble Sir Henry Harrison.	
The Hon'ble F. B. Peacock.	
The Hon'ble Sir Charles Paul.	

So the Motion was carried.

The HON'BLE SIR CHARLES PAUL moved that the Rules, as now settled in Council, be passed.

The Motion was put and agreed to.

CALCUTTA AND THE SUBURBAN POLICE SUPERANNUATION FUNDS BILL.

THE HON'BLE SIR HENRY HARRISON moved that the Bill to consolidate the Calcutta and the Suburban Police Superannuation Funds, as settled in Council, be passed.

He said:—"The Bill was discussed and passed at the last meeting of the Council with a small amendment of a formal character proposed by myself, and I see no possible objection to its being passed now."

The Motion was put and agreed to.

CALCUTTA PORT BILL.

HIS HONOUR THE PRESIDENT said:—"The next question on the notice paper is the discussion upon the motion that, the Report of the Select Committee on the Bill to consolidate and amend the law relating to the Port of Calcutta, and to the appointment of Commissioners for the said Port, be taken into consideration.

"But I might mention that in considering the dissents of the two Hon'ble Members who have affixed separate memoranda to the Report of the Select Committee, I got the very valuable assistance of the learned Advocate-General, and we had an informal meeting last week with the Members of the former Select Committee, who were by that time *functi officio*. The result was that a fresh clause was drafted to meet, as far as possible, the objections taken to the original one. It is the clause which you see in the notice paper in the name of the Hon'ble Sir Henry Harrison.

"But in the course of this week the Hon'ble Mr. Moore applied to me, requesting that the discussion of the matter might be postponed, as the Chamber of Commerce wished to consider the section in its latest form and to take legal opinion upon it. I am quite sure you will all agree with me that it is better to give ample time for consideration rather than to have a debate in this Council which can be avoided, and certainly rather than to have it said that we are hurrying the measure through the Council unnecessarily.

"I therefore took it upon myself to tell the Hon'ble Member that there will be no discussion to-day, and that the consideration of the measure will be postponed to the next meeting of the Council."

The consideration of the Report was, therefore, further postponed.

BENGAL VACCINATION BILL.

THE HON'BLE SIR HENRY HARRISON presented the Report of the Select Committee on the Bill to amend the Bengal Vaccination Act, 1880, and Bengal Act II, 1887.

He said:—"As a matter of fact, although this Bill is mainly a formal one, the Select Committee have made considerable changes in it. Our colleague, the Hon'ble Mr. Nolan, whom I am now permitted to name without any breach of rules, pointed out the effect of the various provisions of the Act, and has recorded a note on the subject; and the result of our consideration has been that we found first that the formal object of the Bill would be better attained not by substituting 'Calcutta' for the 'Town of Calcutta,' but by simply altering the definition of the 'Town of Calcutta,' and omitting the definition of 'the Suburbs:' and then we found no necessity for touching the amended Act at all. Because though the amending Act does refer to the Suburbs, it refers to it in a sense which requires no actual definition; it merely applies to sailors coming to the Suburbs or the Town of Howrah.

"The effect of removing the definition of the 'Suburbs of Calcutta' would not raise any difficulty in the two places in which the words are found. The words would merely remain as meaning (precincts), thus giving that protection to the precincts of Calcutta which ought to be given."

The Council adjourned to Saturday, the 1st February, 1890.

CALCUTTA; C. H. REILY,

Assistant Secretary to the Govt. of Bengal,

The 24th January, 1890. *Legislative Dept.*

NOTE.—The meeting fixed for the 11th January, 1890, was subsequently postponed to the 18th idem.

FAMINE RELIEF BY DISTRICT AND LOCAL BOARDS.

REVENUE DEPARTMENT—FAMINE.

Calcutta, the 24th January, 1890.

RESOLUTION.

UNDER section 99 of the Local Self-Government Act III (B.C.) of 1885 District Boards are empowered to incur expenditure on measures for the relief of famine within such financial limits as may be prescribed by the Commissioner of the Division concerned, and the Bengal Famine Code provides that in districts to which this section of the Act has been extended, relief operations should be governed by rules to be issued under section 138. Section 99 has been already extended to Furreedpore and the districts of the Patna Division, and a notification will now issue rendering its provisions applicable to the remaining District Boards of the Province.

2. For the guidance of District Boards in the discharge of the duty of affording relief in time of distress, the Lieutenant-Governor desires to emphasise the principle which has already been enunciated in the course of the correspondence relating to the recent scarcity in Behar, and which has gained the approval of the Government of India as being in accord with the views expressed in paragraph 21 of the Resolution of that Government, No. 44Fam., dated the 9th June, 1883, on the issue of the Provisional Famine Code. That principle is that the duty of providing relief in the way of work should fall in a gradual scale with the deepening of distress, first on Local, secondly on Provincial, and lastly on Imperial Funds. District Boards must be regarded as forming an integral part of the administration, and it becomes their duty, as it is that of other departments of Government in time of serious scarcity, to subordinate the ordinary objects and methods of their expenditure to the special consideration of saving life. District Boards are the primary agency available for coping with famine, and must be expected in such crises to direct their whole resources, subject only to the maintenance of absolutely necessary works in non-affected tracts, to affording relief. This primary obligation having been carried out, it remains for Government to supplement the resources of Boards, if necessary, so as to enable them not only to combat famine, but also to perform their ordinary functions connected with the up-keep of district communications. Before, then, an appeal is made by the Boards to Government for funds, all possible expenditure, beyond that absolutely necessary for bare maintenance and establishment charges, should be diverted from non-affected to affected areas, and on the opening of relief operations, the District budgets should be remodelled with this object.

3. In order to make the action of Boards conform with the provisions of the Famine Code, the annexed rules are, under section 138 of the Local Self-Government Act, issued for their guidance.

1. In the administration of the relief of scarcity or famine, District Boards should follow the principles of the Bengal Famine Code so far as such principles apply to them. Their attention is specially required to the following rules, which should be carefully observed.

2. On relief works opened and maintained by District Boards, the wages paid to labourers should be fixed with reference to the following provisions of the Bengal Famine Code:—

"124. The full ration prescribed under this Code as sufficient to maintain able-bodied labourers in health and strength is—

	For a man.	For a woman.	For children.
	lb. oz.	lb. oz.	
Flour of the common grain used in the country, or cleaned rice ...	1 8	1 4	$\frac{3}{4}$, $\frac{1}{2}$ and $\frac{1}{4}$ rations according to age and requirements.
Pulse	0 4	0 4	
Salt	0 $\frac{1}{2}$	0 $\frac{1}{2}$	
Ghee or oil	0 1	0 $\frac{1}{2}$	
Condiments and vegetables ...	0 1	0 1	

"125. The minimum ration for labourers under this Code is—

	For a man.	For a woman.	For children, not being infants, below 14.
	lb. oz.	lb. oz.	
* Flour of the common grain used in the country, or cleaned rice ...	1 0	0 14	$\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ rations according to age and requirements.
Pulse	0 2	0 2	
Salt	0 $\frac{1}{2}$	0 $\frac{1}{2}$	
Ghee or oil	0 $\frac{1}{2}$	0 $\frac{1}{2}$	
Condiments and vegetables ...	0 $\frac{1}{2}$	0 $\frac{1}{2}$	

"126. The penal ration prescribed for labourers sent to a poor-house for refusing to work is—

	For a man.	For woman.
	lb. oz.	lb. oz.
Flour, grain or rice	0 14	0 12
Pulse	0 1	0 1
Salt	0 $\frac{1}{2}$	0 $\frac{1}{2}$

"127. The minimum wage under this Code is the amount of money which at the current rates authorised by the District Officer is sufficient to purchase a minimum ration.

"128. The full wage under this Code is the amount of money which at the current prices is sufficient to purchase a full ration.

"129. Payment for labour on Professional Agency works may be made at the rates ordinarily given under the rules in force in the Public Works Department, provided that the sum which a labourer can ordinarily be expected to earn by a fair day's labour shall in no case be less than the full wage prescribed in section 128.

"130. Payment for labour on Civil Agency works, where payment is made by results, shall be so arranged that the sum which able-bodied-labourers can ordinarily be expected to earn shall be as nearly as possible equal to the full wage prescribed by section 128.

"131. Payment for labour on Civil Agency works, where made according to task, shall be arranged at the discretion of the civil officer in charge:

"Provided that in no case it be greater than 75 per cent. of the full wage, nor less than the minimum wage prescribed in this chapter."

3. Every District Board maintaining a relief work shall make a progress return to the District Officer for each week ending on Saturday night in the annexed form.

4. In making the above return, the District Board shall also note—

(*a*) the physical condition of the labourers, and of those seeking relief;
(*b*) the numbers who have been rejected from the work, and the reasons for rejection;
(*c*) the causes of any refusal to work or failure to accomplish the full task, and the action taken;
(*d*) the sufficiency or insufficiency of the scale of wages of payment for piece-work;
(*e*) any other information which it is expedient to communicate.

5. When a District Board opens and maintains temporary poor-houses and places for the distribution of food, gratuitous relief shall be limited to the following classes of persons, and shall be given to them only when they have no relatives able and, by the custom of the country, bound to support them:—

(*a*) Idiots and lunatics.
(*b*) Cripples.
(*c*) Blind persons.
(*d*) All who from age or physical weakness are incapable of earning their living.
(*e*) All persons whose attendance on the sick, or on infant children in their own homes, is absolutely necessary.

6. No person may be admitted to a poor-house except—

(1) persons who, being unfit for employment on works, cannot be conveniently sent to their homes;
(2) persons who, being fit for employment on works, refuse to labour.

7. The site of the poor-house should be chosen with regard to the following circumstances:—

(1) It should be within easy reach of the head-quarters of the District Board, or of some official delegated to act as visitor.
(2) It should be situated on the outskirts of a village or town.
(3) The situation should be healthy.
(4) The drainage should be good.
(5) An ample supply of water for drinking and bathing purposes should be available.

* The flour should be that of the coarsest cereal or millet ordinarily consumed and commonly purchaseable in the bazar: where rice is made the standard of age it should be cleaned rice. The price should be that at which the flour or rice is sold at the bazar attached to or nearest to the relief work: if flour is not sold, the price should be based on that at which the grain is sold. In calculating the price of flour, it should be remembered that flour is always dearer than the grain of which it is composed. This seems a simple method for instruction, but it had recently been forgotten, and wages have been based on the price of the grain not of the flour. Thus, if barley is selling at one anna a pound, a pound of barley should be priced about $1\frac{1}{16}$ anna (*Mr. Elliott's Draft Code of Famine Relief, Chapter II, paragraph 13*).

8. Arrangements shall be made to ensure that relief is not unnecessarily given, and that, when given, it reaches the persons for whom it is intended.

9. So far as may be, consideration shall be shown to persons of respectable position and family who are reduced to starvation. Such persons shall not be forced to labour on the works, but shall, wherever possible, be employed as overseers of gangs, supervisors, accountants or clerks on the works. If no suitable work can be found for them, they may be admitted to gratuitous relief. A list of all such persons so admitted shall be sent weekly to the District Officer.

10. In cases where District Boards undertake the whole system of charitable relief, the following further rules will apply :—

(*i*) Artizans who require relief shall be employed, as far as possible, in their own trades and in localities where the members of any particular trade or calling are numerous. Preference may be given to works which will provide employment for men of such trade or calling.

(*ii*) In localities where weavers are numerous, the District Board may arrange for the distribution of thread, and the payment for cloth woven, at the market price.

(*iii*) If the market price is so low that a weaver cannot support himself, the price given may be raised, with the sanction of the Commissioner, to such an extent as may be necessary.

11. In order that the expenditure on account of the relief of scarcity or famine may be clearly shown in the budget estimates, the major head "Famine relief" is to be divided into the following minor heads :—

(*i*) Relief works.
(*ii*) Temporary hospitals, poor-houses, orphanages.
(*iii*) Gratuitous relief.
(*iv*) Extra medical or other assistance.

Form No. II, referred to in Rule 11 of the rules under section 138, clauses (*i*) and (*r*) of the Local Self-Government Act, published under notification dated 16th September 1886, in the Municipal Department, is to be corrected accordingly.

ORDER.—Ordered that a copy of this Resolution be forwarded to all Commissioners and District Officers, and, through the latter, to all District Boards, for information and guidance.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Government of Bengal.

FORM OF PROGRESS RETURN.

See Rule 3.

FAMINE RELIEF WORKS.

DISTRICT OF_____

Progress Return for the week ending on night of Saturday, the___

Date of the week.	Number of persons employed.			Quantity or portion of work done during the week.	Total amount disbursed as wages.			Total number of infirm persons unfit to work and dependent on labourers employed on the work during the week.	Total amount of wages paid to such persons during the week.	How long the work is likely to give employment.
	Class A.	Class B.	Class C.		Class A.	Class B.	Class C.			
	Wo / Chi						Wo / Chi			
Sunday										
Monday										
Tuesday										
Wednesday ...										
Thursday ...										
Friday										
Saturday										
Total										

NOTE.—"Class A" stands for able-bodied persons accustomed to labour.
"Class B" stands for able-bodied persons not so accustomed.
"Class C" stands for persons not able-bodied, but fit for light employment of the kind required at the work.

LIBERALITY OF RAJAH RUN BAHADUR SINGH, OF TIKARI.

Dated Calcutta, the 28th January 1890.

From—Sir John Edgar, K.C.I.E., C.S.I., Chief Secretary to the Government of Bengal,

To—The Commissioner of Patna.

I am directed to acknowledge the receipt of your letter No. 21G, dated the 9th instant, in which you report that Rajah Run Bahadur Singh, of Tikari, has contributed a sum of Rs. 25,000 to form the nucleus of a trust fund for the purpose of establishing a lady doctor in Gya.

2. In reply, I am to request that you will be so good as to convey to Rajah Run Bahadur Singh an expression of the Lieutenant-Governor's appreciation of his public spirit and liberality. The correspondence will be published in the *Calcutta Gazette*.

No. 21G, dated Bankipore, the 9th January 1890.

From—John Boxwell, Esq., Offg. Commissioner of the Patna Division,

To—The Secretary to the Government of Bengal, Medical and Municipal Depts.

I have the honour to report, for the information of Government, that Babu (now Rajah), Run Bahadur Singh, of Tikari, has contributed a sum of Rs. 25,000 to form the nucleus of a trust fund for the purpose of establishing a lady doctor in Gya.

2. Other subscriptions have raised the total to over Rs. 28,000. Under the Magistrate's care the fund is likely to grow rapidly.

3. The Magistrate has requested me to bring specially to the notice of Government this most generous action of Rajah Run Bahadur Singh.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 25th January, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	BENGAL.		
	Western Districts.		
1	Burdwan Jan. 25, '90	0·12	Weather—cloudy and rather warm. Prospects of *rubbi* not very favourable. Sugarcane good. Prices of common rice :— Srs. Burdwan ... ... 17½ Culna ... ... 16 Cutwa ... ... 16½ Raneegunge ... ... 20 } per rupee.
	Raneegunge ...	0·05	
2	Bankoora „ 25, '90	0·07	Weather—seasonable. *Rubbi* crops doing well. Sugarcane is being cut with good outturn. Common rice 21 seers per rupee at Sudder and 18 seers at Bissenpore.
3	Birbhum „ 25, '90		A few drops of rain fell on the 19th, and there was a thunderstorm not far off. *Amun* crop has been reaped; outturn about 16 annas. Prospects of winter crops good. Price of rice 16 seers per rupee at Soory and 16½ seers at Rampur Hát.
4	Midnapur „ 25, '90	Nil	Weather—seasonable. Rice harvest in the Sudder subdivision completed with 12 annas outturn, but still going on in Contai and Tamluk. Prices of rice :— Srs. Sudder ... ... 16 Contai ... ... 24 (new) Tamluk ... ... 16 Ghatal ... ... 18 } per rupee.
5	Hooghly „ 25, '90	Nil	Hot weather making appearance. *Rubbi* crops thriving well and promise a good outturn. Potatoes specially good. Prices of common rice :— Srs. Sudder and Serampore ... ... 12½ Jehanabad ... ... 17½ } per rupee.
	Howrah „ 25, '90	0·52	Weather—cool. Prospects of crops good. Rain on 25th instant has done good. Harvesting of *amun* crop finished. Prices of common rice :— Srs. Howrah ... ... 12½ Uluberia ... ... 15½ } per rupee.
	Central Districts.		
6	24-Perghs. Jan. 25, '90	1·07	Weather seasonable, but cloudy. Harvesting of *amun* crop progressing quickly. Winter crops doing well. Price of rice varies from 15 to 17 seers a rupee.
7	Nuddea „ 25, '90	Nil	Weather—seasonable. *Kalai, mung,* and mustard are being harvested. Other winter crops doing well.
	Kooshtea ...	0·15	
	Meherpur ...	0·10	
	Chooadanga ...	0·05	
8	Khoolna „ 25, '90	1·04	Weather—seasonable. *Amun* harvest still progressing; outturn good. Winter crops doing well. The rain of the week will do good to the *rubbi* crops.
	Bagirhat ...	0·5	
9	Jessore. „ 25, '90	1·55	Rain on the 24th. Harvesting of *amun* rice nearly completed except on low lands. Cold-weather crops doing fairly well. Prices of rice stationary.
	Jehanabad ...	0·18	
	Magura ...	0·25	
	Narail ...	0·03	
10	Moorshedabad „ 25, '90	0·12	Weather—clear and cold. *Amun* harvesting almost completed. *Rubbi* promises well.
11	Dinagepur „ 25, '90	Nil	Weather—very cloudy yesterday (24th), and this (25th) morning very foggy. Rice harvest almost over, and prospects favourable. Mustard crop in the subdivision expected to be very poor. Pressing of sugarcane continues.
12	Rajahshye „ 25, '90	0·14	Weather—partially cloudy and cold. The shower of rain on the 19th has done much good to the spring crops. Harvesting of *amun* is nearly over with good results. Prospects of standing crops good. Condition of *ganja* good at Nowgong. Price of rice almost stationary.
13	Rungpur „ 25, '90	0·5	Weather—cool and cloudy with light showers of rain. Mustard is being gathered. Prospects of *rubbi* crops good. Ploughing facilitated by rain.
	Gaibanda ...	0·18	
14	Bogra „ 25, '90	0·79	Weather—seasonable. Rain on two days; on the 20th it rained with hail-stones. Reaping of *amun* nearly finished. Other crops are also being reaped. A little damage was caused by the hail of the 20th. Rice is being sold at 21 seers per rupee at head-quarters.
	Nowkhilla ...	1·14	
15	Pubna „ 25, '90	0·33	Weather—seasonable and cloudy at the latter part of the week. *Amun* crop is still being reaped. Mustard and tobacco are expected to be 12 annas crops. Recent rain has done good to crops.
16	Darjeeling „ 25, '90	0·95	Weather—cold and cloudy with occasional rain and snow. In the hills wheat and barley continue to progress favourably, and fields are being prepared for potatoes. In the Terai harvesting of *amun,* mustard, and potatoes continues. Transplanting of tobacco nearly completed.
17	Jalpigoree „ 25, '90	0·13	Weather—cloudy and cold. Cutting of *haimanti* paddy completed; outturn good. *Rubbi* crops doing well. Prices stationary.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded.*			
	Eastern Districts.		
Dacca Divn. 18	Dacca Jan. 25, '90	Figures not given.	Weather—seasonable. Sowing of *boro* paddy continues. Winter crops doing well. Recent rain has done good to the standing crops. Mustard and pulses are being gathered. Fodder is available. No special change in the prices of food-grains. Common rice sold at from 14 to 16½ seers per rupee during the week.
Dacca Divn. 19	Furreedpur „ 25, '90	1·45	Weather seasonable. Mornings occasionally foggy and cloudy. State and prospects of *rubbi* crops continue fair. Cultivation and sowing of *joli* and *boro* in progress. Rain has done much good to the standing crops. Coarse rice selling at 14 seers per rupee in Sudder, 17 seers in Goalundo, and 14½ seers in Madaripur. Outturn of *amun* paddy did not exceed 10 annas in Sudder owing to the damage done by unusual flood. From Goalundo and Madaripur it is reported to be 16 and 14 annas respectively.
Dacca Divn. 20	Backergunge ...	...	Report not received.
Dacca Divn. 21	Mymensingh „ 25, '90	1·16	On the night of the 19th rain fell accompanied by strong wind and hailstones, and there was rain also on the 24th. Weather cool and sometimes cloudy. Rain has done much good to standing crops. Harvesting of *amun* paddy nearly completed. Mustard and pulses are still being gathered. Transplanting of *boro dhan* continues. Common rice sells at 13 seers 5 chittacks per rupee.
Chittagong Divn. 22	Chittagong „ 25, '90	0·66	Weather—seasonable. Prospects and state of winter crops good.
Chittagong Divn. 23	Noakholly „ 25, '90	0·39	Weather—cloudy; rather warm for the season. *Rubbi* crops getting on well. Late rain has done some good to the crops.
Chittagong Divn. 24	Tipperah „ 25, '90	0·45	Weather—seasonable. Recent rain has benefited the winter crops. Mustard is being collected. Transplanting of *boro dhan* going on.
	Brahmanberiah ...	1·19	
	Chandpur ...	0·55	
Chittagong Divn. 25	Chittagong Hill Tracts. „ 24, '90	0·08	Weather—very cold with dense fogs in the mornings throughout the week, except on the morning of the 20th, which was cloudy with drizzling rain. Tobacco, chillies, and other winter crops progressing. Gathering of mustard commenced in some places.
	Hill Tipperah Jan 25, '90	0·30	Weather—cloudy. Reaping of *amun* paddy finished. Chillies and tobacco doing well.
BEHAR.			
Patna Divn. 26	Patna „ 25, '90	0·03	Weather—cloudy towards the end of the week. Slight showers of rain on the night of the 23rd. Harvesting of paddy over. Prospects of *rubbi* continue good. Mustard promising. Poppy flowering and looks well. Prices of food-grains almost stationary.
Patna Divn. 27	Gya „ 25, '90	Nil	Weather—cold and cloudy. Prospects of poppy and *rubbi* good. Harvesting of paddy still going on. Food-stock sufficient.
Patna Divn. 28	Shahabad „ 25, '90	Nil	Weather—cloudy with north-easterly wind. Prospects of all *rubbi* crops continue good. They are now in ear. A shower of rain would be beneficial. Poppy thriving and coming into flower. Pressing of sugarcane going on. Prices stationary.
Patna Divn. 29	Durbhunga „ 25, '90	0·23	Weather—latter part of the week cloudy throughout district. Rain last night (24th) at head-quarters. It will greatly benefit the *rubbi* crops, wheat and barley, the prospects of which are very favourable. Tobacco is being harvested. Poppy doing well. Price of common rice ranges from 19 to 21½ seers per rupee.
Patna Divn. 30	Mozufferpur „ 25, '90	Figures not given.	Weather—cloudy; slight rain on the 21th. All standing crops doing well. Mustard crop commencing to be cut.
Patna Divn. 31	Sarun „ 25, '90	Nil	Weather—clear, but occasionally cloudy. Weather unfavourable for poppy. Prospects of this crop, however, continue good. *Rubbi* crops, including mustard, look well. Sugarcane pressing is in full progress.
Patna Divn. 32	Chumparun „ 25, '90	0·99	Weather—clear and cold to-day (25th). Rain fell on the 23rd and on the night of the 24th, immensely benefiting the standing crops of *rubbi* and poppy, but slight damage is apprehended to wheat. Indigo fields are being prepared. Sugarcane is being pressed. Prices of food-grains stationary.
Bhagulpore Divn. 33	Monghyr „ 25, '90	Nil	Weather—cold and cloudy at the latter part of the week. *Rubbi* crops doing well. Prospects of poppy fair.
Bhagulpore Divn. 34	Bhagulpur „ 25, '90	Nil	Weather—rather too warm and cloudy. Mornings foggy. Prospects promising, but rain wanted for *rubbi* crops.
Bhagulpore Divn. 35	Purneah „ 25, '90	0·02	Weather—cloudy and cold with west wind. Mustard is being harvested. Tobacco and *rubbi* crops doing well, but want a shower of rain. Early ploughings going on.
Bhagulpore Divn. 36	Maldah „ 25, '90	Nil	Weather—mornings foggy and occasionally cloudy. Days and nights hot. Harvesting of winter rice over. *Kalai* and mustard are still being gathered. Transplanting of *boro* paddy going on. Wheat promising. Prospects of other standing crops good. Common rice selling at an average of 17 seers per rupee.
Bhagulpore Divn. 37	Sonthal Perghs. „ 25, '90	0·02	Weather—cold and seasonable. Threshing of paddy continues with average outturn. Prospects of *rubbi* crops good.

	No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	ORISSA.			
Orissa Divn.	38 Cuttack	Jan. 25, '90	Nil	Weather—seasonable. Prospects of crops continue good.
	39 Pooree	„ 24, '90	Nil	Weather—seasonable Harvesting of winter rice (late *sarad*) still continues in the Sudder subdivision, but is finished in the Khorda subdivision. *Dalua* and *mung* crops doing well. Price of common rice varies from 21 to 29 seers per rupee in the Sudder subdivision and 20 to 27 seers in the Khorda subdivision.
	40 Balasore	„ 25, '90	Nil	Weather—seasonable. *Rubbi* crops doing fairly well.
	CHOTA NAGPORE			
	South-West Frontier Agency.			
Chota Nagpore Divn.	41 Hazaribagh	Jan. 25, '90	Nil	Weather—cold and seasonable. Crops generally very promising. A little rain is needed.
	42 Lohardugga	„ 25, '90	0·01	Weather—cloudy. Prospects of *rubbi* crops good. Rain much wanted in the subdivision. Lac gathering finished in Palamow; yield 12 annas on the average.
	43 Singbhoom	„ 25, '90	Nil	Weather—seasonable. Oilseeds and pulses are expected to give an outturn of from 12 to 16 annas. Prospects favourable.
	44 Manbhoom	„ 26, '90	Nil	Weather seasonable Prospects of *rubbi* crops good. Sugarcane is being pressed; probable outturn 12 annas. Coarse rice selling in the Purulia market at 22 seers per rupee.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 28th January, 1890

P. NOLAN,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of Beng

Meteorological Division.	District.	Representative station.	Station Observations.													
			Air Pressure.			Wind.		Temperature.								
			Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	
Orissa.	Pooree	Pooree ...	29·918	29·961	—	N	147	85·7	21st Jan.	63·8	18th Jan.	82·4°	65·6°	74·0°	—	
		Gopalpore	29·943	29·984	—·079	NNW	226	82·2	21st ,,	63·4	18, 19 ,,	81·0	65·3	73·2	+2·7	
		False Point ...	29·939	29·961	—·122	NW	158	83·9	21st ,,	67·0	18th ,,	81·1	62·5	71·8	+3·2	
	Cuttack	Cuttack ...	29·897	29·961	—·098	Calm	26	86·9	24th ,,	59·8	18th ,,	86·1	61·7	73·9	+1·4	
	Balasore	Balasore ...	29·914	29·976	—·114	NNW	76·6	85·4	20th ,,	53·5	21st ,,	82·5	57·3	70·2	+2·4	
South-West Bengal.	South-West Midnapore South 24-Pergunnahs	Saugor Island	29·935	29·902	—·118	Variable	223	79·7	20th ,,	59·9	18th ,,	77·6	64·4	71·1	+2·9	
	Midnapore	Midnapore ...	29·815	29·973	—·127	Calm	25·0	86·3	20th ,,	55·2	18th ,,	83·3	58·6	71·0	+4·1	
	24-Pergunnahs ... ... Howrah ... ,, Hooghly	Calcutta .	29·940	29·963	—·126	Variable	58	81·5	20th ,,	55·8	18th ,,	78·9	59·5	69·2	+3·3	
	Burdwan	Burdwan .	29·878	29·964	— 131	North-westerly.	40·8	85·5	20th ,,	55·8	18th ,,	80·7	59·8	70·2	+3·6	
	Bankoora	Bankoora ...	29·961	29·980	—·100	Calm	43	83·0	24th ,,	55·6	18th ,,	81·2	58·0	69·6	+3·7	
	Beerbhoom ... ... West Burdwan	Ranegunge	29·926	29·977	—·124	Calm	35·8	85·5	20th ,,	56·1	18th ,,	81·6	58·3	70·0	+4·1	
	Moorshedabad	Berhampore...	29·886	29·957	— 132	Variable	34·1	80·6	20th ,,	56·2	18th, 19th Jan.	78·5	57·6	68·1	+3·3	
	Nuddea	Krishnaghur...	29·914	29·983	—·114	WNW	69·0	83·0	20th ,,	53·9	18th ,,	80·2	57·7	68·9	+4·6	
	Jessore ... ... Khoolna	Jessore ...	29·921	29·956	—·122	Calm	27·2	81·7	20th ,,	56·5	18th ,,	79·8	59·1	69·4	+3·9	
East Bengal.	Chittagong	Chittagong .	29·872	29·967	—·113	North-westerly.	40·9	81·1	19,20,23 ,,	56·1	18th, 19th Jan.	79·5	58·2	68·8	+2·3	
	Chittagong Hill Tracts	Demagiri ..	Observations not received.													
	Backergunge	Barrisal ...	29·944	29·957	—·106	Calm	35·8	79·3	19th Jan.	56·1	18th ,,	78·1	59·4	68·8	+4·2	
	Noakholly ... ,,	Noakholly ...	29·915*	29·961*	—	N	66·4	81·3	19th ,,	54·0	18th ,,	70·5	56·5	63·0	—	
	Furreedpore	Furreedpore...	29·931	29·973	—·096	Calm	35	74·0	22nd ,,	56·0	18th ,,	73·7	58·3	66·0	+2·2	
	Dacca	Dacca ...	29·931	29·954	—·122	North-easterly.	57·9	81·1	20th ,,	56·8	22nd, 23rd Jan.	79·8	57·7	68·7	+2·2	
	Tipperah	Commillah ...	29·935	29·972	—·094	Easterly	21·7	80·9	20th ,,	56·0	18th, 23rd Jan.	79·3	57·3	68·2	+3·5	
	Mymensingh	Mymensingh..	29·910	29·970	—·180	E	40·3	77·9	19th ,,	55·8	21st ,,	76·3	57·5	66·9	+3·6	
North Bengal.	Bogra	Bogra .	29·879	29·946	—·104	Calm	34·2	79·6	20th ,,	53·1	18th ,,	77·6	55·3	66·4	+1·1	
	Pubna	Serajgunge ...	29·907	29·956	—·115	NE	22·6	79·5	20th ,,	52·5	23rd ,,	78·3	55·2	66·7	+3·4	
	Rajshahye	Rampore Beauleah.	29·884	29·957	—·095	Variable	72·3	80·1	20th ,,	55·7	18th, 22nd Jan.	77·7	57·3	67·5	+5·5	
	Maldah	Maldah ...	29·899	29·985	—	NW	59·8	79·7	20th ,,	52·7	18th ,,	76·5°	53·5°	66·0°	—	
	Dinagepore	Dinagepore ..	29·860	29·937	—·098	NE	52	79·1	23rd ,,	52·2	18, 19, 22 & 23 Jan.	77·6	53·8	65·7	+2·8	
	Rungpore	Rungpore ...	29·865	29·998	—·078	ENE	20	79·6	21st ,,	51·9	18th, 23rd Jan.	77·5	53·4	65·4	+3·7	
	Julpigoree ... ... Cooch Behar	Julpigoree ...	29·685	29·980	—·085	NE	?	?	?	51·9	21st ,,	?	53·8	?	?	
	Darjeeling Hill Tracts ...	Darjeeling ...	22·908	—	—	WSW	138·1	53·9	19th ,,	34·7	20th ,,	53·5°	35·7	44·5°	+5·3	
North Behar.	Purneah ... .. North Bhagulpore ...	Purneah ...	29·835	29·969	—·116	Calm	28·5	76·2	22nd, 23rd, 24th Jan.	50·5	19th ,,	75·3	52·4	63·9	+2·4	
	Mozufferpore	Mozufferpore	Observations suspended.													
	Durbhunga	Durbhunga ..	29·807	29·985	—·109	ENE	53	77·4	24th Jan.	55·4	19th ,,	76·3	56·7	66·5	+4·7	
	Chumparun	Motihari ...	29·743	29·985	—·089	North-easterly.	81·2	76·2	22nd—24th Jan.	49·9	18th, 22nd Jan.	75·2	53·2	63·7	+4·4	
	Sarun	Chupra ...	29·767	29·972	—·093	South-easterly.	33·5	78·3	24th ,,	51·0	18th ,,	77·0	54·7	65·8	+5·0	
South Behar.	Shahabad	Dehree ..	29·805	29·932	—·119	SSW	97·9	81·8	24th ,,	51·5	18th ,,	79·6	54·5	67·0	+5·6	
		Buxar ..	29·716	29·974	—·120	ENE	62·1	81·4	24th ,,	50·9	22nd ,,	78·4	53·7	66·9	+4·4	
		Arrah ..	29·761	29·908	—·105	Calm	40·5	80·2	24th ,,	51·9	18th ,,	76·1	53·4	65·8	+5·3	
	Gya	Gya ..	29·574	29·975	—·120	Southerly	91·1	82·6	24th ,,	52·4	18th ,,	80·0	54·7	67·4	+3·8	
	Patna	Bankipore ...	29·781	29·975	—·129	Variable	23·3	78·9	24th ,,	53·0	19th ,,	76·9	55·6	66·2	+3·6	
	South Bhagulpore ... Monghyr	Bhagulpore ...	29·787	29·959	—·122	Calm	20	79·8	24th ,,	53·5	19th ,,	77·2	54·6	65·9	+4·3	
	Sonthal Pergunnah ...	Doomka ..	29·442	29·971	—	Calm	47·8	80·9	20th ,,	52·6	18th ,,	79·2	55·3	67·3	—	
Chutia Nagpur.	Hazaribagh	Hazaribagh ...	27·902	29·979	—·105	South-westerly.	147·9	80·7	20th ,,	53·8	21st, 22nd Jan.	77·5	55·8	66·7	+5·1	
	Lohardugga ... ... Manbhoom	Ranchee ...	27·774	29·974	—·104	Calm	103·7	82·0	20th ,,	50·5	21st ,,	77·7	53·1	65·4	+4·0	
	Singbhoom	Chyebassa ...	29·193	29·993	—	SW	28·6	85·8	20th ,,	52·7	18th ,,	82·9	56·0	69·4	—	

* Means of six days. † Means of five days.

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average of means of the reading during the same period for the
The *humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The nu
e the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during th
stations in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 24th of January 1890.

Average humidity at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	DISTRICT OBSERVATIONS. RAINFALL. OF WEEK. Mean for district.	Normal mean.	Since 1st of month. Mean for district.	Normal mean.	Variation.	Since 15 h May 1889. Mean for district.	Normal mean.	Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
85	0	Nil	Nil	0·07	Nil	0·14	−0·14	74·88	85·31	+19·57	0·0	0·2	Pooree	Pooree	Orissa.
72	0·1	Nil											Gopalpore		
91	0·9	Nil											False Point		
79	0·7	Nil	Nil	0·06	Nil	0·16	−0·16	60·24	51·71	+14·53	0·0	0·2	Cuttack	Cuttack	
88	0	Nil	Nil	0·04	Nil	0·19	−0·19	49·89	52·79	−2·90	0·0	0·2	Balasore	Balasore	
93	1·0	Nil	Nil	0·07	Nil	0·23	−0·23	58·43	62·24	−3·81	0·0	0·3	Saugor Island	South-West Midnapore South 24-Pergunnahs	South-West Bengal.
78	0·7	Nil	Nil	0·06	Nil	0·31	−0·31	46·29	51·38	−5·09	0·0	0·2	Midnapore	Midnapore	
93	1·0	Nil	Nil	0·09	Nil	0·32	−0·32	53·38	51·50	+1·88	0·0	0·3	Calcutta	24-Pergunnahs... Howrah Hooghly	
84	0	0·12	0·04	0·10	0·04	0·21	−0·17	43·87	46·52	−2·65	0·3	0·3	Burdwan	Burdwan	
84	0	Nil	0·03	0·12	0·03	0·20	−0·17	55·91	52·49	+3·42	0·3	0·3	Bankoora	Bankoora	
82	0·1	0·05	0·01	0·10	0·01	0·32	−0·31	52·45	51·50	+0·95	0·3	0·4	Ranegunge	Beerbhoom West Burdwan	
95	2·4	0·12	0·02	0·13	0 02	0·37	−0·35	51·17	50·39	+0·78	0·2	0·4	Berhampore	Moorshedabad	
86	1·7	Nil	0·06	0·07	0·06	0·20	−0·14	51·55	49·00	+2·46	0·6	0·3	Krishnaghur	Nuddea	
94	2·3	Nil	0·15	0·13	0·15	0·32	−0·17	53·54	52 99	+0·55	0·6	0·3	Jessore	Jessore Khoolna	
90	1·3	Nil	Nil	0·29	Nil	0·46	−0·46	100 02	113·48	−13·46	0·0	0·5	Chittagong	Chittagong	East Bengal.
			0·04	0 24	0·04	0·42	−0·38	65·17	81·05	−15·88	0·5	0·5	Demagiri	Chittagong Hill Tracts	
91	0·7	0·03	0·14	0·10	0·14	0·45	−0·31	77 96	76·77	+1·19	1·0	0·3	Barrisal	Backergunge	
90	0·3	0·25	0·36	0·13	0·36	0·56	−0·20	90·65	106·39	−15·74	1·5	0·3	Noakholly	Noakholly	
95	0·9	Nil	1 45	0·12	1·45	0·25	+1·20	61·77	55·66	+6·11	1·3	0·3	Furreedpore	Furreedpore	
94	1·9	0·20	0·44	0·09	0·44	0·23	+0·21	75·03	59·46	+15·57	1·0	0·3	Dacca	Dacca	
85	0·4	0·35	0·30	0·15	0·30	0·45	+0·14	50·04	69·27	−13·23	1·0	0·4	Commillah	Tipperah	
91	2·0	1·30	0·51	0·10	0·51	0·27	+0·24	88·14	67·48	+20 66	0 8	0 3	Mymensingh	Mymensingh	
90	1·4	0·16	0·42	0·10	0·42	0·27	+0·15	65·23	57·20	+8·03	1·0	0·4	Bogra	Bogra	North Bengal.
96	0·9	0·08	0·21	0 09	0·21	0·28	−0·07	55·28	53·17	+2·11	1·0	0·4	Serajgunge	Pubna	
88	0·6	0·03	0·05	0·14	0 05	0·42	−0·37	54·35	53·74	+0 61	0·3	0 4	Rampore Beauleah	Rajshahye	
89	1·1	Nil	Nil	0·13	Nil	0·36	−0 36	39·76	54 11	−14·35	0·0	0·4	Maldah	Maldah	
85	1·9	Nil	0	0·18	0	0·29	−0·29	57·37	56 89	+0·48	0·2	0·4	Dinagepore	Dinagepore	
92	1·7	0·32	0·48	0·14	0·50	0·31	+0·19	85 66	74·03	+11·63	1·5	0·4	Rungpore	Rungpore	
91	2·7	0·16	0·50	0·18	0·56	0·24	+0·32	117·69	111·44	+6 25	1·4	0·5	Julpigoree	Julpigoree Cooch Behar	
85	6·0	0·24	0·20	0·32	0·32	0·53	−0·01	133·27	120·81	+12 46	1·5	1·0	Darjeeling	Darjeeling Hill Tracts	
92	1·7	Nil	0·29	0·18	0·29	0·34	−0·05	75·00	58·48	+16·52	0·4	0·4	Purneah	Purneah North Bhagulpore	
			0·11	0·14	0·11	0·42	−0·31	46·77	43·03	+5·74	0·3	0·4	Mozufferpore	Mozufferpore	North Behar.
88	1·3	Nil	0·14	0·15	0·14	0·42	−0·28	51·98	44·46	+7·51	0·3	0·4	Durbhunga	Durbhunga	
89	2·3	0 62	0·38	0·13	0·58	0·40	−0·02	63·93	46·53	+17·40	1·0	0·3	Motihari	Chumparun	
82	0·9	Nil	Nil	0·18	Nil	0·40	−0·40	40·13	42·61	−2·48	0 0	0·4	Chupra	Sarun	
81	1·9	Nil											Dehree	Shahabad	South Behar.
83	1·4	0·03	Nil	0·22	Nil	0·54	−0·54	40·07	40·14	−0·07	0·0	0·5	Buxar		
89	2·6	Nil											Arrah		
76	1·3	Nil	Nil	0·16	Nil	0·47	−0·47	37·07	41·36	−4·29	0·0	0·5	Gya	Gya	
87	2·0	0·03	Nil	0·15	Nil	0·40	−0·40	43·49	41·18	+2·31	0·0	0·5	Bankipore	Patna	
88	1·4	Nil	Nil	0·18	Nil	0·37	−0 37	42·43	43·45	−1·02	0·0	0·5	Bhagulpore	South Bhagulpore Monghyr	
87	0·3	0·02	0	0 14	0	0·30	−0·30	54·15	50·64	+3·51	0·2	0·4	Doomka	Southal Pergunnahs	
80	0	Nil	Nil	0·17	Nil	0·45	−0·45	43·03	50·56	−7·53	0·0	0·5	Hazaribagh	Hazaribagh	Chutia Nagpore.
67	0·8	Nil	Nil	0 21	Nil	0·60	−0·60	44·84	49·24	−4·40	0·0	0·5	Ranchi	Lohardugga Manbhoom	
			Nil	0·11	Nil	0·32	−0·32	38·33	46·77	−8·44	0·0	0·4			
76	0	Nil	Nil	0·19	Nil	0·44	−0·44	48·70	51·22	−2·46	0·0	0·5	Chyebassa	Singbhoom	

ten years. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
Cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
17 years. The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at the subdivisional

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 24th of January 1890

Meteorological division.	District.	Station.	Rainfall.							Total		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 18th May 1889.	Average rainfall from 1 May date
			Saturday, 18th January.	Sunday, 19th January.	Monday, 20th January.	Tuesday, 21st January.	Wednesday, 22nd January.	Thursday, 23rd January.	Friday, 24th January.	Number of rainy days.	Rainfall of week.				
Orissa ...	Pooree ...	Pooree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·00	80·03	51
		Khurdah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	76·57	50
		Banpur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	65·50	48
		False Point ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	76·80	63
		Gop ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		
		Pipli ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		
	Cuttack	Jagatsingpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	73·97	46
		Banki ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	52·43	49
		Cuttack ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	75·18	50
		Kendrapara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	72·03	53
		Jajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	57·64	53
		Dharmsala ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50·25	
		Salipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	
	Balasore ..	Chandbali ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	54·64	52
		Bhuddruck ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	57·66	51
		Soroh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	46·05	50
		Balasore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	46·61	57
		Jellasore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	39·59	53
		Baripodah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	54·79	53
South-West Bengal.	Midnapore ..	Contai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·15	55·13	61
		Sangor Island	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	56·74	66
		Tumlook ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	49·40	51
		Midnapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	46·26	48
		Ghuttal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	45·19	54
		Kukrahaty ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·65	
		Bhagwanpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·72	
		Garbetta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	
	24-Pergunnahs	Diamond Harbour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	63·41	58
		Canning Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·80	
		Alipore Jail ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·47	51·80	55
		Barrackpore...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	51·79	49
		Dum-Dum ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	48·58	51
		Baraset ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	57·61	49
		Busseerhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	60·92	54
	Howrah ...	Howrah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	59·12	51
		Mohesreka ... (*Ooloberiah.*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	54·64	51
	Hooghly ..	Serampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	55·27	49
		Hooghly ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	54·93	48
		Jehanabad ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	41·16	54
	Burdwan ...	Culna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	41·32	44
		Burdwan ...	.....	.....	0·12	.....	.....	.....	.....	1	0·12	0·12	0·12	47·19	47
		Cutwa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	43·11	47
		Kanecgunge ...	.....	.....	0·05	.....	.....	.....	.....	1	0·05	0·05	0·19	55·88	48
		Mankur ...	.....	.....	0·09	.....	.....	.....	.....	1	0·09	0·09	?	53·80	
	Bankoora ...	Bankoora ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	50·79	51
		Bishenpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	57·49	51
		Maliara ...	.....	.....	.....	.....	.....	.....	0·11	1	0·11	0·11	0·17		51
		Khatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	65·01	54
		Indas ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	
		Kotalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	
		Anda ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·44	
		Gangajalghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·17	
		Kaspore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	
		Sonamukhi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·33	
	Beerbhoom	Bh. Soory ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	59·06	53
		Hetampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	47·07	54
		Rampore Haut	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	47·78	51
		Nalpore ...	.....	.....	0·07	.....	.....	.....	.....	1	0·07	0·07	?	55·04	
		Murarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	
	Nuddea ...	Ranaghat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	53·80	46
		Kishnaghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	42·95	45
		Chooadanga ...	.....	.....	0·05	.....	.....	.....	.....	1	0·05	0·05	0·21	49·86	50
		Meherpore ...	.....	.....	0·10	.....	.....	.....	.....	1	0·10	0·10	0·22	53·15	47
		Kooshtea ...	.....	.....	0·15	.....	.....	.....	.....	1	0·15	0·15	0·21	56·06	54
	Khoolna ..	Satkhira ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	53·51	55
		Bagirhat ...	.....	.....	0·50	.....	.....	.....	.....	1	0·50	0·50	0·41	54·50	61
		Khoolna ...	.....	.....	0·25	.....	.....	.....	.....	1	0·25	0·25	0·43	56·00	54
		Nakipur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Rampal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Jessore ...	Narail ...	.....	.....	0·03	.....	.....	.....	.....	1	0·03	0·30	0·45	49·50	45
		Jessore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	62·58	54
		Jhenidah ...	.....	.....	0·18	.....	.....	.....	.....	1	0·18	0·18	0·26	50·74	53
		Magoorah ...	.....	.....	0·25	.....	.....	.....	.....	1	0·25	0·25	0·18	56·73	49
		Bongong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	46·01	51
	Moorshedabad	Kandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	53·38	50
		Berhampore...	.....	.....	0·12	.....	.....	.....	.....	1	0·12	0·12	0·42	46·28	51
		Lalbagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	47·13	50
		Azimgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·45	?	51
		Jungipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	55·01	49
		Lalgola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·47	59·02	50
		Jsaynge ...	.....	.....	0·04	.....	.....	.....	.....	1	0·04	0·04	?	43·29	?
		Akhriguni ...	.....	.....	0·25	.....	.....	.....	.....	1	0·25	0·25	?	43·06	?
		Patkabari ...	.....	0·10	.....	.....	.....	.....	.....	1	0·10	0·10	?	?	?
East Bengal	Chittagong ...	Cox's Bazar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	123·59	135
		Chittagong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·49	76·42	94
		Kutubdia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113·09	?
		Satkanya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	63·66	?
	Chittagong Hill Tracts.	Rangamati ...	.....	0·08	.....	.....	.....	.....	.....	1	0·08	0·08	0·46	68·12	83
		Ruma ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	67·20	80
	Backergunge	Patuakhally...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	87·80	87
		Perozepore ...	.....	.....	0·05	.....	.....	.....	.....	1	0·05	0·05	0·53	72·21	69
		Burrisal ...	.....	.....	0·09	.....	.....	.....	.....	1	0·09	0·09	0·51	72·71	67
		Bhola ...	.....	.....	0·25	0·17	.....	.....	.....	2	0·42	0·42	0·32	79·68	81

Meteorological Division.	District.	Station.	Rainfall							Total		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1869.
			Saturday, 23rd January 1869.	Sunday, 24th January.	Monday, 25th January.	Tuesday, 26th January.	Wednesday, 27th January.	Thursday, 28th January.	Friday, 29th January.	Number of rainy days.	Rainfall of week.			
East Bengal—concld.		Gournaddi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	61·32
		Baughai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	99·69
	Noakholly	Noakholly	.....	.....	0·19	0·08	...	.....	.....	2	0·27	0·27	0·46	102·44
		Feuny	.....	.....	0·45	.....	.....	.....	.....	1	0·45	0·45	0·63	76·93
		Hurishpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	83·96
		Ramgunj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	96·75
	Furreedpore	Madaripore	.....	.....	0·69	0·50	.....	.....	.....	2	0·99	0·99	0·39	61·85
		Furreedpore	.....	1·40	.....	.....	.....	.....	.....	1	1·80	1·80	0·18	66·60
		Goalundo	.....	1·55	.....	.....	.....	.....	.....	1	1·55	1·55	0·27	57·84
	Dacca	Munshigunge	.....	.....	0·60	.....	.....	.....	.....	1	0·60	0·60	0·21	76·93
		Dacca	.....	.....	0·23	.....	.....	.....	.....	1	0·23	0·23	0·13	73·91
		Narsingunge	.....	.....	0·44	.....	.....	.....	.....	1	0·44	0·44	0·12	80·80
		Manickgunge	.....	.....	0 51	.....	.....	.....	.....	1	1·51	0·51	0·27	66·80
		Joydebpore	.....	.....	1·16	.....	.....	.....	.....	1	1·16	1·16	?	67·77
	Hill Tipperah	Amurtola	.....	.....	0·18	.....	.....	.....	.....	1	0·18	0·18	0·48	44·26
	Tipperah	Comilla	.....	.....	0·45	.....	.....	.....	.....	1	0·45	0·45	0·49	69·93
		Chandpore	.....	.....	0·55	.....	.....	.....	.....	1	0·55	0·55	0·29	65·87
		Brahmunberia	.....	.....	1 19	.....	.....	.....	.....	1	1·19	1·19	0·33	51·87
		Ramakandrapore.	.....	.....	0 29	.....	.....	.....	.....	1	0·29	0·29	?	60·43
		Nasirnagar	.....	.....	0·30	.....	.....	.....	.....	1	0·30	0·30	?	50·99
		Daudkandi	.....	.....	0·72	.....	.....	.....	.....	1	0·72	0·72	?	53·01
		Kasba	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	62·44
		Lakshem	.....	.....	0·30	.....	.....	.....	.....	1	0·30	0·30	?	69·39
	Mymensingh	Kishoregange	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·45	69·16
		Atia (Tangail)	.....	.....	0·84	.....	.....	.....	.....	1	0·84	0·84	0·33	61·36
		Mymensingh	.....	.....	1·16	.....	.....	.....	.....	1	1·16	1·16	0·48	97·71
		Jamalpore	.....	.....	0·34	.....	.....	.....	.....	1	0·34	0·34	0·33	85·48
		Netrokona	.....	.....	0 20	.....	.....	.....	.....	1	0 20	0·20	0·06	136·13
		Subernakhali	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·48
		Durgapore	.....	.....	.....	.....	.....	.....	0·34	1	0·30	0·30	?	150·38
		Sherepore Town	.....	.....	0·30	.....	.....	.....	0·34	2	0·64	0·64	?	67·78
		Dewanganj	.....	.....	0·16	.....	.....	0·20	0·41	3	0·77	0·77	?	57·06
North Bengal.	Pubna	Pubna	.....	.....	0·33	.....	.....	.....	.....	1	0·33	0·33	0·16	50·29
		Serajgunge	.....	.....	0·08	.....	.....	.....	.....	1	0·08	0·08	0·31	50·94
	Bogra	Sherepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	62·66
		Nowkhilla	.....	.....	1·14	.....	.....	.....	.....	1	1·14	1·14	0·30	62·10
		Bogra	.....	.....	0·20	.....	.....	.....	.....	1	0 20	0·20	0·27	70·33
		Panchbibi	.....	.....	0·30	.....	.....	.....	0·02	2	0·32	0·32	0·21	65·18
	Rajshahye	Bemaleah	.....	.....	0·14	.....	.....	.....	.....	1	0·14	0·14	0·35	46·34
		Nattore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·49	53·84
		Naogaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	57·97
		Lalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	36·73
		Monda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·27
	Maldah	Maldah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	50·93
		Chanchal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	39·96
		Gajol	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·79
		Sibganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·77
	Dinagepore	Mohadebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	53·93
		Churamon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	51·83
		Raigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	53·23
		Dinagepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	67·34
		Balcorghat	.....	.....	.....	.....	.....	.....	0·01	1	0·01	0·01	0·23	61·29
		Thakoorgaon	.....	.....	.....	.....	.....	.....	0 34	1	0 34	0·34	?	57·81
	Rungpore	Bhawanigunge (Gyabanda)	.....	.....	0·18	.....	.....	.....	0·02	2	0·20	0·20	0·26	57·75
		Rungpore	.....	.....	0·08	.....	.....	.....	0·20	2	0·28	0·37	0·30	54·73
		Kurigram	.....	.....	.....	.....	.....	.....	0·65	1	0·65	0·65	0·33	51·93
		Bogdogra (Nilphamari)	.....	.....	.....	.....	.....	.....	0·80	1	0·80	0·80	0·33	53·49
		Ulipore	.....	.....	.....	.....	.....	.....	0·10	1	0·10	0·10	?	53·10
	Julpigoree	Julpigoree	.....	.....	.....	.....	.....	.....	0·18	1	0·13	0·18	0·26	150·46
		Alipore Door	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·38
		Fullacotta	.....	.....	0·30	.....	.....	.....	0·10	2	0·00	0·40	?	139·20
		Dubigunj	.....	.....	0 21	.....	.....	.....	0·31	2	1·02	1·02	?	89·94
		Bhagalpore (Nagrakatta).	.....	0·06	0·23	.....	.....	.....	.....	3	0·29	0·71	?	139·12
	Cooch Behar	Dimhatta	.....	.....	0·04	.....	.....	.....	0·44	2	0·48	0·67	0·26	93·87
		Cooch Behar	.....	.....	.....	.....	.....	.....	0·50	1	0·50	0·55	0·23	136·39
		Mekligunge	.....	.....	.....	.....	.....	.....	1·00	1	1·00	1·00	0·18	125·27
		Mathabhanga	.....	.....	.....	.....	.....	0·37	0·03	2	0·40	0·40	0·39	112·03
	Darjeeling Hill.	Buxa	0·03	0·27	.....	.....	.....	.....	.....	2	0·30	1·21	0·81	198·36
		Sittiguri	.....	.....	0·02	.....	.....	.....	0·02	2	0·04	0·07	0·26	136·99
		Darjeeling	.....	.....	0·24	.....	.....	.....	.....	1	0·24	0·40	0·42	136·99
		Kalimpong	.....	.....	0·20	.....	.....	.....	.....	1	0·20	0·26	0·18	91·72
		Kurseong	.....	0·70	.....	.....	.....	0·05	0·60	3	1·35	1·98	?	170·23
South Behar	Purneah	Kissengunge	.....	.....	.....	.....	.....	.....	1·30	1	1·30	1·30	0·07	103·07
		Arrureah	.....	.....	.....	.....	.....	.....	0·14	1	0·14	0·14	0·26	75·75
		Purneah	.....	.....	.....	.....	.....	.....	0·02	1	0·02	0·02	0·26	69·47
		Gondwara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	
		Baleramporo	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	
		Matiari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	
		Kaliagunj	.....	.....	.....	.....	.....	.....	0·20	1	0·20		?	
	North Bhagulpore.	Maddapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·20	0·18	90·25
		Soopool	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	67·20
		Pratabgunj	.....	.....	.....	.....	.....	.....	0·21	1	0·21	0·21		69·16
	Durbhunga	Tajpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	48·44
		Durbhunga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	50·01
		Madhubani	.....	.....	.....	.....	.....	.....	0·41	1	0·41	0·41	0·41	45·23
		Bahora	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·69
		Bethora	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	55·64
	Monsherpore	Sitamarhi	.....	.....	.....	.....	.....	.....	0·23	1	0·23	0·23	0·27	55·29
		Monsherpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	46·43
		Hajipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	46·76
		Pore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	37·48
		Mahua	.....	.....	.....	.....	.....	.....	.....	Nil	N	Nil	?	41·76
		Simhar	.....	.....	.....	.....	.....	.....	.....	Nil	N	Nil	?	
		Pupri	.....	.....	.....	.....	.....	0·24	0·30	2	0·54	0·54	?	

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 24th of January 1890 —con

Meteorological Division.	District.	Station.	Rainfall. Saturday, 18th January.	Sunday, 19th January.	Monday, 20th January.	Tuesday, 21st January.	Wednesday, 22nd January.	Thursday, 23rd January.	Friday, 24th January.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 18th May 1889.
North Behar —concluded.	Chumparun.	Motihari	.....	.....	.....	.....	.....	.....	0·54	1	0·54	0·54	0·18	75·33
		Bettiah	.....	.....	.....	.....	.....	.....	0·22	1	0·22	0·22	0·44	52·51
		Bagaha	.....	.....	.....	.....	.....	.....	0·37	1	0·37	0·37	?	70·24
		Burhurwa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·70
	Sarun	Gopalgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	35·48
		Sewan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	44·20
		Chuprah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	40·74
South Behar	Shahabad	Buxar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·64	47·44
		Dehree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·62	42·66
		Bhaboosh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·59	38·16
		Sassoram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	39·41
		Arrah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	42·09
		Mohaniah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?
	Gya	Aurungabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	35·42
		Gya	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	39·85
		Nowadah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	39·59
		Johanabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	33·40
		Arwal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34·34
		Daudnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	26·09
		Sherrghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	29·29
		Rajauli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17·92
		Pakri Barawan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·90
	Patna	Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	31·49
		Dinapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	45·53
		Behar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	41·08
		Barrh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	35·83
		Buckram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil			41·24
		Hilsa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil			35·21
	Monghyr	Begoosarai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	47·62
		Monghyr	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	41·07
		Jamui	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	39·48
		Gogri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50·19
		Sheikpura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·32
	South Bhagulpore	Bhagulpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	45·06
		Banka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	38·84
		Kalgong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	40·07
		Dangaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	?
	Sonthal Pergunnahs.	Rajmehal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	59·90
		Godda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	49·04
		Pakour	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	73·59
		Nya Dumka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·50	56·77
		Deoghur	.....	.....	0·02	.....	.....	.....	.....	1	0·02	0·02	0·30	40·40
		Jamtara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	46·21
		Mohagama	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	56·41
		Nawahat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·87
Chutia Nagpur.	Hazaribagh.	Pachamba (*Giridi*,	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	38·90
		Hazaribagh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	40·10
		Semtagurah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	50·24
		Mahudi Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	
		Jhoomra Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·54	43·00
		Barki	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·36
		Chatra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·04
		Karaydeha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	39·35
		Ramghar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil			
	Lohardugga.	Lohardugga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·87	45·24
		Ranchi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	53·61
		Pulamow	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	34·16
		Silli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	33·80
		Balumat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	?
		Hossainabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·40
		Garwah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	28·77
	Singbhoom	Chyebassa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	46·76
		Chakradarpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	40·80
		Ghatsilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	58·70
		Baharagura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	53·80
	Manbhoom	Purulia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	43·46
		Gobindpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	33·19
		Kashunathpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·91
		Barrabhoom	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·32
		Jhalda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·48
		Oung	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	38·56

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the retu are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 28th January* 1890.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 24TH JANUARY 1890.

THE meteorological conditions for the previous week had been fairly normal except that for a certain time southerly breezes had set in over parts of the province, and temperature and humidity had become decidedly above the normal. On the 18th and 19th of January the changes in the general meteorological conditions over Bengal were unimportant, but on the latter date there was evidence of the formation of a barometric depression, over the North-West Provinces. By the morning of the 20th this feeble depression, which was rather irregularly defined, had apparently travelled south-eastwards into South-West Bengal, and pressure was decidedly low at such stations as Calcutta and Saugor Island, round which area also there was a distinct but feeble cyclonic circulation of winds. With these disturbed conditions a number of rain showers occurred on the 20th in South-West and East Bengal and a few in North Bengal, but the rainfall was only important in East Bengal. On the morning of the 21st this feeble depression had passed away, and conditions became more normal for the north-east monsoon, and continued so in Bengal for the next two or three days; but in the mean-time another depression was formed on the 22nd over North-Western India, and on this date its centre was apparently between Sirsa, Multan, and Jacobabad. On the morning of the 23rd the depression had moved in a south-easterly direction, and the centre on this day was apparently between Lucknow and Agra; while on the morning of the 24th the depression had again advanced in a south-easterly direction, and was beginning to make itself felt over Behar and Bengal. On this day, in fact, pressure was from a fifth to a quarter of an inch below the normal over a considerable part of Behar, Chutia Nagpur, and South-West and Central Bengal, but no very definite centre could be assigned to the depression from the observations made in the Bengal Presidency. Winds also appeared to show a rather irregular cyclonic circulation, or perhaps two circulations, the centre of one being in South Behar, and of the other in Chutia Nagpur. This, again, caused conditions to become disturbed over parts of Bengal, and rather numerous showers were reported on the morning of Friday, the 24th, over North Bengal and North Behar; but up to this time the disturbance had not advanced sufficiently far over Bengal to cause rain over the remainder of the province. At the close of the week, therefore, conditions were distinctly favourable for rain over a considerable part of the province. As is usual during the passage of barometric depressions, temperature became abnormally high, while the air was also rather largely saturated with moisture; the sky also became more or less clouded over during the passage of these depressions, so that as two of these depressions have affected the weather in the province during the week under review, the meteorological conditions have been decidedly abnormal.

Pressure—Has been below the normal almost throughout the week, and the mean pressure has been about a tenth of an inch lower than usual. The actual variations in the mean pressure are from a defect of 0·132 inch at Berhampur to one of 0·078 inch at Rungpur.

Temperature—As stated previously, has been decidedly high, particularly during the passage of the depressions, when on some days, such as the 24th, the mean temperature of most of the stations in the west and south-west of the province became from five to nearly nine degrees above the normal. The mean temperature for the whole province for the week has been 3·7° above the normal for the period; and while the excess has been fairly equally distributed, the excess temperatures have been largest in Behar and Chutia Nagpur, where they have equalled from four to four and-a-half degrees.

The actual temperatures during the week, the range from day to night, and their variations from the normal values, are best seen in the following table, where the average maximum, minimum and mean temperatures for the week at nine typical stations in different districts of the province are given, together with the normal values. In both day and night temperatures in all districts of the province it will be seen that temperatures have been decidedly high:—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 24th January 1890.

	Normal mean maximum temperature for the week ending 24th January.	Actual mean maximum temperature for the week ending 24th January 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 24th January.	Actual mean minimum temperature for the week ending 24th January 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 24th January.	Actual mean daily temperature for the week ending 24th January 1890.	Variation of actual mean from the normal.
Cuttack	85·0	90·1	+1·1	59·8	61·7	+1·9	72·4	73·9	+1·5
Calcutta	76·7	78·9	+2·2	54·8	59·5	+4·7	65 8	69·2	+3·4
Dacca	78·5	79·8	+1·3	54·6	57·7	+3·1	66·6	68·7	+2 1
Burdwan	78·5	80·7	+2·2	54·2	59·8	+5·6	66·4	70·2	+3 8
Patna	72·9	76·9	+4 0	49·5	55·6	+6·1	61·2	66·2	+5 0
Gya	75·9	80·0	+4·1	51·1	54·7	+3·6	63·5	67·4	+3·9
Purneah	74·7	75·3	+0·6	48·2	52·4	+4·2	61·4	63·9	+2·5
Hazaribagh	72·7	77·5	+4·8	50·3	55·8	+5·5	61·5	66·7	+5 2
Darjeeling	48·4	53·5	+5·1	34·0	35·7	+1·7	39·2	44·5	+5·3

Rainfall.—The rainfall in East Bengal during the week has averaged almost half an inch, in North Bengal about a quarter of an inch, and in North Behar about a fifth of an inch. The falls in South-West Bengal only averaged a few hundredths of an inch, while in Orissa, Chutia Nagpur, and South Behar there was no rain. The districts receiving the largest amounts of rain were—in East Bengal, Furreedpur, Comillah, Mymensingh, and Dacca; in North Bengal, Julpigoree, Rungpur, and Bogra; in North Behar, Chumparun and Purneah; and in South-West Bengal, the Jessore and Khoolna districts

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 24th of January 1890 :—

Meteorological Divisions.	Temperature						Rainfall.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
Orissa	88·9	53·5	82·6	62·6	72·6	+2·4	Nil	0·06	−0·06	0·0	0·3	−0·3	Nil	0·16	62·01	53·69
South-West Bengal ...	80·3	53·9	80·3	59·2	69·7	+3·7	0·04	0·10	−0·06	0·3	0·4	−0·1	0·04	0·29	52·41	51·85
East Bengal	81·3	54·0	78·0	57·8	67·9	+3·0	0·51	0·15	+0·36	0·9	0·5	+0·4	0·51	0·37	76·04	74·08
North Bengal	80·1	51·9	77·9	54·6	66·3	+3·3	0·27	0·14	+0·13	0·8	0·5	+0·3	0·29	0·30	73·41	70·17
North Behar	78·3	49·9	75·9	54·0	65·0	+4·1	0·19	0·17	+0·02	0·4	0·6	−0·2	0·19	0·39	57·85	48·58
South Behar	82·6	50·9	78·5	54·5	66·5	+4·5	0	0·17	−0·17	0	0·5	−0·5	0	0·40	44·16	43·74
Chutia Nagpur	82·0*	50·5*	77·6*	54·4*	66·0*	+4·5*	Nil	0·17	−0·17	0·0	0·5	−0·5	Nil	0·46	43·08	39·34

* Chyebassa not included.

METEOROLOGICAL OFFICE, BENGAL;
The 28th January 1890

A. PEDLER,
Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 19th to 25th January 1890.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature.						Hygrometry.			Rainfall past 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Jan. 1890 ...	19th ...	29·993	71·5	82·9	22·8	60·1	74·6	69·6	·658	66 8	77	.....
,, ,, ...	20th ...	·926	72·3	79·9	15·2	64·7	72·1	68·6	·653	66·6	83	.....
,, ,, ...	21st ...	·984	69·1	77·9	17·6	60·3	70·6	66·1	·582	63·2	78	.....
,, ,, ...	22nd ...	·992	68·9	78·9	20·0	58·9	71·0	65 0	·539	61·1	71	...
,, ,, ...	23rd ...	·955	70·2	81·4	22·5	58·9	73·6	65·6	·525	60·3	63	.....
,, ,, ...	24th ...	·878	73·5	82·9	18 8	64·1	76·4	70·6	·672	67·4	74	.....
,, ,, ...	25th ...	·916	70·3	76·9	13·2	63·7	68·4	65·0	·573	62·8	83	1·02

	Inches.
The mean 10 A.M. pressure of the seven days	29·949
	°
The mean temperature of the seven days	70·8
The extreme variation of temperature	24·0
The maximum temperature	82·9
	%
The mean 10 A.M. relative humidity of the seven days	76
	Inches.
The total fall of rain from 19th to 25th January 1890	1·02

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. LITTLE,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;
The 27th January 1890.

Results of the Meteorological Observations taken at the Alipore Observatory from 19th to 25th January 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature. Mean.	Maximum.	Range.	Minimum.	Hygrometry. Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Wind. Prevailing direction.	Miles recorded.	Rain.	Weather.
1890.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Jan.	19th	130·8	9·4	29·897	69·7	81·1	23·1	58·3	65·3	0·571	62·7	80	SW by S, SW and S by E.	96	Nil	Clear, ≏, —.
,,	20th	131·0	6·5	·854	70·9	79·0	14·7	64·3	66·5	·592	63·7	79	S by E, NNW and variable.	89	,,	Chiefly cloudy, o.
,,	21st	132·1	8·8	·909	68·1	76·4	16·1	60·3	63·7	·529	60·6	77	NE, NNW and calm	62	,,	Chiefly clear, ≏.
,,	22nd	129·4	8·9	·901	67·4	77·8	20·0	57·8	62·3	·498	58·8	76	WNW and calm ...	35	,,	Chiefly clear, ≏, —.
,,	23rd	131·1	9·5	·862	68·5	79·2	21·9	57·3	63·3	·517	59·9	76	SSW, SW and calm	59	,,	Clear, ≏, —.
,,	24th	133·3	9·3	·803	72·6	81·7	18·0	63·7	68·6	·651	66·1	81	SSE, SSW and variable.	161	,,	Chiefly clear, ≏.
,,	25th	132·7	8·1	·860	66·8	75·7	12·9	62·8	63·4	·539	61·0	82	NNW and calm ...	79	0·77	Chiefly cloudy, o, p.

		Inches.
The mean pressure of the seven days		29·870
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...		30·005
		Hours.
The total number of hours of bright sunshine		60·5
The maximum possible number of hours of sunshine		76·6
		°
The mean temperature of the seven days		69·2
The average temperature of the corresponding period for 24 years, S.-G.'s Office		68·4
The extreme variation of temperature		24·1
The maximum temperature		81·7
		Miles.
The highest velocity of the wind in one hour		14
		lbs.
The highest pressure of wind on one square foot	Not measurable.	
		%
The mean relative humidity		79
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office		70
		Inches.
The total-fall of rain from 19th to 25th January 1890		0·77
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		0·05
The total fall from 1st to 25th January 1890		0·77
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		0·19

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, p passing temporary showers, ≏ dew; — fog.

C. Little,
For Meteorological Reporter to the Govt. of India.

Meteorological Office, Govt. of India;
Calcutta, the 27th January 1890.

MEMORANDUM.

BIRTHS and deaths were registered in the principal Municipalities in Bengal during the week ending 11th January 1890, at the rates, respectively, of 22·8 and 25·9 per 1,000 of population, against 25·8 and 23·7 per 1,000 during the preceding week ending 4th January, indicating a retrogression in the registration of births and an increase in that of deaths.

2. The highest proportions of births and deaths were returned from the following Municipalities :—

Births.	Ratio per *mille.*	*Deaths.*	Ratio per *mille.*
Chupra	42·3	Poori	58·7
Bali	42·1	Arrah	58·6
Arrah	38·3	Jessore	55·1
Rampore Beaulcah	36·8	Darjiling	44·5
Midnapore	31·0	Chittagong	42·3
Comillah	30·8	Ranaghat	41·9
Durbhanga	30·7	Burdwan	39·7
Jessore	30·6	Comillah	38·5
		Hughli and Chinsurah	36·1
		Dacca	33·7

3. The specific diseases, as noted below, proved fatal at the rates exhibited opposite them :—

	Ratio per *mille* during the weeks ending—	
	11th January 1890.	4th January 1890.
Cholera	2·4	2·2
Small-pox	·4	·5
Fever	11·5	9·8
Bowel-complaints	3·1	3·6
Injury	·4	·2
Other causes	8·1	7·3

indicating chiefly, that the mortality from fever was higher during the week under notice than during the preceding week ending 4th January.

4. Of the diseases mentioned above, small-pox was noticeably severe in Poori town, there being seven deaths (mortality 14·7 per 1,000 of population), and bowel-complaints prevailed in Hughli and Chinsurah Municipality (mortality 14·7 per 1,000 population), while cholera, fever and the maladies coming under the head of "Other causes" were reported to have been notably fatal in the following Municipalities :—

Cholera.	Ratio per *mille.*	*Fever.*	Ratio per *mille.*	*Other causes.*	Ratio per *mille.*
Jessore	30·7	Arrah	49·0	Midnapore	23·2
Chittagong	9·4	Darjiling	44·5	Poori	18·9
Burdwan	9·2	Purneah	24·2	Dacca	14·9
Howrah	6·3	Rampore Beaulcah ...	23·6	Durbhanga	12·6
Dacca	3·9	Chittagong	21·1	Bhagulpore	11·8
				Gya	10·2
				Chupra	10·1

5. The death-rates under the heads of *Sex*, *Class* and *Age* stood as follows :—

According to Sex.	Ratio per *mille.*	*According to Class.*	Ratio per *mille.*	*According to Age.*	Ratio per *mille.*
Males	30·4	Christians	14·9	Under 1 year ...	172·1
Females	21·2	Hindus	25·8	1 and under 5 years ...	25·2
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population ...	143	Mahomedans ...	26·5	5 „ 10 „ ...	13·7
		Budhists	25·7	10 „ 15 „ ...	9·7
		Other classes ...	76·8	15 „ 20 „ ...	14·1
				20 „ 30 „ ...	16·0
				30 „ 40 „ ...	23·7
				40 „ 50 „ ...	22·4
				50 „ 60 „ ...	32·9
				60 years and upwards ...	66·4

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

The 27th January 1890.

1	2	3			4			5			6	7							8						9	10		11		12
DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—																		
					NUMBER OF—			RATIO PER 1,000 OF POPULATION PER ANNUM.				Disease.														Sex.				
												DEATHS FROM—							RATIO PER 1,000 OF POPULATION PER ANNUM.						Ratio of deaths per 1,000 of population per annum in the previous week.	DEATHS.		RATIO PER 1,000 OF POPULATION PER ANNUM.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.		Males.	Females.	Males.	Females.	Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population.
Burdwan ...	Burdwan	18,663	16,017	34,080	9	6	15	13·7	9·2	22·9	150	6	...	11	5	...	4	26	9·2	...	16·9	7·6	..	6·1	39·7	44·2	17	9	48·9	29·2	165
Midnapore ...	Midnapore ...	16,927	16,633	33,560	10	10	20	15·5	15·5	31·0	100	...	...	1	2	...	15	18	...	...	1·5	3·1	...	23·2	27·9	26·3	12	6	36·9	18·8	200
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	5	7	12	8·2	11·5	19·7	71	2	...	9	9	...	2	22	3·3	...	14·7	14·7	...	3·3	36·1	47·6	10	12	32·8	39·4	82
Serampore ...	Serampore ...	13,559	12,937	26,496	8	6	14	4·6	3·4	8·0	133	1	..	9	5	...	8	23	·6	...	5·1	2·9	...	4·6	13·2	39·3	14	9	13·7	12·4	108
	Utterpara	3,046	2,464	5,510	...	...	...	...	...	...	.....	1	...	...	1	...	1	3	3·5	...	...	3·5	...	3·5	10·5	84·9	2	1	13·3	7·5	186
Howrah ...	Howrah	53,153	37,660	90,813	22	18	40	12·6	10·3	22·9	122	11	...	24	3	...	7	45	6·3	...	13·7	1·7	...	4·0	25·8	24·6	34	11	33·3	15·2	220
	Bali	7,836	6,979	14,815	6	6	12	21·0	21·0	42·1	100	1	...	2	3	...	...	6	3·5	...	7·0	10·5	...	...	21·0	28·1	5	1	33·2	7·5	471
Nuddea ..	Kishnaghur ...	13,263	14,214	27,477	5	4	9	9·5	7·5	17·0	125	...	...	4	...	...	3	7	...	...	7·5	...	...	5·7	13·2	13·2	6	1	23·5	3·7	766
	Ranaghat	4,028	4,655	8,683	...	...	...	...	...	...	.....	3	...	1	...	1	2	7	17·9	...	6·0	...	6·0	12·0	41·9	35·9	3	4	38·7	44·7	86
	Santipore	13,708	15,979	29,687	2	2	4	3·5	3·5	7·0	100	...	...	6	...	...	...	6	...	...	10·5	...	...	...	10·5	12·3	3	3	11·4	9·8	122
Jessore ...	Jessore	4,830	3,665	8,495	4	1	5	24·5	6·1	30·6	400	6	...	1	...	...	2	9	36·7	...	6·1	...	...	12·2	55·1	49·0	6	3	64·6	42·6	152
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	5	9	14	13·1	23·6	36·8	55	...	...	9	...	...	1	10	...	...	23·6	...	...	2·6	26·3	31·5	5	5	24·2	28·8	86
Darjiling ...	Darjiling	4,579	2,439	7,018	...	2	2	...	14·8	14·8	No male birth.	...	...	6	...	...	...	6	...	...	44·5	...	...	...	44·5	37·0	5	1	56·8	21·3	267
Dacca ...	Dacca	42,782	37,379	80,161	18	17	35	11·7	11·0	22·7	105	6	...	12	9	2	23	52	3·9	...	7·8	5·8	1·3	14·9	33·7	24·7	36	16	43·8	22·3	195
	Naraingunj ...	7,605	4,956	12,561	3	2	5	12·4	8·3	20·7	150	3	...	1	1	...	2	7	12·4	...	4·1	4·1	...	8·3	29·0	53·8	4	3	27·4	31·5	87
Chittagong ...	Chittagong ...	13,340	8,790	22,130	4	1	5	9·4	2·3	11·7	400	4	...	9	2	...	3	18	9·4	...	21·1	4·7	...	7·0	42·3	30·5	16	2	61·4	11·8	563
Tipperah ...	Comillah	8,153	5,353	13,506	2	6	8	7·7	23·1	30·8	33	1	...	4	2	...	3	10	3·9	...	15·4	7·7	...	11·6	38·5	57·7	6	4	38·3	35·9	100
Patna	Patna City ...	78,762	81,475	160,237	21	20	41	6·8	6·5	13·3	105	1	1	9	5	2	11	29	·3	·3	2·9	1·6	·6	3·6	9·4	9·4	18	11	11·9	7·0	157
Gya	Gya	38,290	37,831	76,121	16	14	30	10·9	9·6	20·5	114	...	...	23	...	...	15	38	...	...	15·7	...	...	10·2	26·0	21·9	16	22	21·7	30·2	70
Shahabad ...	Arrah	20,960	22,505	43,465	12	20	32	14·4	23·9	38·3	60	...	1	41	4	1	2	49	...	1·2	49·0	4·8	1·2	2·4	58·6	13·2	22	27	54·6	62·4	87
Mozufferpore .	Mozufferpore ...	23,084	19,658	42,742	9	10	19	10·9	12 2	23·1	90	...	...	2	2	...	5	9	...	...	2·4	2·4	...	6·1	10·9	4·9	5	4	11·3	10·6	110
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	23	16	39	18·1	12·6	30·7	143	...	...	17	...	...	16	33	...	...	13·4	...	...	12·6	26·0	23 6	18	15	27·7	24·1	112
Sarun	Chupra	25,116	26,554	51,670	24	18	42	24·2	18·1	42·3	133	...	...	2	2	1	10	15	...	...	2·0	2·0	1·0	10·1	15·1	12 1	12	3	24·8	5·9	480
Bhagulpore ...	Bhagulpore ...	29,640	27,813	57,453	19	10	29	17·2	9·0	26·2	190	...	...	7	2	...	13	22	...	...	6·3	1·8	...	11·8	19·9	19 0	13	9	22·8	16·8	137
Monghyr ..	Monghyr	28,154	29,366	57,520	20	6	26	18·1	5·4	23·5	333	...	...	12	3	2	8	25	...	...	10·3	2·7	1·8	7·2	22·6	19·9	13	12	24·0	21·2	114
Purneah ...	Purneah	8,463	6,553	15,016	1	...	1	3·5	...	3·5	No female birth.	...	...	7	...	...	...	7	...	...	24·2	...	...	..	24·2	6·9	4	3	24·6	23·8	104
Poori	Poori	13,247	11,537	24,784	1	6	7	2·1	12·6	14·7	16	2	7	6	4	...	9	28	4·2	14·7	12·6	8·4	...	18·9	58·7	51·8	17	11	66·7	49·6	154
	Total ...	550,986	510,588	1,061,574	249	217	466	12·2	10·6	22·8	115	48	9	235	64	9	165	530	2·4	·8	11·6	3·1	..	8·1	25·0	23·7					

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Class. Deaths among— Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Ratio per 1,000 of population per annum. Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan ...	Burdwan	...	18	8	...	...	...	30·5	40·5	...	...
Midnapore ...	Midnapore ...	...	15	3	...	...	...	30·1	21·6	..	...
Hughli ...	Hughli and Chinsurah	...	18	4	...	...	.	37·0	73·7	...	...
Serampore ...	Serampore ...	...	21	2	...	..		16·0	5·1	...	..
	Utterpara	...	3	...	...	...	...	11·6	...	..	...
Howrah ...	Howrah	...	29	15	...	1		22·1	38·6	..	215·8
	Bali	...	5	1	...	...	...	19·4	33·7	...	...
Nuddea ...	Kishnaghur ...	...	5	2	...	...	...	14·0	12·6	...	...
	Ranaghat	...	6	1	...	...	...	42·6	25·1	..	...
	Santipore	...	5	1	...	...	...	12·6	5·8	...	...
Jessore ...	Jessore	...	6	3	...	...	...	69·2	40·3	...	...
Rajshahye ...	Rampore Beauleah ..		5	5	...	...	...	26·2	26·5	..	...
Darjiling ...	Darjiling	...	6	...	...	...	...	67·9	..	.	...
Dacca	Dacca	...	30	22	...	...	...	38·7	28·4	...	...
	Narainganj ...	...	3	4	...	...	...	21·7	32·8	...	...
Chittagong ..	Chittagong ...	...	3	14	1	...	...	28·9	47·6	216·7	...
Tipperah ...	Comillah	...	2	8	...	...	...	17·5	56·3	...	...
Patna	Patna City ...	...	19	10	...	...	...	8·3	12·7	...	..
Gya ...	Gya	...	31	7	...	...	...	26·9	22·6	...	..
Shahabad ...	Arrah	...	41	8	...	...	...	68·7	33·5	...	...
Mozufferpore ..	Mozufferpore ...	...	6	3	...	...	...	10·4	12·5	...	...
Durbhanga ...	Durbhanga ...	...	20	13	...	...	...	21·5	38·5	...	...
Sarun	Chupra	2	9	4	...	...	972·0	11·8	17·5	...	...
Bhagulpore ...	Bhagulpore ...	...	16	6	...	...	...	20·9	18·1	...	...
Monghyr ...	Monghyr	...	19	6	...	...	...	22·1	24·8	...	...
Purneah ...	Purneah	...	7	...	...	...	...	30·7	...	.	...
Poori ...	Poori	...	28	...	...	...	...	59·4	...	...	...
	TOTAL ...	—	376	150	1	1	14·9	25·8	26·5	25·7	76·8

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Age. Deaths. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 60 years.	60 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	3	1	2	1	.	5	9	1	2	2
Midnapore ...	Midnapore ...	6	1	1	...	2	1	2	3	1	1
Hughli ...	Hughli and Chinsurah	1	3	1	1*	1	4	5	2	1	3
Serampore ...	Serampore ...	4	6	1	...	...	5	2	3	...	2
	Utterpara	.	1	...	...	...	...	.	2	...	...
Howrah ...	Howrah	7	4	1	1	1	8	14	3	3	3
	Bali	..	...		...	...	...	2	1	...	3
Nuddea ...	Kishnaghur ...	2	1	...	...	.	...	2	1	...	1
	Ranaghat	...	...	3	...	...	2	1	...	...	2
	Santipore	...	1	..	1	...	.	1	1	1	1
Jessore ...	Jessore	.	1	..	..	1	3	1	1	1	1
Rajshahye ...	Rampore Beauleah ..	1	..	2	..	...	1	1	...	...	5
Darjiling ...	Darjiling	2	..	...	.	...	...	3	...	1	...
Dacca	Dacca	7	2	5	3	4	6	6	5	7	7
	Narainganj ...	2	...	...	...	...	1	4	..	...	.
Chittagong ..	Chittagong ...	1	1	2	1	...	4	2	4	2	1
Tipperah ...	Comillah	3	1	...	...	...	...	.	3	...	3
Patna	Patna City ...	6	2	2	...	...	4	3	2	3	7
Gya ...	Gya	5	7	...	...	...	4	3	3	5	11
Shahabad ...	Arrah	6	3	3	3	6	8	9	3	2	6
Mozufferpore ..	Mozufferpore ...	1	..	...	2	...	...	...	2	...	4
Durbhanga ...	Durbhanga ...	2	5	2	3	2	.	3	3	5	8
Sarun	Chupra	9	...	...	...	1	1	...	1	1	2
Bhagulpore ...	Bhagulpore ...	3		.	...	2	1	1	4	7	4
Monghyr ...	Monghyr	9	...	1	1	1	1	5	3	...	4
Purneah ...	Purneah	.	1	2	...	...	1	..	...	1	2
Poori ...	Poori	1	4	2	1	1	3	1	3	6	1
	TOTAL ...	84	45	29	18	22	65	80	54	49	84

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Age. Ratio per 1,000 of population per annum. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 60 years.	50 and under 60 years.	60 years and upwards
Burdwan ...	Burdwan	220·4	23·0	44·6	20·7	..	32·8	60·3	11·8	42·4	70·2
Midnapore ...	Midnapore ...	419·9	22·1	13·0	...	32·9	7·1	18·5	41·9	25·2	29·4
Hughli ...	Hughli and Chinsurah	64·5	70·3	18·0	21·0	20·7	33·5	45·5	24·9	20·0	75·3
Serampore ...	Serampore ...	100·8	56·3	8·3	...	...	11·5	5·4	13·3	...	27·7
	Utterpara	...	104·1	..	...	..	..	...	53·7	...	...
Howrah ...	Howrah	170·4	57·5	8·3	7·9	7·1	18·3	37·8	13·3	28·4	41·6
	Bali	...		...	...	...	...	37·3	26·9	...	213·1
Nuddea ...	Kishnaghur ...	200·7	21·1	...	...	...	...	24·3	15·9	...	39·1
	Ranaghat	...	...	93·3	...	...	69·0	41·7	...	...	182·8
	Santipore	...	17·9	...	17·9	...	...	12·0	14·8	22·2	26·5
Jessore ...	Jessore	...	105·3	...	...	71·0	77·5	34·0	40·5	92·4	113·5
Rajshahye ...	Rampore Beauleah ..	125·1	...	50·0	...	...	12·5	15·4	...	...	270·0
Darjiling ...	Darjiling	559·5	...	...	..	...	...	108·9	...	213·1	...
Dacca	Dacca	191·8	14·1	26·2	19·6	28·5	20·4	26·8	31·0	76·9	65·3
	Narainganj ...	372·8	...	...	...	...	19·5	97·2	...	...	...
Chittagong ..	Chittagong ...	92·4	23·4	41·6	20·2	...	44·9	31·2	92·2	95·9	65·3
Tipperah ...	Comillah	525·3	39·8	...	...	...	...	...	118·7	...	230·1
Patna	Patna City ...	72·4	7·1	6·2	...	...	7·2	6·7	5·5	11·0	26·4
Gya ...	Gya	145·3	57·3	...	...	...	14·1	12·3	16·0	39·6	111·1
Shahabad ...	Arrah	242·2	35·2	33·4	35·3	97·1	53·0	72·7	33·3	33·6	108·2
Mozufferpore ..	Mozufferpore ...	54·5	...	...	26·3	...	...	...	20·8	...	85·5
Durbhanga ...	Durbhanga ...	66·5	34·2	13·3	29·1	25·9	...	14·0	21·0	59·3	130·2
Sarun	Chupra	331·7	..	...	...	15·0	5·6	...	8·6	12·6	30·6
Bhagulpore ...	Bhagulpore ...	130·7	...	...	...	24·3	4·8	5·6	33·0	85·5	57·7
Monghyr ...	Monghyr	315·2	...	7·4	9·1	13·8	5·0	29·1	24·5	...	58·0
Purneah ...	Purneah	...	43·0	65·8	...	...	15·8	...	...	55·5	128·9
Poori ...	Poori	680·5	115·7	45·4	27·7	28·0	49·2	12·8	43·9	120·8	28·8
	TOTAL ...	172·1	25·2	13·7	9·7	14·	16·0	23·7	22·4	32·9	63·4

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

W. H. GREGG, *Dir. Publ. Health, Camb.*

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

NUDDEA RIVERS.

Statement showing quantities of Goods carried during the month of November 1889.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
91	1. Grain ...	389	4,217	4,606	2,75,726	4,606	2,75,726	
...	2. Cotton ...	.....	.....	.....	.....	...	...	
01	3. Oilseeds ...	16	1,301	1,317	1,75,965	1,317	1,75,965	
07	4. Salt ...	3,898	.....	3,898	3,33,993	3,898	3,33,993	
...	5. Piece-goods ...	.....	...	.....	.....	.....	.....	
14	6. Metal ..	50	19	69	24,830	69	24,830	
25	7. Building materials	151	36	187	1,764	187	1,764	
39	8. Miscellaneous ...	2,210	7,063	9,273	13,74,310	9,273	13,74,310	
72	9. Fuel ...	734	101	835	10,425	835	10,425	
2 rafts	10. Timber ...	852 c. ft.	520 c. ft.	1,372 c. ft.	2,838	1,372 c. ft.	2,838	
6 „	11. Bamboos ...	93 „	1,600 „	1,693 „	169	1,693 „	169	
,949 & 8 rafts.	12. Total ...	7,448 & 945 c. ft.	12,737 & 2,120 c. ft.	20,185 & 3,065 c. ft.	22,00,020	20 185 & 3,065 c.ft.	22,00,020	
,228 & 4 rafts.	13. Total of same month last year	5,689 & 166 c. ft.	18,185 & 3,698 c. ft.	23,874 & 3,864 c. ft.	28,11,085	23,874 & 3,864 c. ft.	28,11,085	

	Up.	Down.	Total.
4. Total number of boats plying cargo No.	876	1,073	1,949
4a. Ditto empty boats, steamers, &c., No.	456	111	567
5. Total number of boats plying passenger No.	995	1,622	2,617
5a. Ditto empty boats „	61	24	85
16. Total registered tonnage, cargo Tons	17,726	26,817	44,543
17. Total registered tonnage, passenger Tons	447	335	782
18. Ton-mileage ..	.....	.....	.....
19. Estimated value of cargo Rs.	8,35,223	13,61,790	21,97,013
20. Number of passengers No.	20,797	13,884	34,681
21. Rafts, bamboos C. ft.	93	1,600	1,693
22. Do., bullahs „	852	520	1,372
23. Estimated value of rafts Rs.	1,287	1,720	3,007
24. Tollage on boats „	4,809-6-6	7,411-0-6	12,220-7-0
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	6-0-0	11-10-0	17-10-0
27. Total tollage on boats per ton-mile* ...	.....	.....	.....
28. Ditto on rafts per 100 cubic feet ... Rs.	.....	.....	0-9-3

	Rs.	A.	
Total tollage of month—24+25+26 ...	12,238	1	
Total tollage of same month last year ...	13,321	1	

Memorandum of Tollage.

	Rs.	A.	
1. Balance not recovered on the 1st of the month ...	480	2	
2. Tollage per month ...	12,238	1	
3. Total ...	12,718	3	
4. Amount paid into Treasury during the month ...	12,349	4	
5. Balance due at the end of the month ...	368	15	

* Boats in these rivers do not pay per mile.

Abstract for the month of November 1889 *as compared with the corresponding month of the previous year.*

	1889-90. During the month.	1889-90. To end of the month.	1888-89. During the month.	1888-89. To end of the month
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Tollage	12,238 1 0	1,46,101 3 9	13,321 1 6	1,54,152 5 2

CALCUTTA,
The 28th January 1890.

G. A. G. SHAWE,
Under-Secy. to the Govt. of Beng...

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

ORISSA COAST CANAL SYSTEM.

LENGTH OF CANAL OPEN, 97½ MILES.

Statement showing quantities of Goods carried during the month of November 1889.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.	
		Quantity—Tons.			Value.	Quantity.	Value.
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.
78	1. Grain ...	611	215	826	42,487	826	42,487
...	2. Cotton ...	.....	.....	.....	.....	.....	.....
7	3. Oilseeds ...	35	.....	35	3,040	35	3,040
18	4. Salt ...	.....	140	140	16,915	140	16,915
5	5. Piece-goods ...	.....	43	43	8,100	43	8,100
2	6. Metal ...	.....	3	3	575	3	575
14	7. Building materials	32	22	54	543	34	383
516	8. Miscellaneous ...	466	322	788	1,01,805	788	1,01,775
8	9. Fuel ...	.....	81	81	606	81	606
16 rafts	10. Timber ...	1,977 c. ft.	.....	1,977 c. ft	1,335	1,977 c. ft.	1,335
32 „	11. Bamboos ...	1,300 „	.....	1,300 „	141	1,300 „	141
348 & 48 rafts.	12. Total ...	1,144 & 3,277 c. ft.	826	1,970 & 3,277 c. ft.	1,75,547	1,950 & 3,277 c.ft.	1,75,357
836 & 46 rafts.	13. Total of same month last year	2,053 & 2,927 c. ft.	463 & 237 c. ft.	2,516 & 3,164 c. ft.	1,54,036	2,516 & 3,164 c.ft.	1,54,036

	Up.	Down.	Total.
4. Total number of boats plying cargo No.	340	308	648
5. Total number of boats plying passenger No.	78	78	156
6. Total registered tonnage, cargo Tons	2,698	2,364	5,062
7. Total registered tonnage, passenger Tons	795	787	1,582
8. Ton-mileage ...	116,000	119,161	235,161
9. Estimated value of cargo Rs.	79,528	94,543	1,74,071
10. Number of passengers No.	1,485	1,361	3,346
11. Rafts, bamboos C. ft.	1,300	.....	1,300
12. Do., bullahs „	1.977	.....	1,977
13. Estimated value of rafts Rs.	1,476	.....	1,476
14. Tollage on boats „	2,036-2-3	2,092-1-6	4,128-3-9
15. Compounded tollage on boats Rs.	.....	4-8-0	4-8-0
16. Tollage on rafts „	75-12-0	.. ...	75-12-0
17. Total tollage on boats per ton-mile Rs.	.....	... ..	0-0-3·3
18. Ditto on rafts per 100 cubic feet Rs.	.....	.....	2-4-11

	Rs. A.
Total tollage of month—24+25+26 ...	4,208 7
Total tollage of same month last year ...	3,647 14

Memorandum of Tollage.

	Rs. A.
1. Balance not recovered on the 1st of the month	4,372 13
2. Tollage per month ...	4,208 7
3. Total ...	8,581 4
4. Amount paid into Treasury during the month ...	4,178 10
5. Balance due at the end of the month ...	4,402 10

Abstract for the month of November 1889 as compared with the corresponding month of the previous year.

	1889-90.		1888-89.	
	During the month.	To end of the month.	During the month.	To end of the mon
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A.
llage	4,208 7 9	37,829 0 6	3,647 14 6	42,143 4

CALCUTTA,
The 28th January 1890.

G. A. G. SHAWE,
Under-Secy. to the Govt. of Benga

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 25th January 1890, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 25th January 1890.			Week ending Saturday, the 26th January 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,774	3,14,270	5,443	1,803	5,06,175	8,984
Jute	188	1,06,583	2,036	142	97,075	1,785
Firewood	72	47,300	720	125	61,400	878
Other articles	937	2,09,305	3,186	1,244	2,53,510	3,715
Total ...	2,971	6,77,458	11,385	3,314	9,18,160	15,312

Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of December 1889, as compared with the same month of the previous year.

Staples.	1888.		1889.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1888.	1889.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	452	.....	507	.....	652	507	.....	145
Cotton, raw	25	.....	6	.....	25	6	.....	19
Cotton twist and yarn—								
1.—European	1	1	.....	.....	2	...	.....	2
Cotton piece-goods—								
1.—European	47	1	55	.....	48	55	7	.....
Dyes and tans—								
1.—Indigo	.....	2	.....	5	2	5	3	.....
Grains—								
1.—Wheat	.....	1	.....	.....	1	.....	.....	1
2.—Rice	1	740	62	1,071	717	1,133	386	....
4.—Others	21	57	29	18	18	78	47	31
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed	.....	7	.....	.....	7	.....	.....	7
b.—Undressed	...	1	.....	3	1	3	2	.....
2.—Skins of sheep, goats and small animal—								
a.—Dressed	.....	1	.....	.....	1	.....	.....	1
Jute—								
1.—Raw	.....	37	.....	138	37	138	101	.....
2.—Gunny bags and cloths	20	2	35	3	22	38	16	.....
Leather, manufactured	8	.....	5	.....	8	5	.....	3
Metals—								
2.—Iron	29	.....	10	.....	29	10	.....	19
4.—Others	8	7	7	2	15	9	.....	5
Oils—								
1.—Castor	1	.....	.....	.....	1	.....	.....	1
2.—Kerosine	2	.....	6	.....	2	6	4	.....
3.—Others	13	.....	8	.....	13	8	.....	5
Oilseeds—								
1.—Linseed	.....	16	...	.....	16	.....	.....	16
2.—Mustard and rape	99	.....	29	.....	99	29	.....	70
3.—Til or gingelly ...	.....	.....	7	.....	.....	7	7	.....
6.—Others	.....	3	.....	.....	3	.....	.....	3
Provisions—								
1.—Ghee	.....	.....	4	.....	.....	4	4	.....
2.—Dried fruits and nuts	7	.....	4	.....	7	4	.....	3
3.—Others	64	.....	63	.....	68	63	.....	5
Railway plant and rolling-stock	8	21	29	4	29	33	4	.....
Salt	38	.....	27	.....	38	27	.....	11
Silk, raw—								
2.—Indian	2	7	29	8	9	37	28	.....
Silk piece-goods—								
2.—Indian	.....	5	.....	4	5	4	.....	1
Stone and lime	6	3	9	.....	9	9	.....	.....
Sugar—								
1.—Drained	19	.....	18	.....	19	18	... ..	1
2.—Undrained	4	.....	85	.....	4	85	81	.... .
Tobacco	5	1	.....	.....	6	.....	.....	6
Timber	1	.....	3	.....	1	3	2	.. ...
All other articles of merchandise	56	18	45	72	74	117	43	.....
Total ...	1,141	937	1,082	1,328	2,078	2,410	688	355

Increase.	Tons.
Cotton piece-goods—	
(1) European	7
This increase is due to steamer service between Jeaganj and Calcutta being stopped for want of sufficient water.	
Grains—	
(2 ice	386
This increase is due to greater export owing to high market rate at Calcutta.	
Jute—	
(1) Raw	101
This increase is due to greater export owing to high rate in some parts of Hooghly district.	

	Tons.
(2) Gunny-bags and cloths	16
This increase is due to the import of gunny-bags for export of rice.	
Oilseeds—	
(3) Til or gingelly	7
This increase is due to there being no traffic under this head last year.	
Silk, raw—	
(2) Indian	28
This increase is due to import of tussur silk cocoons from Raniganj district.	
Sugar—	
(2) Undrained	81
This increase is due to greater import owing to high rate at Azimganj.	
DECREASE.	
Coal	145
This decrease is due to less import owing to previous stock not being exhausted.	
Cotton, raw	19
This decrease is due to previous stock not being exhausted.	
Grains—	
(4) Others	31
This decrease is due to failure of kollyee crops this year.	
Hides and skins—	
(1) Hides of cattle—	
(*a*) Dressed	7
This decrease is due to non-carriage of such articles this year.	
Metals—	
(2) Iron	19
This decrease is due to less demand this year.	
Oilseeds—	
(1) Linseed	16
This decrease is due to non-export this year owing to high rate at Azimganj	
(2) Mustard and rape	70
This decrease is due to less import owing to local dull market rate.	
Salt	11
The decrease is due to import by boat in previous months.	
Tobacco	6
The decrease is due to non-carriage this year.	

R. G. MOOKERJEE,
Manager, Nalhati State Railway.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 18th January 1890, *on* 1,525½ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	*275,259	*3,16,510 12 0	23,96,401 0	5,73,138 13 0	19,790 8 0	9,09,440 1 0	65,782½	90,544½	156,327
Or per mile of railway	.....	207 7 8	.....	375 11 3	12 15 7	596 2 6	.....	.....	.....
For previous 2 weeks of half-year	361,717	4,16,729 7 0	42,50,665 20	9,60,460 2 0	30,683 8 0	14,07,873 1 0	100,533½	146,312½	246,846
Total for 3 weeks ...	636,976	7,33,240 3 0	66,47,066 20	15,33,598 15 0	50,474 0 0	23,17,313 2 0	166,315½	236,857	403,173
COMPARISON.									
Total for corresponding week of previous year	247,247½	2,92,502 14 4	27,22,496 0	5,98,422 9 8	14,587 15 1	9,05,513 7 1	66,271	93,042	160,21
Per mile of railway corresponding week of previous year ...	.....	191 11 10	.....	392 4 6	9 9 0	593 9 4	.....	.....	.....
Total to corresponding date of previous year	632,194½	7,53,877 10 10	76,29,282 30	16,02,578 13 3	41,402 4 6	24,87,858 12 7	177,513	273,536	451,04

* The increase in coaching traffic is principally due to the "Magh Mela" held at Allahabad.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1888 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,525½	9,05,513	594	1,525½	9,09,440	596	1,525½	3,50,27,584	547	1,525½	3,48,78,380	544	.....	149,204

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 18th January 1890, on 57½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings	Traffic Train-miles run.		
	Number of passengers.	Receipts	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	12,039	6,389 10 0	32,767 0	2,207 5 0	52 0 0	8,648 15 0	1,718	1,242	2,960
Or per mile of railway	210½	111 11 4	573 0	38 9 5	0 14 6	151 3 3	.....	.....	..
For previous 2 weeks of half-year	21,710	11,145 9 0	53,625 30	3,661 13 0	72 13 0	14,880 3 0	2,746	1,016	3,762
Total for 3 weeks ...	33,749	17,535 3 0	86,392 30	5,869 2 0	124 13 0	23,529 2 0	4,464	2,258	6,722
Comparison									
Total for corresponding week of previous year	11,937	6,328 14 10	25,557 20	1,882 5 0	33 0 0	8,244 3 10	1,936	458	2,394
Per mile of railway corresponding week of previous year ...	209	110 10 4	447 0	32 15 6	0 9 3	144 2 1	.....	... ..	....
Total to corresponding date of previous year	34,800	18,314 1 10	70,202 0	4,819 8 0	102 2 9	23,235 12 7	5,102	1,336	6,438

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1888 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked	Receipts.	Per mile worked.	Mean mileage worked	Total receipts.	Per mile worked per week.	Mean mileage worked	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	8,244	144	57½	8,649	151	57½	3,91,994	163	57½	4,05,960	169	13,966	.....

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 18th January 1890, on 22½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	19,578	4,838 12 0	10,374 10	375 1 0	8 4 0	5,212 1 0	902	66	968
Or per mile of railway	.....	217 0 4	.....	16 13 9	0 5 11	234 4 0	.....	... ..	....
For previous 2 weeks of half-year	28,832	7,334 11 0	17,311 0	722 3 0	10 8 0	8,067 6 0	1,419	99	1,518
Total for 3 weeks ...	48,410	12,163 7 0	27,685 10	1,097 4 0	18 12 0	13,279 7 0	2,321	165	2,486
Comparison.									
Total for corresponding week of previous year	19,791	4,887 13 9	11,216 0	363 9 0	3 1 9	5,254 8 6	896	72	968
Per mile of railway corresponding week of previous year ...	.....	219 10 10	... ...	16 5 5	0 2 3	236 2 6	.....	.....	.....
Total to corresponding date of previous year	50,904	12,593 5 0	26,302 20	902 8 0	14 3 9	13,510 0 9	2,434	184	2,618

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1888 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
22½	5,255	236	22½	5,212	234	22½	2,20,393	236	22½	2,17,275	232	.....	3,118

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for first 11 days of January 1890, on 747 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for first 11 days ...	270,740	1,18,230 0 0	9,71,200 0	2,36,940 0 0	26,810 0 0	3,81,980 0 0	36,369	58,769	95,138
Or per mile of railway ...	181	79 0 0	650 0	158 0 0	*5 0 0	242 0 0	.....	.....	.....
For previous weeks of half-year	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total for 2 weeks ...	270,740	1,18,230 0 0	9,71,200 0	2,36,940 0 0	26,810 0 0	3,81,980 0 0	36,369	58,769	95,138
COMPARISON.									
Total for corresponding 12 days of previous year	257,803	1,09,777 0 0	8,22,403 0	1,98,395 0 0	26,053 0 0	3,34,225 0 0	37,126	55,130	92,256
Per mile of railway corresponding period of previous year ...	102	82 0 0	611 0	147 0 0	*4 0 0	233 0 0	.....	.....	.....
Total to corresponding date of previous year	257,893	1,09,777 0 0	8,22,403 0	1,98,395 0 0	26,053 0 0	3,34,225 0 0	37,126	55,130	92,256

* Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR FIRST 12 DAYS OF JANUARY 1889.			RECEIPTS FOR FIRST 11 DAYS OF JANUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 12TH JANUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 11TH JANUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
673	3,34,225	248	747	3,81,980	256	673	85,76,614	311	723	*90,20,143	304	4,43,529	.....

* Audited up to week ending 23rd November 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for first 11 days of January 1890, on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for first 11 days ...	48,450	16,840 0 0	67,350 0	4,330 0 0	130 0 0	21,300 0 0	5,570	3,044	8,914
Or per mile of railway ...	194	67 0 0	269 0	17 0 0	1 0 0	85 0 0	.....	.....	.....
For previous weeks of half-year	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total for 2 weeks ...	48,450	16,840 0 0	67,350 0	4,330 0 0	130 0 0	21,300 0 0	5,570	3,044	8,914
COMPARISON.									
Total for corresponding 12 days of previous year	46,217	15,433 0 0	75,770 0	3,700 0 0	2,450 0 0	21,583 0 0	6,425	3,320	9,745
Per mile of railway corresponding period of previous year ...	185	61 0 0	303 0	15 0 0	10 0 0	86 0 0	.....	.....	.....
Total to corresponding date of previous year	46,217	15,433 0 0	75,770 0	3,700 0 0	2,450 0 0	21,583 0 0	6,425	3,320	9,745

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

RECEIPTS FOR FIRST 12 DAYS OF JANUARY 1889.			RECEIPTS FOR FIRST 11 DAYS OF JANUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 12TH JANUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 11TH JANUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	21,583	86	125	21,300	85	125	5,67,738	111	125	*5,93,777	116	26,039	.....

* Audited up to week ending 23rd November 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for first 11 *days of January* 1890, *on* 86 *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for first 11 days ...	29,270	11,290 0 0	57,640 0	5,740 0 0	500 0 0	17,530 0 0	4,030	1,088	5,124
Or per mile of railway	170	66 0 0	335 0	33 0 0	3 0 0	102 0 0	.....	.....	.....
For previous weeks of half-year	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total for 2 weeks ...	29,270	11,290 0 0	57,640 0	5,740 0 0	500 0 0	17,530 0 0	4,030	1,088	5,124
Comparison.									
Total for corresponding 12 days of previous year	27,313	8,156 0 0	11,913 0	1,315 0 0	276 0 0	9,747 0 0	4,284	1,070	5,354
Per mile of railway corresponding period of previous year	159	47 0 0	69 0	8 0 0	2 0 0	57 0 0	.....	.....	.....
Total to corresponding date of previous year	27,313	8,156 0 0	11,913 0	1,315 0 0	276 0 0	9,747 0 0	4,284	1,070	5,354

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for first 12 days of January 1889.			Receipts for first 11 days of January 1890.			Total receipts from 1st April 1888 to 12th January 1889.			Total receipts from 1st April 1889 to 11th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	9,747	57	86	17,530	102	86	2,33,221	66	86	*3,00,764	85	67,543	.....

* Audited up to week ending 23rd November 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 18*th January* 1890, *on* 27½ *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	3,166	1,050 0 0	18,181 0	1,105 0 0	13 0 0	2,168 0 0	509	254	763
Or per mile of railway	116	39 0 0	667 0	41 0 0	.....	80 0 0	.....	.....	.....
For previous one week of half-year	4,553	1,042 0 0	29,324 0	1,684 0 0	31 0 0	3,357 0 0	800	399	1,199
Total for 2 weeks ...	7,719	2,092 0 0	47,505 0	2,789 0 0	44 0 0	5,525 0 0	1,309	653	1,962
Comparison.									
Total for corresponding week of previous year	3,500	1,273 0 0	16,657 0	839 0 0	17 0 0	2,129 0 0	509	605	1,114
Per mile of railway corresponding week of previous year ...	123	46 0 0	611 0	31 0 0	1 0 0	78 0 0	.....	.....	.....
Total to corresponding date of previous year	8,553	3,160 0 0	41,388 0	2,105 0 0	39 0 0	5,350 0 0	1,381	1,367	2,748

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1888 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27½	2,129	78	27½	2,168	80	27½	80,571	74	27½	80,243	74	.....	328

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 18th January 1890, on 273 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles ru		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Tot
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	45,931	24,287 0 0	2,24,434 0	23,571 0 0	5,124 0 0	52,982 0 0	6,633	6,768	13,
Or per mile of railway	168	89 0 0	822 0	86 0 0	3 0 0	178 0 0*	.....	.....	...
For previous one week of half-year	68,548	28,612 0 0	3,42,046 0	39,248 0 0	7,435 0 0	75,295 0 0	8,437	13,668	22,
Total for 2 weeks ...	114,479	52,899 0 0	5,66,480 0	62,819 0 0	12,559 0 0	1,28,277 0 0	15,050	20,430	35,
Comparison.									
Total for corresponding period of previous year	40,547	14,795 0 0	1,37,990 0	12,816 0 0	4,133 0 0	31,744 0 0	5,237	5,631	10,
Per mile of railway corresponding week of previous year ...	149	54 0 0	505 0	47 0 0	6 0 0	107 0 0*	.....	.....	...
Total to corresponding date of previous year	103,654	37,265 0 0	3,66,700 0	32,930 0 0	8,091 0 0	78,886 0 0	14,453	14,711	29,

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1888 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1889-90.	Total decrease 1889-90
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
273	31,744	116	273	52,982	194	204·29	13,28,389	126	273	16,11,709	147	2,83,320	.....

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The Calcutta Gazette.

WEDNESDAY, FEBRUARY 5, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 25th January 1890.—The following list showing the number of members of Local Boards to be elected for each of the thanas in the district of Mymensingh is published for general information, under Rule 19 of the Rules made under clause (*a*), section 138 of the Bengal Local Self-Government Act, 1885:—

District.	Names of Local Boards.	Names of Thanas.	Number of members to be elected for the thana.
Mymensingh	Sudder for Mymensingh.	Mymensingh or Nasirabad ...	2
		Ishvargunge	2
		Fulpur	2
		Guffergong	2
		Phulbariah	2
	Tangail ...	Tangail	4
		Gopalpur	3
		Kalihati	1
	Jamalpur ...	Jamalpur	2
		Sherepur	1
		Dewangunge	2
		Nalitabari	1
	Kishoregunge ...	Kishoregunge	3
		Nikly	3
		Bazitpur	4
	Netrokona ...	Netrokona	3
		Durgapur	2
		Kenduah	3

This notification cancels the notification, dated the 1st February 1887, published at page 22, Part IB. of the *Calcutta Gazette* of the 2nd idem.

H. J. S. Cotton,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 25th January 1890.—The following list showing (*a*) the number of members fixed by the Lieutenant-Governor under sections 7 and 8, respectively, of the Bengal Local Self-Government Act, 1885, for the District and the Local Boards established in the district of Mymensigh, and (*b*) the number of members of the District Board to be elected by each of the Local Boards in the distric , is published for general inf rmation :—

District Board of	Number of members fixed for the District Board.	Local Board of	Number of members fixed for the Local Board.	Number of members of District Board to be elected by the Local Board.
Mymensingh ...	24	Mymensingh ...	15	8
		Jamalpur ...	9	2
		Tangail ...	12	3
		Kishoregunge ...	15	2
		Netrokona ...	12	2

This notification cancels the notification, dated the 1st February 1887, published at page 22, Part IB. of the *Calcutta Gazette* of the 2nd idem.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 29th January 1890.—It is hereby notified that, under section 11. Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint the following gentlemen to be members of the several Local Boards in the district of Moorshedabad : —

Local Boards.	Names of members.
Sudder ..	Baboo Kalidas Mukerji. „ Gobinda Jiban Hazra. „ Charu Kristo Chowdhury. „ Shama Churn Bose. „ Pulin Chundra Sanyal.
Lalbagh ...	Salaman Kudr Syed Wahed Ali. Mr. G. Rose. Munshi Rezaulla.
Kandi ...	Baboo Nilmadhub Rai „ Surendra Nath Rai Chowdhuri. Munshi Keramutulla Chowdhuri. Baboo Kristonath Rai Chowdhuri.
Jungipore	Baboo Kristoballav Rai. Mr. W. R. Rice. Baboo Harilall Dass. Mr. C. B. Walton.

2. The Lieutenant-Governor is pleased to appoint the following gentlemen, under section 10 of the Act, to be members of the Local Boards mentioned against their names :—

Local Boards.	Names of members.
Sudder ...	Mr. W. F. Macdonnell. Baboo Deviprosad Tewari. „ Panchuram Mandal. Mr. E. B. Hills. Sabkutulla Hazi.
Lalbagh ...	Baboo Moheshnarain Roy. „ Amrita Lal Kar. „ Baikantonath Adhicari. Bhagwan Chundra Chatterjee.
Kandi ...	Baboo Bistu Chandra Ganguli. Moulvi Razel Khair *alias* Raja Mean.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 29th January 1890.—Whereas a notification dated the 27th September 1889, declaring the intention of the Lieutenant-Governor to extend the provisions of Act IV (B.C.) of 1865 (an Act for the prohibition of the practice of inoculation) to the whole of the district of Chumparun was published at page 217, Part IB. of the *Calcutta Gazette* of the 2nd October 1889, and whereas no valid objection has been raised within one month from the date of the publication of the notification within the district, it is hereby notified that, in the exercise of the powers vested in the Local Government under section 3 of the Act, the Lieutenant Governor declares that the provisions of the Act be extended to the said district.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 1st February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Dr. E. Bovill, Civil Surgeon of Chumparun, to be a Commissioner of the Motihari Municipality in that district, *vice* Dr. R. D. Murray, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 1st February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Sudder Local Board, in the district of Bhagulpore, under section 29 of Act III (B.C.) of 1885, of Baboo Kanai Lall Singh to be their Chairman, *vice* Mr. C. P. Carpenter, C.S., transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 1st February 1890.—It is hereby notified that the Lieutenant-Governor approves the election, under section 27 of Act III (B.C.) of 1884, by the Commissioners of the Narsingunge Municipality, in the district of Dacca, of Mr. W. Rattray to be their Chairman, *vice* Mr. H. F. Wilson, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 1st February 1890.—It is hereby notified that the Lieutenant-Governor approves the election, under section 27, Act III (B.C.) of 1884, by the Commissioners of the Manicktollah Municipality, in the district of the 24-Pergunnahs, of Kumar Gopendra Krishna Deb Bahadur, C.S., to be their Chairman, *vice* Mr. Kedar Nath Roy, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 3rd February 1890.—Whereas a notification, dated the 18th October 1889, declaring the intention of the Lieutenant-Governor to sanction the imposition, under section 85 *b*), Act III (B.C.) of 1884, by the Commissioners of the South Suburban Municipality, in the district of the 24-Pergunnahs, of a rate on the annual value of all holdings situated within the Municipality, in lieu of the tax upon persons under clause (*a*) of the said section now imposed, was published at page 226, Part IB of the *Calcutta Gazette* of the 23rd idem, and whereas no objection has been raised to the proposed measure, it is hereby notified for general information that, in the exercise of the power vested in the Local Government by section 85 of the said Act, and in accordance with the recommendation of the Commissioners of the South Suburban Municipality made at a meeting, the Lieutenant-Governor sanctions the imposition by the Municipal Commissioners of the said rate within the limits of the said Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 3rd February 1890.—It is hereby notified for general information that the Lieutenant-Governor intends, in the exercise of the power vested in the Local Government by section 221 of Act III (B.C.) of 1884, and in accordance with the recommendation of the Commissioners of the North Dum-Dum Municipality, in the district of the 24-Pergunnahs, made at a meeting, to extend the provisions of Part IX of the said Act to the villages of Kadihatti and Nimta in Wards I and II respectively of the above Municipality, unless good reasons are shown to the contrary within one month from the date of the publication of this notification within the Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal

NOTIFICATION.

The 3rd February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Mr. J. Windsor, C.S., to be the Chairman of the Bettiah Municipality, in the district of Chumparun, *vice* Mr. H. Luson, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 3rd February 1890.—It is hereby notified for general information that in accordance with the recommendation of the Commissioners of the Garwah Municipality in the district of Lohardugga, made at a meeting, and in the exercise of the power conferred on him by section 9 of Act III (B.C.) of 1884, the Lieutenant-Governor intends to revise the southern and eastern boundaries of the said Municipality, unless good reasons are shown to the contrary within one month from the date of the publication of this notification within the Municipality. The revised southern and eastern boundaries are as follows:—

On the South.—From Jhanukia Ahar to the northern boundary land-mark of pucca terrace of mouzah Tenar on the right bank of the river Danroo, and thence along the right bank of the same river to the point where it meets and is crossed by the Gurwa-Peska village road.

On the East.—The Hariyara Sote from the trijunction of villages Sone Purwa, Bhoratia, and Chetna to the junction of the Hariyara Sote with the Danroo river, and thence straight to the point of Jhanukia Ahar, where it meets the southern boundary.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

ERRATUM.

The 4th February 1890.—In the notification dated 7th January 1890, containing the names of the elected and appointed members of Local Boards in the Bankoora district, published at pages 6 and 7 of Part IB of the *Calcutta Gazette* of the 8th idem, *for* "Baboo Soron Chandra Pal" *read* Baboo "Poran Chundra Pal."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 30th January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Dacca Municipality for a public purpose, viz. for the extension of the Jubilee Street in Uari, in the town of Dacca, pergunnah Jahangirnagar, zillah Dacca, it is hereby declared that for the above purpose a piece of land, measuring more or less, 3 cottahs of standard measurement, is required. The land is bounded on the North by Uari Khal; on the East by Jagabandhu Karmakar's house; on the South by Bhojohari Shaha's Street; and on the West by Dwarika Nath Chakravarti's land.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 5, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given that the undermentioned plots of the Nizamut lakhiraj State lands situated in the district of Nuddea will be put up to sale at the Collectorate of Nuddea on the 13th March 1890, corresponding with 1st Chyte 1296 B.S.

The purchasers of the plots will be subject to the following conditions :—

I.—The plots will be sold revenue free to the highest bidders above the upset price.

II.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the estates to be again put up for sale at the risk of the defaulting purchasers after issue of advertisement as in the case of original sale.

V.—The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mouzah.	Pergunnah.	Approximate area in bighas.	Annual assessment.	Upset price.	Boundaries.	Remarks.
				B. K. CH.	Rs. A. P.	Rs. A. P.		
1	Aujongachi in Bartoil.	Bahaliapara in Bartoil.	Mohamedshahye.	31 7 14	12 0 0	313 5 0	North, east, and south of jote lands of Hagooram Boi and others of Bartoil; west of the confines of mouzah Belgharia.	Mourashi jote of Banesh Chandra Sarkar of Belgachi and dwelling-house of Gopal Chandra Ghose of Bartoil.
2	Aujongachi ...	Aujongachi ...	Taragooniah	394 1 10	93 0 0	3,936 11 0	West of the dwelling-houses of Chuni Sheikh and Nabin Mandal Ghose and others, ryots of the zemindars of Chitna; north of the nij-jote lands of the aforesaid zemindars; east of the confines of Khairpur; south of the nij-jote lands of the aforesaid zemindars.	Mourashi jote of Banesh Chandra Sarkar of Belgachi.
3	Dak Adda ...	Kulberia ...	Plassey ...	1 4 8	2 12 6	40 0 0	East and north of a public road; south and west of jote lands of Brojo Lal Rai.	Plot No. I, khas Nizamut.
							South of jote lands of Gurudoyal Sinha and Bhikoo Mandal; east and north of jote lands of Punchanan Rai; west of jote lands of Bani Mandal.	Plot No. II, khas Nizamut.

Nuddea Collectorate, the 14th January 1890.

N. K. Bose, for Collector.

NOTICE is hereby given that the undermentioned plot of the Nizamut lakhraj State lands, situate in the district of 24-Pergunnahs, will be put up to sale at the Collectorate of the 24-Pergunnahs on Friday, the 28th March 1890—

The purchaser of the plot will be subject to the following conditions :—

I.—The plot will be sold revenue-free to the highest bidder above the upset price.

II.—The sale to be subject to existing leases, and to the rights conferred by the settlement proceedings and by the laws in force, and purchaser to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the plot to be again put up for sale at the risk of the defaulting purchaser after issue of advertisement as in the case of original sale.

V.—The purchaser shall be put in possession on receipt of the orders of the Collector approving of the sale, but such possession shall be liable to be disturbed in case the final confirmaton of the Board of Revenue should not be accorded to the proceedings.

Name of estate.	Mouzah.	Pergunnah.	Approximate area.	Annual assessment.	Upset price.	Boundaries.	Remarks.
			B. K. CH.	Rs. A. P.	Rs. A. P.		
Dak Adda	Chitpore ...	Amirabad...	0 3 6	16 14 0	506 4 0	South of the dwelling house of Jitu Dhobi, east of the tank belonging to Zebunnissa Begum, north of the dwelling house of Talemun Jemadar, and west of a public road and the sepoy post.	Dwelling-house of Kudroo Dhobi of Chitpore.

K. N. Roy, Deputy Collector, for Collector on tour.

Serial No.	No. of tenures in register No. I.	Names of tenures and their situation.	Annual rental.		The amount of arrears for which the tenures to be sold.			Remarks.
			Rent.	Cess.	Rent.	Cess.	Total.	
		Thana town mouzah Bakalya, mehal Noabad.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	887	20134/559 Taluq Manindra Chandra Ghose and others.	3,373 6 0	226 9 0	843 0 0	56 11 0	899 11 0	
		Mouzah ditto, thana ditto.						
2	805A	20134/559(৯) Taluq Khetra Moni Dasi and others.	1,135 11 9	44 6 0	284 0 0	11 1 0	295 1 0	The entire taluqa will be sold.
		Thana Futikchir, mouzah Jouzkhala, mehal Noabad.						
3	4618	23878/588 Taluq Obedar Rahaman Khan	2,344 0	102 9 0	693 0 0	5 5 9	698 5 9	

Chittagong, the 14th January 1890. C. H. ALLEN, for Offg. Collector.

Statement of the Affairs of the Bank of Bengal for the week ending 28th January 1890.

LIABILITIES.

		Rs.	A.	P.
Capital paid up		2,00,00,000	0	0
Reserve Fund		58,00,000	0	0
Public Deposits at Head Office ... ... Rs	1,01,07,670 3 3			
Ditto ditto at Branches ,,	87,96,504 9 1	1,89,04,174	12	4
Other Deposits at Head Office and Branches		3,11,73,418	13	9
Bank Post Bills, &c.		4,85,932	4	6
Sundries		8,55,813	2	0
Rupees ...		7,72,19,339	0	7

ASSETS.

		Rs.	A.	P.
Government Securities		16,53,682	9	0
Other authorized Investments		76,58,046	0	0
Loans on Government and other authorized Securities		1,69,79,904	13	7
Accounts of credit on ditto ditto		1,01,06,099	4	3
Bills discounted and purchased		2,01,24,519	8	5
Balances with other Banks		10,29,649	13	5
Bullion		3,16,594	8	1
Dead Stock		12,28,095	13	2
Stamps		13,307	11	0
Sundries		3,49,920	4	10
		5,94,59,820	4	6
Cash and Currency Notes at Head Office ... Rs.	76,32,557 7 7			
Cash and Currency Notes at Branches ... ... ,,	1,01,26,961 4 3	1,77,59,518	11	10
Rupees ...		7,72,19,339	0	7

BANK OF BENGAL,
Calcutta, 30th January 1890.

R. L. BIRD, Chief Accte.
Rate for Demand Loans 9 per cent.
Percentage 32·6.

By order of the Directors,
W. D. CRUICKSHANK,
Secy. and Treasurer.
(3495—1)

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.		Number, mark and description.	Consignees.	Ships.
1890.				
Jan.	15	25 Cases, D & Co. in a diamond	Order	S S. "Khedive."
,,	15	10 Cases, D in a diamond	Ditto	Ditto.
,,	15	3 Packages, A S P	Ditto	Ditto.
,,	15	1 Case, Major Alexander	Addressed	Ditto.
,,	15	18 Cases, D. W. Butchart, Esq., care of W. Magor, Esq.	Ditto	Ditto.
,,	15	2 Cases, A A by S O B Co., Colombo	Order	Ditto.
,,	15	1 Case, B & Co. in a diamond, U H & C outside ...	Ditto	Ditto.
,,	15	1 Case, 4621 in a diamond, B B & Co. below ..	Ditto	Ditto.
,,	15	1 Case, Co-operative Pharmacy	Ditto	Ditto.
,,	15	3 Packages, 1373 in a diamond	Ditto	Ditto.
,,	15	1 Case, G & C	Ditto	Ditto.
,,	15	1 Case, G. Officer, Mess Brigade	Addressed	Ditto.
,,	15	1 Drum, I A by S in a diamond	Order	Ditto.
,,	15	1 Case, J C in a diamond, L S & Co. outside ...	Ditto	Ditto.
,,	15	1 Case, J K G & Co. in a block, B S & Co. outside	Ditto	Ditto.
,,	15	1 Drum, Joyhing	Ditto	Ditto.
,,	15	3 Cases, L O C K E	Ditto	Ditto.
,,	15	1 Case, M M by 77 in a diamond	Ditto	Ditto.
,,	15	1 Case, H. J. Momisey, Esq.	Addressed	Ditto.
,,	15	1 Case, N B & M Y in a block	Order	Ditto.
,,	15	20 Cases, N G	Ditto	Ditto.
,,	21	10 Cases, 239 in a diamond, N P & G outside ...	Ditto	Ditto.
,,	21	1 Case, Major J. O. F. Nutt	Addressed	Ditto.
,,	21	15 Cases, 27th P L in a diamond	Order	Ditto.
,,	21	2 Packages, 1 by R C D in a triangle	Ditto	Ditto.
,,	21	1 Case, R B N by 244 in a diamond, J below ...	Ditto	Ditto.
,,	21	2 Cases, R W or W R in a diamond	Ditto	Ditto.
,,	21	1 Package, S K D in a diamond	Ditto	Ditto.
,,	21	2 Packages, 2000 in a triangle, S D & Co. below ...	Ditto	Ditto.
,,	21	2 Packages, S H M J in a diamond, U H & Co. outside.	Ditto	Ditto.
,,	21	2 Packages, 2044 in a triangle, S D & C below ...	Ditto	Ditto.
,,	21	3 Packages, T D P & Co. in a diamond, G A & Co. outside.	Ditto	Ditto.
,,	21	7 Packages, 273 in a diamond, W T H B below ...	Ditto	Ditto.
,,	21	2 Packages, 908 in a diamond, W N & Co. outside	Ditto	Ditto.
,,	21	1 Package, W L	Ditto	Ditto.
		1 Parcel, the Secretary, Christian Knowledge Society.	Addressed	Ditto.
	21	1 Parcel, Revd. J. W. Thomas	Ditto	Ditto.
	21	1 Parcel, H. W. Pickford, Esq.	Ditto	Ditto.
	21	1 Parcel, India Life of Stephen, Baptist Mission House.	Ditto	Ditto.
	21	1 Case, W. F. Burrows, Esq.	Ditto	Ditto.
	16	5 Cases, D & Co. in a diamond	Ditto	S S. "Dorunda."
	16	15 Cases, D in a diamond	Ditto	Ditto.
	16	25 Cases, J K G	Ditto	Ditto.
	16	1 Drum, K & Co. or no mark	Order	Ditto.
	16	4 Cases, B L D & Co	Ditto	Ditto.
	16	7 Cases, L O C K E	Ditto	Ditto.
	16	1 Case, M in a diamond, B M & Co. outside	Ditto	Ditto.
	16	1 Case, M A in a diamond	Ditto	Ditto.
	16	5 Cases, N P D	Ditto	Ditto.
	16	1 Case, R M by 38 in a diamond ...	Ditto	Ditto.
	16	2 Cases, S D by 257 in a diamond, J below	Ditto	Ditto.
	16	1 Cask, B C	Ditto	Ditto.
	16	10 Cases, 408 in a diamond, C B below ...	Ditto	Ditto.
	16	1 Case, diamond or no mark ...	Ditto	Ditto.
	16	1 Case, 294 in a diamond	Ditto	Ditto.
	16	1 Case, H C G & Co. in a diamond, S & S C below.	Ditto	Ditto.
	16	1 Case, H J B by 252 in a diamond, J below ..	Ditto	Ditto.
	16	50 Cases, I G by 74 in a diamond, M B L T outside	Ditto	Ditto.
	16	12 Packages, no mark	Ditto	Ditto.
	16	3 Packages, Nahartati in a block ...	Ditto	Ditto.
	16	1 Case, P C B in a diamond ...	Ditto	Ditto.
	16	1 Cask, S S by 294 in a block ...	Ditto	Ditto.
	16	2 Bales, diamond T top	Ditto	Ditto.
	16	1 Case, W C D in a triangle, C & B below	Ditto	Ditto.

Date of removal to Import Warehouse.		Number, mark and description.	Consignees.	Ships.
1890.				
Jan.	24	2 Cases, 560 in a diamond, W below	Order ...	S. S. "Dorunda."
„	24	1 Parcel, Mrs. Ashing Thomson, care of Planters' Stores	Addressed ...	Ditto.
„	24	1 Parcel, M in a diamond, B M & Co. outside ...	Order ...	Ditto.
„	24	1 Case, T S M	Ditto ...	Ditto.
„	24	1 Keg, X in a circle	Ditto ...	Ditto.
„	24	1 Keg, no mark Upper Assam	Ditto ...	Ditto.
„	24	1 Drum, R & Co., Madras below	Ditto ...	Ditto.
„	24	2 Drums, O & Co. in a diamond, Madras below ...	Ditto ...	Ditto.
„	24	1 Iron axle, H C M by C in a diamond, O S top ...	Ditto ...	Ditto.
„	24	1289 Iron plates, A & B	Ditto ...	Ditto.
„	24	8 Bars angle iron, S A K in a diamond or no mark	Ditto ...	Ditto.
„	24	9 Bars T-iron, S or no mark	Ditto ...	Ditto.
„	24	94 Iron plates, B	Ditto ...	Ditto.
„	17	2 Cases, A S W & Co. by A	Ditto ...	S. S. "Pallas."
„	17	2 Cases, 184 in a diamond, A B & Co. outside ...	Ditto ...	Ditto.
„	17	3 Cases, F E R E in a diamond	Ditto ...	Ditto.
„	17	1 Case, Messrs. Hoare, Miller & Co.	Addressed ...	Ditto.
„	17	3 Bars flat iron, D X or no mark	Order ...	Ditto.
„	17	11 Earthen pipes, J B	Ditto ...	Ditto.
„	17	5 Cases, K V in a diamond, Cawnpore below ...	Ditto ...	Ditto.
„	17	3 Cases, L O C K E	Ditto ...	Ditto.
„	17	1 Case, N & Co.	Ditto ...	Ditto.
„	17	1 Case, 500 in a diamond, W L below	Ditto ...	Ditto.
„	17	3 Bundles nail rod iron, 1 white or no mark ...	Ditto ...	Ditto.
„	17	9 Bundles nail rod iron, 1 red or no mark ...	Ditto ...	Ditto.
„	22	1 Case, N C B by 48 in a block	Ditto ...	S. S. Rudeshimer."
„	22	7 Cases, O & H	Ditto ...	Ditto.
„	22	1 Case, 7860 in a diamond, J S & G outside ...	Ditto ...	Ditto.
„	22	1 Case, C S	Ditto ...	Ditto.
„	22	17 Iron joists, R or on mark	Ditto ...	Ditto.
„	22	25 Packages, no mark	Ditto ...	Ditto.
„	22	1 Iron joist, S B S or no mark	Ditto ...	Ditto.
„	22	1 Iron joist, K D or no mark	Ditto ...	Ditto.
„	22	1 Case, I in a diamond, B B & Co. below ...	Ditto ...	Ditto.
„	22	1 Case, J J H	Ditto ...	Ditto.
„	22	3 Packages, G. W. Hungerford, Esq., care of Messrs Jardine, Skinner & Co.	Addressed ...	S. S. "Scotia."
„	22	20 Packages, W L	Order ...	Ditto.
„	22	2 Casks, T	Ditto ...	Ditto.
„	22	1 Bale, S & Co. in a circle, H M top ...	Ditto ...	Ditto.
„	22	2 Cases, H H in a diamond, C below ...	Ditto ...	Ditto.
„	22	1 Sample, Messrs. Gopee Natha Misser & Co. ...	Addressed ...	Ditto.
„	22	1 Sample, Messrs. T. N. Singh & Son, 4, Clive Ghât Street.	Ditto ...	Ditto.
„	22	93 Iron rain-water pipes, C or no mark ...	Order ...	Ditto.
„	22	7 Sheets iron, R B or no mark ...	Ditto ...	Ditto.
„	22	1 Case, T A S in a heart, P top ...	Ditto ...	Ditto.
„	23	6 Iron plates, no mark	Ditto ...	S. S. "Thorndale."
„	23	3 Iron plates, Z	Ditto ...	Ditto.
„	23	4 Iron plates, W H	Ditto ...	Ditto.
„	23	10 Iron plates, K L	Ditto ...	Ditto.
„	23	4 Iron plates, B C	Ditto ...	Ditto.
„	23	165 Iron plates, L M	Ditto ...	Ditto.
„	23	122 Iron plates, K L M	Ditto ...	Ditto.

Port Commrs.' Office, Calcutta, the 1st February 1890. (3500—1) G. H. SIMMONS, Vice-Chairman.

Notice.

IN continuation of notice, dated the 9th October 1889 published at page 1656, Part II of the *Calcutta Gazette* of 30th October 1889, regarding the Barque *Grosvener*, it is further notified that the said vessel, with all her masts, sails, gear, and appurtenances which may be on board her on the 19th day of April 1890, will be sold by auction to the highest bidder on Saturday, the 19th of April 1890.

The sale will be held at the Port Office, Chittagong, and will commence at 3 P.M.

Terms—25 per cent. on fall of the hammer if desired by Receiver of Wrecks: the balance within a week of sale and before taking delivery. If the purchaser fails to pay the balance within seven days from date of sale, the vessel will be re-sold at his risk and expense. The vessel can be inspected at Chittagong by application to the Receiver of Wrecks.

E. GOOD, Receiver of Wrecks.

(3498—4)

WANTED a Sub-Overseer for the District Works, Maldah, on Rs 40 pay and Rs. 10 horse allowance. None need apply who is not a passed Sub-Overseer and has sufficient practical experience in road works. All applications, with copies of testimonials, must reach the undersigned on or before the 10th February 1890.

JOGENDRO NATH GHOSE, District Engineer.

(3478—2)

Notice.

WANTED a Record-keeper for the Maldah Collectorate on a salary of Rs. 40 rising to Rs. 60 by biennial increments of Rs. 2.

No one need apply who has not had previous experience in a similar post. The selected candidate is to furnish security to the extent of Rs. 500, either in Government Promissory Notes or in cash.

Applications will be received up to 25th February next.

POORNO CHUNDRA CHATTERJEE,
Deputy Collector in charge.

Excise.

NOTIFICATION.

1. The right of retail sale of the Liquors and Drugs specified below will be put up to auction at the Onium Sale-room, Board of Revenue, 2, Bankshall Street, on Tuesday, the 11th February 1890, and subsequent days, in the following order :—

Name of article.	Date of sale.
Country Spirit	Tuesday, 11th February 1890, commencing at 11 A.M. Wednesday, 12th ditto ditto ditto. Thursday, 13th ditto ditto ditto.
Rum and Imported Liquor by glass ...	Friday, 14th ditto ditto ditto.
Ganja, Siddhi, Charas, Majum ...	Monday 17th ditto ditto ditto. Tuesday, 18th ditto ditto ditto.
Opium, Madak, Chandu	Wednesday 19th ditto ditto ditto. Thursday, 20th ditto ditto ditto.
Tari	Friday, 21st ditto ditto ditto. Saturday, 22nd ditto ditto ditto.

2. A complete list of all the shops for which licenses will be offered and a copy of each form of license are open to general inspection at the Office of the Superintendent of Excise Revenue, 4, Bankshall Street, and the number of these shops is not under any circumstances to be increased during the term of three years ending the 31st March 1893, except under the sanction of the Commissioner of Excise, Bengal, in each case. The Superintendent of Excise Revenue, however, reserves to himself the right, in case of combination, or for other cause, to transfer, before its settlement, any shop from the locality specified, to some other locality in the neighbourhood, being within a distance of 150 yards from the advertised shop or premises, provided that in cases of re-sale the transfer does not bring the shop within a quarter of a mile of any other similar shop which has been settled at any previous sale and the term of whose license is unexpired.

3. It is not at present intended to open any other shop during the term of the license; but the Superintendent of Excise Revenue does not absolutely bind himself in this respect. On special cause shown, and with the sanction of the Commissioner of Excise, Bengal, in each case, the number of shops may be increased: provided, however, that, whenever a new shop is opened, it will be optional to the holder of a similar license for the sale of Liquor or Drugs, if his shop is within a quarter of a mile of the new shop, to surrender his license without forfeiting his advance, when the Superintendent of Excise Revenue is to re-settle the shop by auction or otherwise.

4. The right of retail sale of the Liquors and Drugs is to be put up to auction at upset prices sanctioned by the Commissioner of Excise, Bengal.

5. The right of retail sale of the Liquors and Drugs is to be put up to auction in separate lots of one or more shops either in the order specified in the list, or in such other order as the officer conducting the sale may deem fit. When one lot has been sold, the next lot is not to be put up until the sum payable in advance on account of the lot already sold has been actually paid: provided, however, that where the sum payable exceeds Rs. 25, a promissory note may be taken from any respectable and well-known purchaser in lieu of cash payment.

6. The purchasers of the right of retail sale of Country Spirit, Rum, and Imported Liquors are entitled to sell Imported Liquors by the glass only, the liquor to be drunk on the premises.

7. The auction is to be held subject to the following conditions :—

(*a*)—That the Superintendent of Excise Revenue does not bind himself to accept the highest or any bid.

(*b*)—That the settlement with each accepted purchaser will, in Calcutta and the Suburbs, be contingent on the production by him of the usual Police certificate or license as the case may be, viz.—

For Excise licenses for—
- Doasta ...
- Rum ...
- Imported Liquors by glass
- Tari ... ...
- Ganja ...
- Siddhi ...
- Charas ...
- Majum ...

If to be held in Calcutta, a Police certificate in the form prescribed by section 36, Act IV (B.C.) of 1866, must be produced; and if to be held in the Suburbs, a Police certificate in the form prescribed by section 19, Act II (B.C.) of 1866, must be produced.

For Excise licenses for—
- Opium ...
- Madak ...
- Chandu ...

If to be held in Calcutta, a Police license in the from prescribed by section 39, Act IV (B.C.) of 1866, must be produced; and if to be held in the Suburbs, a Police license in the form prescribed by section 22 of Act II (B.C.) of 1866 must be produced.

(*c*)—That the person accepted as the purchaser is to state in writing, within seven days from the date of settlement, in what building he purposes to open his shop, and is at the same time to submit a plan showing clearly and distinctly what building or portion thereof he desires to be covered by the license, it being understood that the removal of shops to other premises than those named in the list attached to this notification will be contingent on the approval of both the Excise and Police authorities, and that any sum which has been paid as an advance of the license fee under the provisions of clause (*d*) of these conditions will be returned to any person to whom a license may be subsequently refused for Police reasons.

(*d*)—That the term of the license is to be for three years ending the 31st March 1893, and that, except in the case of Tari, the license fee for that period is to be paid in advance in the following instalments:—namely, the sum equivalent to the fee for two months, at the time of sale, and one month's fee on the date on which the currency of the license commences, and one month's fee on the 1st day of every succeeding month, until the whole of the fee due on the license shall have been paid. In the case of Tari only one month's fee is to be paid in advance at the time of sale, and fifteen days' fee on the date on which the currency of the license commences, and the rest of the fee in half-monthly instalments, viz., on the 1st and 16th day of every month, until the whole of the fee due on the license shall have been paid. This condition is to be strictly enforced in future, and failure to comply with it is to be met by immediate cancelment of the license.

(*e*)—That the purchaser is not to be entitled to receive back any portion of his advance in the event of his shop being closed before the expiration of the term of the license on violation of any of the conditions of the license, or his being convicted of a non-bailable criminal offence, or of any offence against the Excise laws or rules; and in the case of the surrender of a license under Act VII (B.C.) of 1878, the licensee is to give fifteen days' previous notice in writing to the Superintendent of Excise Revenue, and pay a sum equal to the license fee for fifteen days, over and above the amounts already paid in advance; and in the case of the surrender of a license under Act I of 1878, the licensee is to give one month's previous notice in writing to the Superintendent of Excise Revenue, and pay such fine not exceeding six months' license fees as the Superintendent of Excise Revenue may adjudge, over and above the amounts already paid in advance.

(*f*)—That the currency of the license is to commence on the 1st April 1890 on which date the purchaser is to open his shop, in all respects prepared for the accommodation of customers, to be certified by an Excise Officer—failure to comply with this condition is to be met by the immediate cancelment of the license and the forfeiture of the deposit, except in the case of delay caused by the non-issue of the Police certificate or Police license, for which a reasonable extension of time may be allowed upon application and cause shown to the Superintendent of Excise Revenue.

(*g*)—That where the amount of the sum payable in advance is required to be paid at once in cash, and the bidder fails to make such payment, the officer conducting the sale is either immediately to put up the lot again for sale, or after the other lots in the list have been disposed of, or he may postpone the sale to such future date as he shall then and there notify; and the defaulting purchaser is to be debarred from bidding for such lot or for any other lot, and he is not to be allowed to remain in the auction-room; and that the defaulting purchaser will be liable for any loss that may accrue to Government in case it becomes necessary to re-sell a lot at a lower rate either in consequence of his failure to deposit the sum payable at the time of sale, or to redeem his promissory note on or before 4 P.M. on the day following that on which the note was signed.

(*h*)—That the purchasers are to adhere to all the provisions of the Opium, Excise and Police laws, and of the rules which have been or may from time to time be prescribed by the Board of Revenue.

8. All sales subsequent to the date of the triennial sale in March are to be held subject to the conditions contained in this notification, so far as they may be applicable.

9. Any further information regarding the auction may be had on application at the Office of the Superintendent of Excise Revenue.

D. G. BONNERJEE,

Superintendent of Excise Revenue,
Calcutta, the Suburbs, Howrah, and Bally.

OFFICE OF THE SUPDT. OF EXCISE REVENUE; 4, BANKSHALL STREET, CALCUTTA, *the 15th January* 1890.

Notification.

IT is hereby notified that under section 46 of the Local Self-Government Act III (B.C.) of 1885, the District Board of Dacca have at their Special Meeting, held on the 11th January 1890, determined to levy the road cess in this district for the ensuing financial year 1890-91 at the maximum rate of one-half anna or six pies in the rupee on the annual value of lands.

L. HARE, Chairman.

Dacca District Board's Office, the 11th January 1890.

NOTICE is hereby given that Mary Stephen, who obtained a decree *nisi* on the 23rd January 1890 in the High Court for dissolution of marriage against her husband S. S. Stephen, has revoked and cancelled the power-of-attorney which she executed in his favour, and that the said S. S. Stephen has no authority to act as her attorney in any matter whatsoever. Any payment of money therefore to the said S. S. Stephen on account of the said Mary Stephen will not be recognised.

GOVESH CHUNDER CHUNDER, Attorney for Mary Stephen.

Calcutta, the 27th January 1890. (3494—3)

Stolen.

THE Government Promissory Note No. 160426, of the 4 per cent. of 1865, for Rs. 1,000, and the Government Promissory Note No. 205964, of the 4 per cent. of 1865, for Rs. 1,000, the former originally standing in the name of the Bank of Bengal, last endorsed to Soorendra Nath Mookerji, who in January 1889 endorsed to his wife Shrimoti Khiroda Debya, the proprietor, by whom it was never endorsed to any other person; the latter originally standing in the name of the Comptroller-General, last endorsed to Soorendra Nath Mookerji, who in January 1889 endorsed to his wife Shrimoti Khiroda Debya, by whom it was never endorsed to any other person. Payment of the above Notes, and the interest thereupon, have been stopped at the Public Debt Office, Bank of Bengal, and application is about to be made for the issue of duplicates in favour of the proprietor.

SOORENDRA NATH MOOKERJI, Resident of Benjhatty under Serampore, zillah Hooghly, at present residing at Dholy *vid* Dholy P. O., zillah Mozufferpore.

(3495—3)

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sál beams and scantlings supplied from this depôt will be as follows:—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 „ „ 2-12 „
23 „ „ 2-14 „
24 „ „ 3 „

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 „ 2-4 „
Under 7 feet „ 2 „

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Bahramghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates:—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates:—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

Road Cess Notification.

DISTRICT PUBNA.

IT is hereby notified that under section 38 of the Cess Act, as amended by the second schedule of the Local Self-Government Act III (B.C.) of 1885, the District Board of Pubna have determined that road cess in that district for the cess year 1890-91 shall be levied at the maximum rate, viz., one-half anna on each rupee of the annual value of lands, and of the annual net profits from mines, quarries, tramways, railways and other immoveable property as enumerated in section 6 of the Cess Act.

W. FIDDIAN, Chairman.

LETTERS of Administration (with copy Will and Codicil annexed) of the property and credits of Edward John Morgan, formerly of Oak Cottage, Parkestone, near Poole, in the County of Dorset, but late of Forefield House, in the City of Bath, in the County of Somerset in England, Esquire, deceased, have been granted by the High Court, Calcutta, to G. W. F. Buckland, Esq., of No. 1, Esplanade West, Calcutta, as the Attorney of the executors named in the Will of the deceased. All persons having claim against the deceased are requested to submit same to the Administrator before the 15th day of February next, after which date no claims will be admitted.

J. A. APCAR, Attorney.

Calcutta, 30th November 1889. (3330—3)

JOGENDRA NATH SEN, M. A., B. L., intends to apply for enrolment as a Vakil of the High Court.

(3444—4)

TARA PRASANNA GUHA, B.L., intends to apply for enrolment as a Vakeel of the High Court.

(3496—4)

Destroyed.

THE Government Promissory Note No. 029771 of the 4 per cent. loan of 1879 for Rs. 500, standing in the name of Baboo Sarbessur Mitra, the proprietor, by whom it was never endorsed to any other person. Payment of the above note and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, and application is to be made for accrued interest and for the issue of duplicates in favour of the proprietor after twoyears from date of last advertisement.

(2520—3) SARBESSUR MITRA, Asansol.

PROCEEDINGS of the Eighth General Meeting of Shareholders in the Bengal Silk Company, "Limited," held at the Registered Office of the Company, No. 25, Mangoe Lane, Calcutta, on 29th January 1890, at noon.

PRESENT:

D. Yule, Esq.
Dr. C. H. Joubert.
J. W. Stocks, Esq.
G. C. Hodgson, Esq.
J. A. Anderson, Esq.
E. J. Marshall, Esq.
R. A. Lyall, Esq.
E. L. McAlester, Esq., by his Attorney, R. A. Lyall, Esq.
C. J. Lyall, Esq., C.S., C.I.E. by his Attorney, R. A. Lyall, Esq.
A. A. Stokes, Esq., by his Attorney, R. A. Lyall, Esq.
A. Yule, Esq., by his Attorney, D. Yule, Esq.
G. Yule, Esq., by his Attorney, D. Yule, Esq.

Proposed by Mr. J. W. Stocks,
Seconded by Mr. G. C. Hodgson—

1*st*.—That Mr. D. Yule take the Chair.

Proposed by Mr. D. Yule,
Seconded by Mr. J. A. Anderson—

2*nd*.—That the Managing Agents' Report having been taken as read be adopted, and that the accounts be passed as correct.

Carried unanimously.

Proposed by Mr. G. C. Hodgson,
Seconded by Dr. C. H. Joubert—

3*rd*.—That a Dividend of 4 per cent. on the Capital of the Company be declared payable immediately after this meeting to every Shareholder whose name stood on the Books of the Company on 16th instant, and that the sum of Rs. 11,726-10-5 be carried forward to next account subject to the deduction of the Managing Agents' and Manager's commissions as detailed in the Report.

Carried unanimously.

Proposed by Mr. J. W. Stocks,
Seconded by Mr. J. A. Anderson—

4*th*.—That Messrs. Lovelock and Lewes be elected Auditors of the Company on the same remuneration as before.

Carried unanimously.

Proposed by Dr. C. H. Joubert,
Seconded by Mr. J. A. Anderson—

5*th*.—That in the opinion of the Shareholders a vote of thanks is due to the Managing Agents and Manager for the skill with which they have brought the affairs of the Company through a series of disastrous years and placed them on the present satisfactory footing.

Carried unanimously.

The Meeting closed with a vote of thanks to the Chair.

D. YULE, Chairman.

LYALL, MARSHALL & Co., Managing Agents.
Calcutta, 29th January 1890. (3502—1)

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

In the matter of THOMAS RICHARDSON FRENCH, an insolvent.

Notice that an application for an *ad interim* protection order has been this day made by the said insolvent, and that such application will be heard and disposed of by the Acting Commissioner of the Insolvent Court on Monday, the 10th day of February instant, at the hour of half past ten o'clock in the forenoon.

☞ "Any creditor of the said insolvent desirous of opposing such application must appear before the said Court at the time and place aforesaid.

C. G. Lewis, Attorney. (3503—1)

In the matter of BHUGWANJEE CURSONJEE, an insolvent.

On Thursday, the 2nd day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

Insolvent in person. (3504—2)

In the matter of SOOBENDRO NATH SEN, an insolvent.

On Thursday, the 2nd day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

E. J. Fink, Attorney. (3505—2)

In the matter of GOPEE KANTO SEN, an insolvent.

On Friday, the 10th day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

M. M. Chatterjee, Attorney. (3506—2)

In the matter of LEONTIUS BRIDGNELL NYSS, an insolvent.

On Monday, the 6th day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

Insolvent in person. (3507—2)

In the matter of LEOZANDER and RAOUL QUILLET, insolvents.

On Saturday, the 11th day of January last, it was ordered that the matters of the petition of the said insolvents be heard on Saturday, the 1st day of March next, and that the said insolvents do then attend to be examined before the said Court.

Dignam, Robinson and Sparkes, Attorneys. (3508-2.)

In the matter of THOMAS RICHARDSON FRENCH, an insolvent.

On Wednesday, the 29th day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

C. G. Lewis, Attorney. (3509—2)

In the matter of THOMAS RICHARDSON FRENCH, of No. 7, Sudder Street, in the Town of Calcutta, teacher of music, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Wednesday, the 29th day of January last, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

C. G. Lewis, Attorney. (3510—1)

In the matter of GOPEE KANTO SEN, of No. 20, Durponarain Thakoor's Street, in the Town of Calcutta, formerly carrying on business as merchant in co-partnership with Romakanto Sen and Kisto Mohun Mullick, under the name and style of Hurry Dass Dutt & Co., and afterwards carrying on business as merchant and commission agent at No. 25, Swallow Lane in Calcutta aforesaid, under the name, style and firm of Gopeekanto Sen and Company, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Friday, the 10th day of January last, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

M. M. Chatterjee, Attorney. (3511—1

In the matter of LEONTIUS BRIDGNELL NYSS, of No. 4 Beparee Tollah Lane, in the Town of Calcutta, a day extra reader in the Government Central Press, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Monday, the 6th day of January last, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3512—1

In the matter of SOOBENDRO NATH SEN, of No. 16, Modo Roy's Lane, in the Town of Calcutta, lately an assistant in the Cash Department of Messrs Mackinnon, Mackenzie and Company of Calcutta merchants, but now out of employ, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Thursday, the 2nd day of January last, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

E. J. Fink, Attorney. (3513—1

In the matter of BHUGOWANJEE CURSONJEE, of No. 10 Kurbulla Lane, in the Town of Calcutta, late trader in rice to Allepee and Malabar coast, since then in the service of Mahomed Omer, and now in the employ of Solomon Perta, an insolvent.]

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Thursday, the 2nd day of January last, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3514—1

In the matter of Gosto Behary Seal, an insolvent.

Notice that an application for an *ad interim* protection order has been this day made by the said insolvent, and that such application will be heard and disposed of by the Acting Commissioner of the Insolvent Court on Monday, the 10th day of February instant, at the hour of half past 10 o'clock in the forenoon.

☞ "Any creditor of the said insolvent desirous of opposing such application must appear before the said Court at the time and place aforesaid."

N. C. Bose, Attorney. (3515—1)

Chief Clerk's Office, the 4th February 1890.

Insolvency Notice.

NOTICE is hereby given that the undermentioned dividend is lying unclaimed :—

Estate SREERAM CHUNDER CHATTERJEE, *an insolvent.*

No.	NAME OF CREDITOR.	Amount of claim.	1st Dividend at Rs. 50 per cent.
5	Abinash Chunder Shaha	Rs. A. P. 120 0 0	Rs. A. P. 60 0 0

Estate ALBERT SMALLWOOD (*separate estate*), *an insolvent.*

			1st Dividend at Rs. 1-13-6 per cent.
54	F. S. Fairhead	Rs. A. P. 2,45 14 3	Rs. A. P. 133 9 6

(3501—1) A. B. MILLER, Official Assignee.

POSTAL NOTICES.

Unclaimed Letters held in the Calcutta General Post Office on 4th February 1890.

Ainslie, J. H.
Albrechs, A.
Balthazar, C.
Brocas, Mrs.
Butler, Darley & Co.
Butterfass, G.
Caroll, W. F.
Cohen, A. M.
Currie, R. S.
Schiebler, C.
Glyn, C.
Groner, R.
Gutch, George.
McNutty, J. H.
Watson, W.

Letters marked Care of "Post Office."

Backhouse, W. A.
Baragerey, L.
Barker, F. W.
Bather, H. R.
Baxter, Mrs.
Bear, W.
Bradshaw, W.
Brearey, James.
Belitski, R.
Berkeley, C. M.
Boland, J.
Brown, W.
Carbery, Lady.
Chatterton, J.
Church, E. M.
Close, H.
Comar, Mrs. A.
Cooper, W.
Courage, R.
Courtney, T. S.
Davis, Mrs. G.
Dovitro, D. F. D.
Dickson, Mrs. E.
Douglas, G. P. H.
Drakeford, A.
Duclere, G. P.
Dunlo, Viscount.
Dymond, G. F.
Elliott, K.
Filleul Revd., S. E. V.
Fisk, F. M.
Flack, F. F.
Flaherty, O. H.
Fletcher, Neil.
Forshaw, H.
Fraiser, H. C.
Fraiser, Miss F.
Francis, A. M.
Gallwey, C. H.
Gellett, Cecil S.
Glover, W. E.
Godwin, George.
Green, W. W.
Hamilton, C. J.
Hamilton, J. R.
Handcock, J. G.
Hardman, G. D.
Hunter, H. C.
Hardy, Mrs. M.
Harper, A.
Hawksworth, Mrs.
Henderson, W. H.
Hewett, F. J.
Hilton, R. W.
Horus, Miss M. L.
Jackson, T.
Johannessen, O. C.
Keane, J. J.
Kennard, F.
Kleine, Henri.
Krieger, G.
Lach, R.
Lamb, E. G.
Langer, J. O.
Lindeman, L. K.
Linton, C. E.
Livesey, Thomas.
Livewright, R.
Lloyd, Willis.
Long, W.
Major, A.
Mallite, J. W.
Malthy, S. W.
Manual, A. M.
Matthews, J. R.
Mathewson, F.
Maxwell, Sir, J. S.
May, J. J.
Mayes, W. H.
McAdoo, Mr.
McKenzie, Mrs. D.
McNair, Miss.
McSmith, D.
Menzies, C.
Mifsud George.
Morshead, L.
Moncriff, A. L. M.
Murphy, John.
Newby, C. R. A.
Ogden, J.
O'Mealy, Capt. D'Oyly.
Penn, Mrs.
Platts, Mrs. S. K.
Powell, F.
Prentor, Miss.
Rennrick, F. B. M.
Rennard, J. R.
Robart, P.
Robinson, G.
Rogerson, Miss A.
Roskell, Richard.
Rubie, Phil C.
Sano, T.
Sessions, F.
Sevestre, J.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sisam, Rev. W. B.
Skinner, R. H.
Smith, M. O.
Soares, F. H.
Sweet, L.
Taylor, C.
Thomas, G. T.
Thomson, Captain W. A.
Thompson and Co.
Thompson, G.
Uphill, T.
Ursite, Johan.
Waddell, Alex.
Walter, F.
Walter, Amherst.
Webster, Mrs.
White, H. J.
Williams, J.
Wilson, H. W.
Worker, E. H.

Registered Letters.

Edwards, C.
Guiseppe, Celestini.
James, L. E.
MacLeod, D. J.
Marsland, W.
Menzies, C.
Smith, M. Oswald.
Zucker, Moses.

Unclaimed Letters held in the Barrackpore Post Office on the 3rd February 1890.

Baker, E.
Balfour, H. T.
Coulter, A.
Dubery, E.
Harvey, Sergeant.
Harding, H. R.
Haswell, Mrs.
Lindsay, W. C.
Lloyd, C.
Martin, Mr.
Mathuson, J.
Presgent, Mr.
Stevens, Mrs. C.
Thompson, Jas.

E. HUTTON,
Presidency Postmaster, Calcutta.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	11th Feb. ...	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets).	10th " ...	Ditto.
Mauritius, Mayotte, Nossi Be and Réunion.	11th " ...	Ditto.
Zanzibar, Mozambique, Delagoa Bay, Natal and Cape Colonies.	11th " ...	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	10th " ...	Ditto.
Australia, New Zealand, and Tasmania.	10th " ...	Ditto.
Madras and Colombo ...	5th " ...	Per P. & O. steamer *Rosetta.*
Straits, China and Japan ...	6th " ...	Per str. *Kutsang.*
Rangoon and Moulmein ...	7th " ...	Ditto *Sirsa.*
Ditto ditto ...	11th " ...	Ditto *Madura.*
Akyab, Kyaukpyu, Sandoway and Rangoon.	5th " ...	Ditto *Madras.*
Mauritius	11th " ...	Ditto *Wardha.*
Adelaide, Melbourne and Sydney.	8th " ...	Ditto *Clitus.*

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E. HUTTON, Presidency Postmaster.
General Post Office, the 4th February 1890.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 31st January 1890.

Name of river.	Reach of river.	Least depth of water soundings.	Remarks.
		Ft. In.	
Bhagirathi.	Entrance from Ganges ...	1 0	At mouth entrance practically closed.
	Thence to Nurpur	1 6 0	Dhopipara.
	From Nurpur to Jungipur ...	1 0	Kanupore.
	" Jungipur to Berhampur	1 2	Patanpara.
	" Berhampur to Cutwa ...	1 0	Nogore.
	" Cutwa to Nuddea ...	2 3	Patooly.
Bhyrab-Jelinghi.	Entrance from Ganges ...	6 0	
	Thence to Akriganj	5 0	
	Akriganj to junction of the Bhyrub and Jelinghi ...	4 3	Chukyama.
	Thence to Patkabari	5 0	Amtola.
	Patkabari to Nuddea	3 9	Kalinagur.
Mathanga.	Entrance from Ganges ...	2 0	
	Thence to Chuypara ...	1 0	Sircarpara.
	From Chuypara to Shikarpur	0 6	Pragpore.
	" Shikarpur to Boalia ...	0 9	Shampore.
	" Boalia to Chuadanga ...	2 6	Sialmari.
	" Chuadanga to Kissengunj and Hanskhali...	2 6	Pirpore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	REMARKS.
			A. M.	Feet.	Feet.	Below zero.
Ganges.	Sahebganj ...	1-2-90	6	1·00	67·00	
	Rampore Hoalia	1-2-90	12	0·96	42·96	
	Entrance of Bhagirati ...	1-2-90	7	2·30	47·61	
	Entrance of Bhyrub-Jelinghi ..	1-2-90	...	7·25	45·61	
	Entrance of Matabanga ...	1-2-90	...	2·64	.....	
Bhagirati...	Berhampur ...	3-2-90	12	2·42	36·21	
Jelinghi ...	Kishnaghur ...	31-1-90	...	3·79	12·68	
	Saroopgunge ...	1-2-90	6	2·92	7·22	
Matabanga	Hanskhali ...	31-1-90	...	2·50	13 35	

C. E. LIVESAY, C.E.,
Exe. Engr., Nuddea Rivers Division.

Berhampore, the 3rd February 1890.

AT the Meteorological Office, No. 5, Russell Street, the following official publications:—

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Ditto	ditto	1870	...	„ 2 6	„
Ditto	ditto	1871	...	„ 2 8	„
Ditto	ditto	1872	...	„ 3 0	„
Ditto	ditto	1873	...	„ 3 0	„
Ditto	ditto	1874	...	„ 3 0	„
Administration Report of		1870-71	...	„ 0 4	„
Ditto	ditto	1871-72	...	„ 0 4	„
Ditto	ditto	1872-73	...	„ 0 4	„
Ditto	ditto	1873-74	...	„ 0 4	„
Ditto	ditto	1874-75	...	„ 0 4	„
A table of the average monthly and annual rainfall at 98 Stations in Northern India			...	„ 0 4	„
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ALEX. PEDLER,
Offg. Meteorological Reporter to the Govt. of Bengal.
Meteorological Office, Bengal, the 17th March 1886.

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The 24th November 1886.

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The 24th February 1886.

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PART VI.

Bills introduced into the Council of the Governor General for making Laws and Regulations, or published under Rule 22.

GOVERNMENT OF INDIA.

LEGISLATIVE DEPARTMENT.

The following Bill was introduced into the Council of the Governor General of India for the purpose of making Laws and Regulations on the 31st January, 1890:—

No. 3 OF 1890.

A Bill to Amend the Indian Factories Act, 1881.

WHEREAS it is expedient to amend the Indian Factories Act, 1881; It is hereby enacted as follows:— / of 1881.

Amendment of definition of "factory" in section 2, Act XV, 1881.

1. For the words "one hundred" in section 2 of the said Act the word "twenty" shall be substituted.

Amendment of sections 4, 5, 6 and 16, Act XV, 1881.

2. For the word "seven" in sections 4, 5, 6 and 16 of the said Act the word "nine" shall be substituted.

Addition to section 4, Act XV, 1881.

3. To section 4 of the said Act the following shall be added, namely:—

"or for more than the time allowed by this Act for the employment of women."

Amendment of section 7, Act XV, 1881.

4. (1) For the first clause of section 7 of the said Act the following shall be substituted, namely:—

"No woman shall be actually employed more than eleven hours, nor any child more than nine hours, in any factory in any one day."

(2) In the second clause of the same section, before the word "child" the words "woman or", and between the words "allowed to" and the word "him" the words "her or" shall be inserted.

(3) In the last clause of the same section, for the words "A child shall not be deemed to be employed" the words "A woman or child shall not be deemed to be actually employed" shall be substituted.

Substitution of new section for section 8, Act XV, 1881.

5. For section 8 of the said Act the following shall be substituted, namely:—

Allowance of holidays to women and children.

"8. Every occupier of a factory in which women or children are employed shall, before the beginning of each month, fix, according to the castes or classes to which such women or children belong or otherwise, not less than four days in such month to be observed as holidays by each woman or child employed in the factory, and shall forthwith give notice of the days so fixed to such officer as the Local Government may, from time to time, appoint in this behalf.

"An occupier of a factory may, with the previous sanction of the Inspector, substitute, for any day fixed under this section, another day in the same month.

"A woman or child shall not be employed in such factory on a day fixed under this section as a day to be observed as a holiday by the woman or child, unless when another day has been substituted for such day as hereinbefore provided, in which event the woman or child shall not be employed in such factory on the day so substituted."

Amendment of section 9, Act XV, 1881.

6. In section 9 of the said Act, before the word "child" the words "woman or" shall be inserted.

Amendment of section 15, Act XV, 1881.

7. (1) In clause (*a*) of, and the second proviso to, section 15 of the said Act, between the words "any" and "each" respectively and the word "child" the words "woman or", and in the same proviso between the words "two or more" and the word "children" the words "women or", shall be inserted.

(2) For clauses (*e*) and (*f*) of the same section the following shall be substituted, namely:—

"(*e*) neglects to fence any machinery or mill-gearing in any factory;

(*f*) neglects to maintain a supply of water for the use of persons employed in any factory;

(*g*) neglects to ventilate any factory or to keep any factory in a cleanly state and free from effluvia arising from any drain, privy or other nuisance;

(*h*) suffers any factory to be so overcrowded, while work is carried on therein, as to be injurious to the health of the persons employed therein; or

(*i*) neglects to give any notice or furnish any return,".

Amendment of section 18, Act XV, 1881.

8. (1) For clauses (*b*), (*c*) and (*d*) of section 18 of the said Act the following shall be substituted, namely:—

"(*b*) the water-supply to be maintained for the use of persons employed in factories;

[1 Vict., c. 3, s. 61 (1).] (*c*) the ventilation of factories and their cleanliness (including lime-washing, painting, varnishing and washing) and freedom from effluvia arising from any drain, privy or other nuisance;

(*d*) the prevention of such overcrowding of factories, while work is carried on therein, as is likely to be injurious to the health of the persons employed therein;

(*e*) the obligation of occupiers of factories to furnish true returns, occasional or periodical, on and in accordance with the requisition of the local Inspector or the Local Government;

(*f*) the inspection of factories;

(*g*) the manner in which appeals under this Act are to be presented and heard; and

(*h*) otherwise carrying out the purposes of this Act."

(2) To the same section the following shall be added, namely:—

"Before making rules under clause (*b*), clause (*c*) or clause (*d*) of this section, the Local Government shall publish in such manner as may in its opinion be sufficient for giving information to persons interested a draft of the proposed rules, with a notice specifying a date at or after which the draft will be taken into consideration, and shall consider any objection or suggestion which may be received from any person with respect to the draft before the date so specified."

References to Act XV of 1881 to be read as references to that Act as amended by this Act.

9. A reference in any enactment or document to the Indian Factories Act, 1881, shall be read as a reference to that Act as amended by this Act.

[Cf. Ir Act X 1887, s Bom. 1888, (2): an Act IV ss. 10 (iii) a (1).]

IV of 1

STATEMENT OF OBJECTS AND REASONS.

THE Government of India, having recently had under its consideration the reports of Local Governments on the operation of the Indian Factories Act, 1881, and the proceedings of the Commission appointed in 1884 to consider the working of factories in the Bombay Presidency, is of opinion that the Act of 1881 should be so amended as to—

(*a*) bring within its scope any factory in which not fewer than twenty hands are employed,

(*b*) raise from seven to nine years the age below which a child may not be employed in a factory,

(*c*) limit the hours of work for women to eleven in any one day,

(*d*) extend to women the provisions of the Act with respect to the allowance of holidays to children, and enable occupiers of factories to fix such days as holidays for the women and children employed therein as, having regard to the different classes or castes to which they belong, may be most convenient for them,

(*e*) authorise Local Governments to make sanitary rules suited to local requirements, and

(*f*) render it obligatory on occupiers of factories to furnish such statistics as may from time to time be required by the Government.

The object of the Bill is to amend the Act accordingly.

Among the enactments which will be incidentally affected by the Bill (section 9) are the Electricity Act, 1887, the City of Bombay Municipal Act, 1888, and the Indian Merchandise Marks Act, 1889.

A reprint of Act XV of 1881, with the proposed amendments set forth in italics, is appended to this Statement.

The 31st January, 1890. ANDREW R. SCOBLE.

APPENDIX.

ACT No. XV OF 1881.

(As amended by the Bill.)

An Act to regulate labour in Factories.

Preamble. WHEREAS it is expedient to regulate labour in factories: It is hereby enacted as follows:—

Preliminary.

Short title. 1. This Act may be called the Indian Factories Act, 1881.

Local extent. Commencement. It applies to the whole of British India, and shall come into force on the first day of July, 1881.

Interpretation-clause. 2. In this Act, unless there is something repugnant in the subject or context,—

"factory" means any premises (other than indigo-factories or premises situated on, and used solely for the purposes of, a tea or coffee plantation) wherein is carried on, for not less than four months in the whole in any one year, any process for, or incidental to, making, altering, repairing, ornamenting, finishing or otherwise adapting for use, transport or sale, any article or part of an article; and "factory:"

(*a*) wherein steam, water or other mechanical power is used in aid of any such process; and

(*b*) wherein not less than *twenty* persons are on any day simultaneously employed in any manual labour in, or incidental to, any such process; and

every part of a factory shall be deemed to be a factory, except any part used exclusively as a dwelling:

"child" means a person under the age of twelve years: "child:"

"mill-gearing" includes every shaft, whether upright, oblique or horizontal, and every wheel, drum, pulley, rope, driving strap or band, by which the motion of the first moving power is communicated to any machine: "mill-gearing:"

a child who works in a factory, whether for wages or not, either in a manufacturing process or handicraft, or in cleaning any part of the factory used for any manufacturing process or handicraft, or in cleaning or oiling any part of the machinery, or in any other kind of work whatsoever incidental to, or connected with, the manufacturing process or handicraft, or connected with the article made or otherwise the subject of the manufacturing process or handicraft therein, shall be deemed to be employed therein within the meaning of this Act. "employed."

Inspectors and certifying Surgeons.

Inspectors. 3. The Local Government may in its discretion, by notification in the official Gazette, appoint such persons as it thinks fit to be Inspectors of factories within such local limits as it may assign to such Inspectors, and may suspend or dismiss any person so appointed.

In default of such appointment, the Magistrate of the district shall, in virtue of his office, be Inspector of all factories (if any) in the district.

Such Inspectors shall be deemed public servants within the meaning of the Indian Penal Code; and shall be officially subordinate to such authority as the Local Government may, from time to time, indicate in this behalf.

Powers of Inspector. 4. An Inspector of factories may, within the local limits for which he is appointed,—

(*a*) enter, with such assistants (if any) as he thinks fit, any factory whenever he has reason to believe that any person is employed therein;

(*b*) make such examination of the premises and machinery, and of the registers hereinafter prescribed, and take on the spot or otherwise such evidence of any person, as such Inspector may deem necessary for carrying out the provisions of this Act;

(*c*) order that any person shall not be employed in a factory when he has reason to believe that such employment would be in contravention of this Act—

until the age of such person has been certified, in the manner hereinafter provided, to be above *nine* years; or,

for more than the time allowed by this Act for the employment of children until his age has been so certified to be above twelve years; *or*

for more than the time allowed by this Act for the employment of women.

Certifying surgeons.

5. The civil surgeon or such other person practising medicine or surgery as the Local Government may, from time to time, appoint in this behalf for any local area (hereinafter called the certifying surgeon) shall, at the request of any person employed or desirous of being employed in a factory situate in such local area, or of the parent or guardian of such person, examine such person and grant him a certificate, stating whether his age, as nearly as it can be ascertained from such examination, is above or below *nine* years, or twelve years, as the case may be.

Women and Children.

Age *for* employment *of children.*

6. No child shall be employed in any factory if he is under the age of *nine* years.

Hours of employment for *women and* children.

7. No *woman* shall be actually employed *more than eleven hours, nor any child more than nine hours, in any factory* in any one day.

And no *woman or* child shall be employed in any factory on any day without an interval, or intervals, amounting in the whole to at least an hour, being allowed to *her or* him for food and rest.

The times at which such intervals shall be allowed, and the length of each interval, shall be fixed by the Local Government for each factory, after ascertaining, as far as possible, the existing practice in such factory and the wishes of the occupier thereof.

The occupier shall set up and maintain, in some conspicuous place in the factory, a printed or written notice, in English and the languages of the district in which the factory is situate, showing the times at which such intervals shall be allowed and the length of each interval.

A *woman or* child shall not be deemed to be *actually* employed within the meaning of the first clause of this section during any interval allowed for food or rest.

Allowance of holidays to women and children.

8. *Every occupier of a factory in which women or children are employed shall, before the beginning of each month, fix, according to the castes or classes to which such women or children belong or otherwise, not less than four days in such month to be observed as holidays by each woman or child employed in the factory, and shall forthwith give notice of the days so fixed to such officer as the Local Government may, from time to time, appoint in this behalf.*

An occupier of a factory may, with the previous sanction of the Inspector, substitute, for any day fixed under this section, another day in the same month.

A woman or child shall not be employed in such factory on a day fixed under this section as a day to be observed as a holiday by the woman or child, unless when another day has been substituted for such day as hereinbefore provided, in which event the woman or child shall not be employed in such factory on the day so substituted.

Prohibition of employment of woman or child in two factories on same day.

9. No occupier of a factory shall employ therein on any day any *woman or* child who has to his knowledge already been employed on the same day in any other factory.

Prohibition of employment of child in certain dangerous work.

10. No occupier of a factory shall allow any child to clean any part of the mill-gearing or machinery of such factory while the same is in motion, or to work between the fixed and traversing parts of any self-acting machine while such machine is in motion by the action of the steam-engine, water-wheel or other mechanical power, as the case may be.

Register of children in a factory.

11. The Local Government may direct any occupier of a factory to keep, in such form and with such particulars as such Government may, from time to time, prescribe, registers of the children (if any) employed in such factory, and of their respective employments.

Fencing.

Fencing.

12. (*a*) Every fly-wheel directly connected with a steam-engine, or water-wheel or other mechanical power in any part of a factory, and every part of a steam-engine or water-wheel,

(*b*) every hoist or teagle near which any person is liable to pass or be employed, and

(*c*) every other part of the machinery or mill-gearing of a factory which may, in the opinion of the local Inspector, be dangerous if left unfenced, and which he may have ordered to be fenced,

shall, while the same is in motion, be kept by the occupier of such factory securely fenced.

Any order under clause (*c*) may be set aside, on appeal or otherwise, by the Local Government or such authority as it may appoint in this behalf.

Notices.

Notice to be given of accidents.

13. When any accident occurs in a factory causing death or bodily injury whereby the person injured is prevented from returning to his work in the factory during forty-eight hours after the occurrence of the accident, the occupier of such factory, or, in his absence, his principal agent in the management of such factory, shall send such notice of such accident to such authorities in such form and within such time as the Local Government may, from time to time, by rule, direct.

Person beginning to occupy factory to give notice.

14. Every person shall, within one month after he begins to occupy a factory, send to the local Inspector a written notice containing the name of the factory, the place where it is situate, the address to which he desires his letters to be addressed, the nature of the work performed in such factory, the nature and amount of the moving power therein, and the name of the person (if any) under whom the business of the factory is to be carried on.

Penalties.

Penalties.

15. Any person who, in breach of this Act, or of any order or rule made hereunder,—

(*a*) employs any *woman or* child in any factory;

(*b*) neglects to set up or maintain the notice required by section seven, or to fix the days referred to in section eight;

(*c*) allows any child to perform the work forbidden by, or to work in contravention of, section ten;

(*d*) neglects to keep a register in manner prescribed under section eleven;

(*e*) neglects to fence any machinery or mill-gearing in any factory;

(*f*) *neglects to maintain a supply of water for the use of persons employed in any factory;*

(*g*) *neglects to ventilate any factory or to keep any factory in a cleanly state and free from effluvia arising from any drain, privy or other nuisance;*

(*h*) *suffers any factory to be so overcrowded, while work is carried on therein, as to be injurious to the health of the persons employed therein; or*

(*i*) *neglects to give any notice or furnish any return,*

shall be punished with fine which may extend to two hundred rupees:

Provided that—

1st, no prosecution under this section shall be instituted except by, or with the previous sanction of, the local Inspector; and

Only one penalty for same kind of offence on one day.

2nd, no person shall be liable under this section to more than one penalty for any one description of offence committed on the same day, except where two or more *women or* children are employed contrary to the provisions of this Act, in which case one penalty may be imposed in respect of each *woman or* child so employed.

Burden of proof as to age.

16. Where an act or omission would, if a person were under *nine* or twelve years of age, be an offence punishable under this Act, and such person is, in the opinion of the Court, apparently under such age, it shall lie on the accused to prove that such person is not under such age.

Certifying surgeon's declaration in writing.

A declaration in writing by a certifying surgeon that he has personally examined a person employed in a factory, and believes him to be under or over the age set forth in such declaration, shall, for the purposes of this Act, be admissible as evidence of the age of that person.

Occupier primarily liable for breaches of Act.

17. Every occupier of a factory shall be deemed primarily liable for any breach therein of the provisions of this Act; but he may discharge himself from such liability by proof to the satisfaction of the local Inspector, before prosecution therefor, that such breach was committed by some other person without his knowledge or consent; and the person committing such breach shall be liable therefor.

Miscellaneous.

Power to make rules.

18. The Local Government may, from time to time, make rules consistent with this Act, to provide for—

(*a*) the fencing of machinery and mill-gearing in factories;

(*b the water-supply to be maintained for the use of persons employed in factories;*

(*c*) *the ventilation of factories and their cleanliness (including lime-washing, painting, varnishing and washing) and freedom from effluvia arising from any drain, privy or other nuisance;*

(*d*) *the prevention of such overcrowding of factories, while work is carried on therein, as is likely to be injurious to the health of the persons employed therein;*

(*e*) *the obligation of occupiers of factories to furnish true returns, occasional or periodical, on and in accordance with the requisition of the local Inspector or the Local Government;*

(*f*) *the inspection of factories;*

(*g*) *the manner in which appeals under this Act are to be presented and heard; and*

(*h*) *otherwise carrying out the purposes of this Act.*

Such rules shall be published in the official Gazette, and shall thereupon have the force of law.

Before making rules under clause (b), clause (c) or clause (d) of this section, the Local Government shall publish in such manner as may in its opinion be sufficient for giving information to persons interested a draft of the proposed rules, with a notice specifying a date at or after which the draft will be taken into consideration, and shall consider any objection or suggestion which may be received from any person with respect to the draft before the date so specified.

Crown factories.

19. This Act shall apply to factories belonging to the Crown: provided that, in case of any public emergency, the Governor General in Council or the Local Government may, by an order in writing, exempt any such factory from this Act to such extent and during such period as the Governor General in Council or the Local Government, as the case may be, thinks fit.

S. HARVEY JAMES,
Secretary to the Government of India.

[REGISTERED No. 29.]

No. 6 of 1890.

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, FEBRUARY 5, 1890.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT *separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., Cap. 67.

THE Council met at the Council Chamber on Saturday, the 1st February, 1890.

Present:

The HON'BLE SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant-Governor of Bengal, *presiding.*

The HON'BLE SIR CHARLES PAUL, K.C.I.E., *Advocate-General.*

The HON'BLE F. B. PEACOCK.

The HON'BLE P. NOLAN.

The HON'BLE T. T. ALLEN.

The HON'BLE SIR HENRY HARRISON, KT.

The HON'BLE SIR ALFRED CROFT, K.C.I.E.

The HON'BLE DR. MAHENDRA LAL SIRCAR, C.I.E.

The HON'BLE C. H. MOORE.

The HON'BLE H. PRATT.

The HON'BLE SHAHZADA MAHOMMED FURROKH SHAH.

The HON'BLE DR. RASH BEHARY GHOSE.

The HON'BLE RAJA RAMESHWAR SING BAHADUR.

BENGAL VACCINATION BILL.

THE Hon'ble SIR HENRY HARRISON moved that the Report of the Select Committee on the Bill to amend the Bengal Vaccination Act, 1880, and Act II, 1887, be taken into consideration in order to the settlement of the clauses of the Bill.

The Motion was put and agreed to.

The Hon'ble SIR HENRY HARRISON also moved that the clauses of the Bill be considered for settlement in the form recommended by the Select Committee.

He said:—"I have explained the object of the Bill at a previous meeting, and it is therefore not necessary for me to say anything further on this occasion."

The Motion was put and agreed to.

The Hon'ble SIR HENRY HARRISON also moved that the Bill, as amended, be passed.

The Motion was put and agreed to.

CALCUTTA PORT BILL.

His Honour the PRESIDENT said:—"Before adjourning the Council, I think I owe a few words to it in explanation of the omission from the list of business of the Ports Bill which had been originally entered in the list of business for discussion to-day.

"You will recollect that a fortnight ago we adjourned without considering it, in order that the Chamber of Commerce might have an opportunity of submitting a memorial, which we understood was in the course of preparation for our consideration.

"On Wednesday last, my friend, the Hon'ble Mr. Moore, told me he was afraid he would have to ask for another postponement in consequence of the absence of the Chamber's legal adviser. I asked him to see if the postponement could not be avoided, but I heard from him yesterday that he had been unable to get the memorial considered in time for us to take it up to-day, and he again asked for an adjournment. Upon that I took it on myself to exclude the motion from the list of business for to-day.

"Since then (yesterday) I received an application, which I think is in your hands, from the Secretary of the British Indian Association, which requests us that we will postpone for a fortnight the consideration of the Select Committee's report in view of the Committee laying before the Council some further representation regarding section 85.

"I may add that the Secretary says 'that the question of title in riverbanks having been treated by the Select Committee as one of general application, my Committee venture to hope that His Honour the Lieutenant-Governor will be pleased to recognize its importance by granting their prayer.'

"On this occasion I am very glad that we are able to meet their wishes without adding to the inconvenience of the Council, but I think I must protest against a body of the importance of the British Indian Association addressing us two days before the Bill is down for final consideration, asking us to postpone that consideration with reference to a point which has been discussed in all the newspapers since the issue of the report of the Select Committee which has been before them for five whole weeks, and regarding a section which has been the law of the land, with a slight alteration, for the last twenty years. I think it would be more respectful to the Council, and more conducive to public business, if they would take matters of that kind into their consideration a little earlier before the date of actual discussion in Council.

"On this occasion, as I said, I am very glad to be able to meet their wishes, but I do hope that, on Saturday fortnight, to which I propose to adjourn the Council, this Port Bill may be brought up for discussion and settlement."

The Council adjourned to Saturday, the 15th February, 1890.

CALCUTTA;
The 3rd February, 1890.

C. H. REILY,
Assistant Secretary to the Govt. of Bengal, Legislative Department.

EXTENSION OF THE BENGAL TENANCY ACT TO ORISSA.

REVENUE DEPARTMENT—LAND REVENUE.

Calcutta, the 24th January, 1890.

RESOLUTION.

READ—

A letter from the Commissioner of Orissa, No. 1850, dated 4th November, 1886, on the subject of the extension of the Bengal Tenancy Act to that Division.

A letter from the Board of Revenue, No. 975A, dated 17th December, 1889, with enclosures, regarding the arrangements to be made for the survey and settlement of Orissa.

THE Collector of Balasore recommended in 1885 that the Lieutenant-Governor should, in the exercise of the power vested in him by section 1, immediately extend the Bengal Tenancy Act of that year to Orissa. The proposal received no local support at the time, and was considered premature by this Government; but it has since been renewed in connexion with the survey and settlement of the Division which is now being taken in hand. The Director of the Department of Agriculture and Land Records has represented that the settlement laws now in force in Orissa, that is to say, Regulation VII of 1822 and Bengal Act VIII of 1879, read with Act X of 1859, do not supply an adequate machinery for adjusting rents, inasmuch as they do not require the ryots to question the Settlement Officer's proceedings till the record is completed, and that the procedure which they established has proved practically unworkable where it has been contested. He observes—

"In proceedings under Chapter X of the Tenancy Act, the case is otherwise. The Settlement Officer's decision has the force of a decree; it must be appealed against within 30 days of the date of the order, and the appeal lies to the superior court of a Special Judge. Settlement proceedings under Chapter X of the Tenancy Act have therefore a sanction and finality which do not attach to proceedings under Act VIII of 1879. Moreover, experience has shown that proceedings under Chapter X of the Tenancy Act, besides being final, can be worked harmoniously and satisfactorily. It appears to me, therefore, that Chapter X of the Tenancy Act should be extended to those portions of Orissa which are from time to time brought under survey.

"The extension of Chapter X to any particular area involves also the extension of the sections of the Act relating to the determination of the status of tenants and to the enhancement and reduction of rent, *i.e.* sections 19 to 38. As a record of rights will have to be made and fair rents settled under Chapter X, it is evident that the rules for determination of the status of tenants and determination of fair rents prescribed in the Act must also be followed."

There is also some reason to believe that if the most important portion of the Act is extended to Orissa, it will be convenient to introduce the law in its entirety. It is a question, however, whether the provisions as to preparing price-lists (section 39) and as to the payment of landlords' fees on transfers of tenures (sections 12 and 13) should not be excluded. The provisions as to judicial procedure and sales on decree (Chapters XIII and XIV) may, moreover, be found unsuitable to a province in which rent suits are still tried by Revenue officers.

2. The opinion of the Board and of the Revenue officers employed in Orissa is awaited on the subject; and, as the matter is of considerable public importance, the Lieutenant-Governor will be glad to receive any expression of opinion which may be offered by those interested. Such opinions should be transmitted to this Government before the 15th of April next.

ORDER.—Ordered that this Resolution be published in the *Calcutta Gazette* for the information of the public.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,
Secretary to the Govt. of Bengal.

THE CANAL REVENUE REPORTS FOR 1888-89.

No. 198 *I.A.*

Government of Bengal.

PUBLIC WORKS DEPARTMENT.

Irrigation.

Dated Calcutta, the 3rd February 1890.

RESOLUTION.

READ,—

The Canal Revenue Reports for 1888-89, and Chief Engineer's Note on same.

The outlay, direct and indirect, on canals in Bengal, for which capital accounts are kept, amounted at the close of the year 1888-89 to Rs. 7,15,56,843. Of this sum Rs. 6,05,42,061 is the amount spent on Major Irrigation Works and charged to Loan Funds; while the expenditure on Minor Works was Rs. 1,10,14,782, of which Rs. 93,75,327 was provided from Provincial revenues, Rs. 8,66,000 was the grant contributed by the Imperial Government from Famine Relief and Insurance Funds in aid of the construction of the Orissa Coast Canal, and Rs. 7,73,455, representing expenditure on surveys and investigations for irrigation works which have not been carried out, was provided from Imperial revenues, but is not now chargeable with interest.

On Major Works the capital outlay during the year was Rs. 7,92,776, of which Rs. 6,38,718 represents the progress made with the revised project for the Orissa Canals, and Rs. 1,51,340, the expenditure on the Sone system; that on Minor Works was Rs. 1,49,475, of which Rs. 1,01,306 was spent on the Orissa Coast Canal, now nearly completed and open to traffic throughout its length, and Rs. 47,862 on the Circular and Eastern Canals.

2. The length of the canals in Bengal now in operation is altogether 864 miles, of which 621 miles are navigable. The area which, in their present state of completion, they are capable of irrigating is 1,422,319 acres, and the area actually irrigated in 1888-89 was 574,216 acres, the crops raised on which are valued at Rs. 1,81,10,045.

The traffic is represented by 195,140 boats which plied on the canals with passengers or cargo, and measured 3,747,300 tons. These figures do not include the traffic on the Nuddea rivers, which were brought under the management of the Public Works Department at the commencement of the year. On these rivers the boats which paid toll were 48,224 in number, and were measured at 839,502 tons.

3. Receipts and expenditure are shown in the following statement, where the results of three years can be compared:-

	1888-89.		1887-88.		1886-87.	
	Receipts.	Expenditure.	Receipts.	Expenditure.	Receipts.	Expenditure.
Major Irrigation Works.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa Canals	2,43,294	4,05,019	2,22,679	5,02,450	1,79,519	5,20,543
Midnapore Canal	2,51,510	2,09,804	2,33,925	2,50,396	2,33,974	2,35,038
Hidgellee Tidal Canal	55,097	78,040	41,858	66,976	53,494	22,735
Sone Canals	8,31,278	7,94,432	5,88,618	7,52,348	9,02,692	5,97,821
Total ...	13,81,179	14,87,295	10,87,080	15,72,170	13,69,679	13,76,137
MINOR WORKS AND NAVIGATION.						
Irrigation and Navigation Works.						
Sarun Canals	20,814	36,332	20,665	29,307	12,427	28,659
Calcutta and Eastern Canals ...	5,75,125	2,93,801	5,79,934	2,24,656	4,83,654	1,92,264
Orissa Coast Canal	66,174	77,018	53,837	83,507	29,488	61,426
Total ...	6,62,113	4,07,151	6,54,436	3,37,560	5,25,569	2,82,349
GRAND TOTAL ...	20,43,292	18,94,446	17,41,516	19,09,730	18,95,248	16,58,486

The net deficit on Major Works is Rs. 1,06,116 contrasting with deficits in 1887-88 of Rs. 4,85,090 and in 1886-87 of Rs. 6,458, while Minor Works shew incomes in 1888-89 of Rs. 2,54,962, in 1887-88 of Rs. 3,16,876, and in 1886-67 of Rs. 2,43,220. All irrigation works taken together shew a net income in 1888-89 of Rs. 1,48,846; but as interest charges payable to the Imperial Government on the capital spent on Major Works amounted to Rs. 23,39,849, the actual deficit to be met from Provincial revenues was Rs. 21,91,003.

4. The better results of 1888-89 as compared with 1887-88 have been mainly due to increased receipts, but the statement shews that considerable reductions of expenditure were also effected. In Orissa one great outlet of expenditure, the reconstruction of the two weirs which were partially overthrown by the floods of 1886, a work which for two years has been a heavy charge on the revenues of the Orissa Canals, is now happily closed. On the other hand, the ordinary maintenance charges of these canals are found to be higher than usual, a point to which the attention of the Superintending Engineer has been drawn in the Chief Engineer's Note. It seems probable, however, that, so long as the reconstruction of the weirs was in progress, expenditure on ordinary repairs was restricted to the more imperative requirements of the works, and more therefore had to be spent in 1888-89 in carrying out repairs which could be and had been postponed for a while. The cost of establishment chargeable against Revenue, which in 1886-87 was Rs. 5,16,714 for the works given in the table above, rose in 1887-88 to Rs. 7,21,376, an increase due not to greater extravagance in the establishment employed, but to the introduction of a new and fairer method of distributing establishment charges between Irrigation and Roads and Buildings. For 1888-89 the corresponding figure is Rs. 7,01,050, and the saving would have been greater but for an increase of Rs. 27,996 in the cost of establishments employed under Civil officers for the collection of revenue on the Orissa, Midnapore and Sone Canals, an increase which was due chiefly to the greater amount of work involved in realising the heavier collections. On the whole, therefore, there has been a substantial saving in the charges incurred for establishment on the maintenance and management of the canals. The occurrence of this saving can be traced chiefly to the increased amount of work carried out by the Irrigation staff on Roads and Buildings, and the consequent transfer of a larger share of establishment charges from the Irrigation to the Roads and Buildings Branch. Similarly the larger Capital expenditure in 1888-89, on works not chargeable to Revenue, has tended to relieve the canal Revenue account of a portion of its establishment charges.

5. The revenue collected in the last three years on the works mentioned in the above statement is shown below:—

Head.	Revenue		
	1888-89.	1887-88.	1886-87.
	Rs.	Rs.	Rs.
Water-rates	10,22,352	7,69,362	10,43,342
Navigation	9,74,105	9,21,482	7,88,685
Miscellaneous	60,298	66,838	80,171
Total ...	20,56,755	17,57,682	19,12,198
Less refunds of revenue	13,463	16,166	16,950
Net total receipts ...	20,43,292	17,41,516	18,95,248

6. The recovery of the revenue derived from water-rates from the depression of 1887-88 was assisted by the character of the irrigation season of 1888-89, which was such as to lead to a full appreciation of the value of canal water. On the Sone Canals, where collections had been to some extent suspended in consequence of the agitation of the previous year, the receipts rose from Rs. 5,19,586 to Rs. 7,59,556, and it is clear that the efforts of the managing staff to restore public confidence in the canals have been attended with success. Irrigation in Orissa also has received a fresh impetus, and the collections of 1888-89 are higher than those of any year since 1882-83, while on the Midnapore Canal, where no great development of irrigation can be expected owing to the limited and fluctuating character of the source of supply, there is a slight improvement on the results of 1887-88.

7. The activity of irrigation in 1888-89 is evident from the figures in the following table, where actual areas irrigated during the last three years are shown :—

		1888-89.	1887-88.	1886-87.
		Acres.	Acres.	Acres.
Orissa ...	Kharif	156,319	108,867	75,115
	Rabi	2,779	502	2,440
	Perennial	194	137	154
	Total ...	159,292	109,506	77,709
Midnapore ...	Kharif, including boro rice crop	69,777	65,864	69,762
Sone ...	Kharif	69,628	57,595	30,082
	Rabi	69,817	27,501	16,662
	Perennial	4,600	6,265	11,626
	Hot-weather	11,762	13,855	15,278
	Five-year lease ...	200,102	210,164	194,556
	Total ...	355,909	315,380	268,204
	Total Major Works ...	584,978	490,750	415,675
Sarun ...	Kharif	3,897	1,699	566
	Rabi, including hot-weather...	3,316	2,519	1,580
	Total Minor Works ...	7,213	4,218	2,146
GRAND TOTAL, MAJOR AND MINOR WORKS ...		592,191	494,968	417,821

8. The "earnings" of the year's work, of which the above table shows the extent, are as follows :—

	Water rates earned. 1888-89.
	Rs.
Orissa Canals	2,42,808
Midnapore Canal	1,31,433
Sone Canals	8,05,790
Sarun Canals	21,850
Total ...	12,01,881

These sums represent the whole of the liabilities incurred by cultivators on crops raised by canal water during the year. In previous years the definition of the word "earnings" has been restricted to the assessments, which were not only fully completed, but also legally recoverable within the year. Exact returns of "earnings" (in the wider sense of the word now adopted) are not available for previous years ; but owing to the extended use of canal water already noticed, the earnings of 1888-89 considerably exceed those of 1887-88 and 1886-87. This is in favour of good collections in 1889-90.

9. The arrears of water-rates outstanding at the close of each of the last three years are shown in the following statement :—

NAME OF CANAL.	ARREARS.		
	1st April 1889.	1st April 1888.	1st April 1887.
	Rs.	Rs.	Rs.
Orissa Canals	1,14,597	92,109	87,458
Midnapore Canal	84,773	56,493	50,749
Sone Canals	3,80,613	4,11,281	2,31,582
Sarun Canals	34,927	33,492	32,712
Total ...	6,14,910	5,93,375	4,02,501

NOTE.—The figures are those of the Examiner, Public Works Accounts ; but it is believed that they will require correction, since they do not agree with those given by the Superintending Engineer, which again differ from those of the Collector.

The reduction effected in the outstanding balances of the Sone Canals is less than the increments in the balances of the Orissa and Midnapore Canals taken together. The progress made with collections on each system can be compared as follows :—

	Percentage of current demand adjusted.	Percentage of arrear demand adjusted.
Sone Canals	60	80
Midnapore Canal	34	89
Orissa Canals	46	72

These results (except in the case of the Sone Canals) cannot be considered good, and it is again necessary to call the attention of district officers in Orissa and Midnapore to the steady growth of the arrear balances as a subject which demands early and energetic treatment.

10. In Navigation Receipts improved results are shown on all the lines except the Calcutta and Eastern Canals. There is reason to suppose that the income from this route, on which the traffic receipts are greater than on all the other canals of the province combined, is being unfavourably effected by the competition of the Central Bengal Railway. Under arrangements which existed before the construction of the railway, when the canals had a monopoly of the traffic, and which have not yet been altered, tolls are only collected at the Calcutta terminus of the boat-route; and the railway is thus enabled to tap the canal traffic before the latter has paid toll, and therefore at present competes with the canal at an advantage. The actual tollage collections for each system are given below for three years—

Year.	Orissa Canals.	Midnapore Canal.	Hidgellee Tidal Canal.	Orissa Coast Canal.	Sone Canals.	Calcutta and Eastern Canals.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1886-87	58,604	1,09,693	51,904	28,587	49,685	4,73,193	7,71,706
1887-88	66,628	1,20,574	40,406	52,828	50,984	5,71,872	9,09,292
1888-89	69,850	1,46,760	53,910	65,010	52,162	5,65,491	9,53,183

On the Nuddea rivers the collections fell from Rs. 1,98,318 to Rs. 1,91,749.

11. The number of complaints which came up for disposal during the year was altogether 14,710, of which 12,506 were complaints made during the year and 2,204 were old complaints left over for disposal from the files of the previous year—

	Orissa.		Midnapore.		Sone.		Total.	
	Number.	Percentage on cases disposed of.	Number.	Percentage on cases disposed of.	Number.	Percentage on cases disposed of.	Number.	Percentage on cases disposed of.
Pending from last year	1,503	.....	84	.....	615	.....	2,212	.....
Filed during the year	3,789	.....	1,647	.....	7,062	.....	12,498	.....
Total ...	5,292	.....	1,731	.....	7,687	.....	14,710	.....
Disposed of { Admitted	.....	.....	216	11·5	2,253	39·0	.....	.....
Disposed of { Dismissed	.....	.....	1,276	85·5	3,519	61·0	.....	.....
Total ...	4,110	100·0	1,492	100·0	5,772	100·0	11,374	100·0
Pending on 31st March 1889 ...	1,182	.....	239	.....	1,915	.....	3,336	.....
Area irrigated in 1888-89 ... Acres	159,292		69,777		355,909		584,978	
Proportion of acres irrigated to one complaint (current year only).	42·04		42·3		50·4		46·7	
Ditto for 1887-88 (including cases pending from previous years).	37·9		78·3		46·7		47·5	

The above table, which is an abstract of the information given in the various Revenue reports on the filing and disposal of complaints, is defective in the case of the Orissa Canals, where the Deputy Revenue Superintendent has failed to distinguish the claims admitted and those rejected. Also, since in the reports of 1887-88 current and pending complaints were taken together, it is impossible to exactly compare the work done in each year. As, however, the number of complaints, current and pending, in 1887-88 was 10,332, being in the ratio of 1 : 47·5 to the number of acres irrigated, while in 1888-89 the number of current complaints is 12,498 and the ratio 1 : 46·8, it is clear that not only was the number of complaints greater in the latter year, but the proportion of complaints with regard to the area irrigated has also risen. In the case of the Midnapore Canal that proportion has almost doubled—an unsatisfactory state of affairs which should have received attention in the reports of the officers responsible.

12. The number of certificates issued for the recovery of arrears has fallen from 28,805 to 19,536, and the number pending at the close of the year from 19,536 to 15,880—

	Pending at close of 1887-88.	Instituted during 1888-89.	Total.	Disposed of.	Pending at close of 1888-89.
Midnapore	5,310	11,201	16,511	9,326	7,185
Orissa	9,047	5,259	14,306	8,553	5,753
Sone	5,179	4,216	9,395	6,453	2,942
Total ...	19,536	20,676	40,212	24,332	15,880

The reduction in the cases pending has been effected entirely on the Sone and Orissa Canals, as in Midnapore there is a considerable and highly unsatisfactory increase, notwithstanding that the number of cases disposed of is actually higher than in either of the other systems. The percentage, however, of cases disposed of, as compared with the number pending and instituted, is not so good, the respective percentages being for Midnapore 56·5, Orissa 59·8, and Sone 68·7. Judging by the very large proportion of cases struck off compared with the total number disposed of in Midnapore, namely, 5,478, or nearly 59 per cent, it appears probable that sufficient care is not exercised in issuing these certificates, and that much unnecessary work is in consequence thrown on the officer who is trusted with their disposal.

13. The Lieutenant-Governor notes with satisfaction the names of the various officers to whom Colonel Harrison awards special praise, and he takes this opportunity, on Colonel Harrison's connection with the province being severed, of recording his acknowledgment of the excellent service rendered by him during his tenure of the office of Chief Engineer and Joint-Secretary, and of the admirable tact and judgment which Colonel Harrison has always displayed in administering the department confided to him.

ORDER.—Ordered that a copy of this Resolution, and of the Note and its accompaniments, be submitted to the Government of India, in the Public Works Department, for information; also that copies be forwarded to the Appointment, Revenue, and Financial Departments of this Government; the Board of Revenue, Lower Provinces; the Commissioners of the Presidency, Burdwan, Patna, and Orissa Divisions; the Collectors of the 24-Pergunnahs, Nuddea, Hooghly, Midnapore, Burdwan, Patna, Shahabad, Gya, Sarun, Cuttack, and Balasore; the Superintending Engineers of the Orissa, South-Western and Sone Circles; and Examiner, Public Works Accounts, Bengal, for information.

By order of the Lieutenant-Governor of Bengal,

C. W. I. HARRISON, *Lieut.-Col.*, R.E.,
Offg. Joint-Secy. to the Govt. of Bengal,
P. W. Dept.

Government of Bengal.

PUBLIC WORKS DEPARTMENT.

IRRIGATION BRANCH.

REVENUE REPORT.

Note by LIEUTENANT-COLONEL C. W. I. HARRISON, R.E., *Chief Engineer, on the Canal Revenue Reports for the year* 1888-89.

THE Capital expenditure on Irrigation Works, for which Capital accounts are kept, amounted during the year 1888-89 to Rs. 9,19,020 for direct and Rs. 23,231 for indirect charges—

	Direct charges.	Indirect charges.	Total.
	Rs.	Rs.	Rs.
Capital expenditure not charged against Revenue	7,74,547	18,229	7,92,776
Minor Works and Navigation, Provincial	1,44,473	5,002	1,49,475
Total ...	9,19,020	23,231	9,42,251

2. The total Capital outlay at the end of the year 1888-89, including indirect charges, was as follows:—

	Direct charges.	Indirect charges.	Total.
	Rs.	Rs.	Rs.
Major Irrigation Works.			
Productive Public Works. ...	5,88,83,503	16,58,558	6,05,42,061
Minor Works and Navigation.			
Protective grants—Imperial ...	8,66,000	...	8,66,000
Ordinary revenue { Imperial and Provincial } ...	98,67,297	2,81,485	1,01,48,782
Total ...	6,96,16,800	19,40,043	7,15,56,843

3. The above outlay is divided under the different projects in the following statement:-

Works.	During 1888-89.			To end of 1888-89.		
	Direct charges.	Indirect charges.	Total.	Direct charges.	Indirect charges.	Total.
Major Irrigation Works.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa Canals ...	6,23,139	15,279	6,38,718	2,35,37,322	5,31,481	2,40,68,803
Midnapore Canal ...	2,665	53	2,718	82,66,010	1,83,711	84,49,721
Hidgellee Tidal Canal ...	...	...	...	17,95,489	44,807	18,40,296
Sone Canals ...	1,48,443	2,897	1,51,340	2,52,84,682	8,98,559	2,61,83,241
Total ...	7,74,547	18,229	7,92,776	5,88,83,503	16,58,558	6,05,42,061
Minor Works and Navigation.						
Tirhoot Project ...	...	...	...	5,31,425	74,650	6,06,075
Damoodah Project ...	(—)1,200	...	(—)1,200	1,51,141	16,239	1,67,380
Calcutta and Eastern Canals	47,862	1,507	49,369	52,27,428	61,057	52,88,485
Orissa Coast Canal ...	97,811	3,495	1,01,306	41,54,073*	1,02,356	42,56,429
Sarun Canals ...	...	...	...	6,69,230	27,183	6,96,413
Total ...	1,44,473	5,002	1,49,475	1,07,33,297	2,81,485	1,10,14,782
GRAND TOTAL ...	9,19,020	23,231	9,42,251	6,96,16,800	19,40,043	7,15,56,843

* Includes expenditure of Rs. 8,66,000 from famine protective grants.

REVENUE.

4. The total revenue receipts, working expenses and charges for interest in respect of the works which are classed as Major Irrigation Works during 1888-89, and four previous years, are shown in the following statement:—

PARTICULARS.	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.
	Rs.	Rs.	Rs.	Rs.	Rs.
Receipts from all sources ...	13,81,179	10,87,080	13,69,619	15,74,272	12,99,876
Working expenses (direct and indirect charges)	14,87,295	15,72,170	13,76,137	11,98,291	12,27,414
Net revenue	(—)1,06,116	(—)4,85,090	(—)6,458	3,75,981	72,462
Charges for interest	23,39,849	23,13,446	22,91,006	22,66,710	22,29,979
Deficit	24,45,965	27,98,536	22,97,464	18,90,729	21,57,517
Rate per cent. on Capital outlay ...	4·04	4·68	3·88	3·23	3·72

INTEREST.

5. The total amount of interest payable to the Imperial Treasury on account of Major Irrigation Works for the year 1888-89 is Rs. 23,39,849.

FINANCIAL RESULTS.

6. The following statement shows the financial results of both Major Irrigation Works and Minor Works and Navigation, of which Capital and Revenue Accounts are kept, to the close of the year 1888-89:—

	Major Irrigation Works.	Minor Works and Navigation.
	Rs.	Rs.
Direct revenue	1,51,85,443	2,05,73,482
Working expenses (direct charges)	1,58,26,535	79,97,925
Results on direct charges only ... Loss ...	6,41,092	Profit ... 1,25,75,557
Indirect charges debitable to revenue ...	8,27,907	... 2,05,967
Results on both direct and indirect charges ... ... Loss ...	14,68,999	Profit ... 1,23,69,590
Charges for interest on Capital	3,40,63,927	Not calculated.
Net results, including interest to end of 1888-89 ... ... Loss ...	3,55,32,926	

Thus on Major Irrigation Works the net loss including interest is Rs. 3,55,32,926, or 58·69 per cent., of the gross Capital outlay, including all charges.

7. The financial results of Minor Works and Navigation, of which only revenue accounts are kept, are shown below:—

	Rs.
Direct revenue	78,22,208
Working expenses (direct charges)	42,44,206
Results on direct charges only ... ... Profit ...	35,78,002
Indirect charges debitable to revenue	2,21,813
Results on both direct and indirect charges ... Profit ...	33,56,189

EXPENDITURE.

8. The expenditure on, and receipts from, Irrigation, Navigation, and Agricultural Works during the year 1888-89, as compared with those of the year 1887-88, are shown below:—

EXPENDITURE.	1888-89. Rs.	1887-88. Rs.
42—Major Irrigation Works, Working Expenses—		
Provincial	14,87,295	15,72,170
43—Minor Works and Navigation—		
Irrigation and Navigation Works—		
Provincial	7,19,087	8,26,214
Agricultural Works—		
Provincial	7,83,156	7,17,359
Contributions	9,773	5,849
Total ...	7,92,929	7,23,208
49—Irrigation—Capital expenditure not charged against revenue	7,92,776	5,57,976
GRAND TOTAL ...	37,92,087	36,79,568

Receipts.	Rs.	Rs.
XXIX—Major Irrigation Works—Direct receipts—		
Provincial	13,81,179	10,87,080
XXX—Minor Works and Navigation—		
Irrigation and Navigation Works—		
Provincial	8,57,793	8,54,038
Agricultural Works—		
Provincial	9,733	8,606
Total ...	22,48,705	19,49,724

Receipts.

Note.—Commencing with the year 1888-89, "Refunds of revenue" are treated as reduction of receipts and not as charge against Working Expenses, and "Indirect charges" are shown in addition to direct charges under Working Expenses, in accordance with the suggestion contained in Government of India's letter No. 154*I*, dated 15th August 1889.

9. The areas irrigated during the year 1888-89 and the four preceding years, by the Major Irrigation Works, are shown in the following statement:— Area irrigated.

Year.	Orissa Canals.				Midnapore Canal.				Sone Canals.				Total.			
	Kharif.	Rabi.	Perennial.	Total.	Kharif.	Rabi.	Perennial.	Total.	Kharif, including five-year leases.	Rabi.	Perennial.	Total.	Kharif.	Rabi.	Perennial.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1888-89 ...	156,319	2,779	194	159,292	66,408	3,369	...	69,777	281,492	69,817	4,000	355,309	504,219	75,965	4,794	584,978
1887-88 ...	108,867	502	137	109,506	65,864	...	...	65,864	281,614	27,501	6,285	315,380	456,345	28,003	6,402	490,750
1886-87 ...	75,115	2,440	154	77,709	69,762	...	...	69,762	230,910	16,662	11,626	258,204	384,793	19,102	11,780	415,675
1885-86 ...	70,503	1,005	171	72,339	70,604	...	...	70,604	271,433	50,610	10,527	332,570	412,600	51,615	10,698	475,513
1884-85 ...	54,181	2,994	197	57,372	69,294	...	...	69,294	283,361	77,558	9,282	370,661	407,316	80,552	9,459	497,327

The year's working and its financial results will now be dealt with separately for each of the canal systems of the province.

ORISSA CANALS.

10. The Capital, Interest, and Revenue Accounts of these canals are given below:—

1.—CAPITAL ACCOUNT. Capital account.

Heads of account.	Outlay during 1888-89.	Outlay to end of 1888-89.
Direct charges.	Rs.	Rs.
I.—Works	4,88,452	1,69,03,279
II.—Establishment	1,06,375	43,03,670
III.—Tools and plant	15,043	20,01,555
IV.—Suspense accounts	21,307	1,46,525
Loss by exchange	...	2,68,070
Total ...	6,31,177	2,36,23,099
V.—*Less*—Receipts on Capital account ...	7,738	85,777
Net total direct charges ...	6,23,439	2,35,37,322
Indirect charges.		
Capitalization of abatement of land revenue ...	386	32,842
Leave and pension allowances	14,893	4,98,639
Total indirect charges ...	15,279	5,31,481

The capital outlay of 1888-89 shown in this statement represents the progress made with the works provided in the revised estimates of the Orissa Project. Owing to a slight scarcity of food-supply in the district, a more plentiful supply of labour was available than has been the case for some years, and the amount of earthwork carried out on canal and distributary banks, drainage works and protective embankments was more satisfactory. The additional lengths completed and the fresh areas brought under command, or provided with distributaries, will be shown in a later paragraph. The list of masonry works and buildings either put in hand or brought to completion also indicates a fair rate of progress during the year.

INTEREST ACCOUNT.

2.—INTEREST ACCOUNT.

	Rs.
Interest charges to end of 1887-88	1,28,54,084
Ditto for 1888-89	9,29,024
Total ...	1,37,83,108

REVENUE ACCOUNT.

3.—REVENUE ACCOUNT (Actuals).

	Expenditure.			Receipts	
	During 1888-89.	To end of 1888-89.		During 1888-89	To end of 1888-89.
	Rs.	Rs.		Rs.	Rs
DIRECT CHARGES.					
I.—Maintenance and Repairs.			Water-rates ...	1,51,365	16,87,867
			Navigation ...	77,908	10,64,564
			Miscellaneous ...	14,242	2,44,248
			Direct revenue realized in England ...	...	38,686
Works (extensions and improvements) ...	...	1,611			
Repairs ...	2,36,694	35,47,088	Total ...	2,43,515	30,35,365
Compensation ...	...	53			
Establishment, including direction and accounts ..	70,201	8,27,613	*Less*—Refunds of revenue ...	221	3,582
Tools and plant ...	21,156	2,14,313			
Profit and loss ...	...	640			
Total ...	3,28,051	45,91,351			
II.—Revenue management.					
Irrigation establishment ..	43,161	6,69,722			
Navigation establishment ...	15,734	1,75,731			
Total ...	58,895	8,45,453			
III.—Direct expenditure in England ...	...	6,945			
Total direct charges ...	3,86,946	54,43,749			
INDIRECT CHARGES.*					
Capitalized abatement of land revenue ..	...	...			
Leave and pension allowances ..	18 073	2,62,248			
Total Indirect Charges	18,073	2,62,248	Net total receipts	2,43,294	30,31,783
			Deficit ...	1,61,725	26,74,214
Total Working Expenses	4,05,019	57,05,997	Total ...	4,05,019	57,05,997

* These are now shown under the suggestion of the Government of India.

11. The income calculated on "earnings" of the year and expenditure are shown below:— EARNINGS.

Expenditure.	Amount.	Earnings.	Amount.
DIRECT CHARGES.	Rs.		Rs.
I.—Maintenance and repairs.			
Repairs	2,36,694	Water-rates	2,42,808
Establishment, including direction and accounts	70,201	Navigation	77,908
Tools and plant	21,156	Miscellaneous	14,242
Total ...	3,28,051	Total ...	3,34,958
II.—Revenue management.			
Irrigation establishment ...	43,161		
Navigation ditto ...	15,734		
Total ...	58,895	*Less*—Refunds of revenue ...	221
Total direct charges ...	3,86,946	Net earnings	3,34,737
Indirect charges	18,073	Deficit	70,282
Total working expenses ...	4,05,019	Total ...	4,05,019

By the orders of the Government of India, a change is now introduced in the method of calculating the amount of water-rates shown as "earned" in the above statement. Under the rules in force on the Orissa canals, a portion of the water-rates assessed in any year do not become legally due until the 1st May, and a further portion till the 1st June, of the following year. Hitherto, therefore, as explained in previous Revenue Reports, the earnings of each year have been calculated by excluding those instalments of the assessments which would not become due till the year following; but, on the other hand, including those instalments of the assessments of the previous year, which, though undoubtedly earned in that year, have only become due in the year under report. The amount thus arrived at has hitherto been shown in the statistical table IVC attached to each report as the amount of revenue assessed. In this and future reports, however, the 'earnings' of a year will be taken to mean the amount of the liabilities incurred by cultivators for water supplied during that year, without regard to the date on which those liabilities may become legally recoverable. The statement also now for the first time includes, on the expenditure side, indirect as well as direct charges. EARNINGS.

12. The lengths of the canals and distributaries in operation at the close of the year 1888-89, compared with 1887-88, are given in the statement following:— LENGTH CANALS

Name of Canal.	1888-89.								1887-88.							
	Navigable canals.	Canals for irrigation only.	Distributaries and village channels.	Area protected from flood.	Area under command.	Area provided with distributaries.	Area irrigated.	Percentage of area irrigated to area provided with distributaries.	Navigable canals.	Canals for irrigation only.	Distributaries and village channels.	Area protected from flood.	Area under command.	Area provided with distributaries.	Area irrigated.	Percentage of area irrigated to area provided with distributaries.
	Miles.	Miles.	Miles.	Acres.	Acres.	Acres.	Acres.		Miles.	Miles.	Miles.	Acres.	Acres.	Acres.	Acres.	
Kendraparah system. — Kendraparah ...	39	...	354½	129,421	101,110	92,582			39	...	348½	129,421	101,110	91,000		
Ditto extension	15	...	...	8,960	7,000	...			15	...	...	8,960	7,000	...		
Gobri (including extension.)	21	...	..	27,251	53,290	...	72,796	70·8	21	...	...	27,251	53,290	...	54,404	54·2
Pattamoondee ...	...	47	33½	65,000	51,250	10,172			...	47	32½	65,000	51,250	9,387		
Taldundah system. — Taldundah ...	27	...	71½	19,520	15,250	15,250	40,391	71·0	27	...	71½	19,520	15,250	15,250	31,227	51·9
Machgoan ...	4	28	122½	44,928	97,057	41,600			4	15	122½	44,928	68,200	41,600		
High Level Canal, Range I ...	33	...	131½	80,128	48,815	48,815	18,092	37·0	33	...	131½	80,128	48,815	47,780	15,312	32·0
Total Mahanuddee Series ..	139	75	713	375,808	373,772	208,419	131,279	62·9	139	62	706½	375,808	344,921	205,017	100,943	49·3
High Level Canal, Range II ...	12½	...	...	...	10,000		2,385	...	12½	...	...	...	10,000	...	904	...
Ditto, Range III...	19	..	47½	...	57,500	42,500	25,628	60·3	19	..	11½	...	57,500	21,770	7,659	35·0
Jajepore Canal	6½	...	...	...	70,000	...	..	..	...	...	...	...	...	...	...	...
Total Brahmini-Byturni Series ...	38	...	47½	...	137,500	42,500	28,015	65·9	31½	...	11½	...	67,500	21,770	8,563	39·3
Total Orissa Canals ...	177	75	760½	375,808	511,272	250,919	159,292	63·4	170½	62	718	375,808	412,421	226,787	109,506	48·2

There has been an increase of 6½ miles in the length of canals intended for the purposes both of irrigation and navigation, and of 13 miles in the length of those to be used for irrigation only. The former increase is due to the completion of the Jajepore Canal in the Brahmini-Byturni Series, which was opened for traffic in the month of August 1888, and the latter to the completion of the Machgong Extension Canal in the Mahanuddee Series, as far as the 32nd mile, up to which point it has been filled with water.

There has been no increase in the length of village channels, and none are in progress upon any of the canals, but the length of distributaries has increased during the year to the extent of 42½ miles, of which 6¾ miles are on the Kendrapara and Pattamoondi Canals, and 35¾ miles on the High Level Canal, Range III, where the whole length of distributaries proposed to be constructed has been completed with the exception of about two miles of main distributary, and a few minor branches required for affording irrigation to the high ground near the Main Canal and the Orissa Trunk Road. The area protected from flood remains the same as it was in the previous year, as the Daib embankment has not yet been fully completed, but there is an increase of 98,851 acres in the area under command in consequence of the completion of that portion of the Machgong Extension Canal which lies above the 32nd mile, and of the Jajepore Canal, the former of which has added 28,851 acres, and the latter 70,000 acres to the area commanded. The area provided with distributaries has also increased to the extent of 24,132 acres, of which 3,402 acres, are on the Kendrapara, Pattamoondi and High Level, Range I, canals of the Mahanadi Series, and 20,730 acres, on the High Level Canal, Range III, of the Brahmini-Byturni Series.

RAINFALL.

13. The rainfall of the year 1888-89 and of the previous year in the Cuttack and Balasore districts is given in the Statistical Table No. IVE. In both districts the total fall registered is very nearly the same as that registered in 1887-88.

The average rainfall at the thirteen stations situated within the area commanded by the Orissa canals for nineteen years is 55·18 inches, whilst the fall of the year at the same stations was 47·94, or 7·24 inches below the average.

From the statement of rainfall at the eleven stations in the upper districts drained by the Mahanadi, which has been supplied by the Superintending Engineer, it appears that the average fall during the year under review was 43·08 inches against 52·18 inches of the year 1887-88, showing a decrease of 9·10 inches. The average for the last seven years up to and including 1887-88 was 46·22 inches, so that the fall of the year under review is somewhat below the average.

From the table below, which gives the average rainfall observed during the kharif and rabi months during the last seven years at thirteen stations within the tract irrigated by the Orissa canals, it is evident that the kharif rains, though on the whole more plentiful than usual, were unequally distributed, a very short fall being registered in July and October, while that of August was unusually large. The deficiency in October was, however, partly made up by an increase in November, when the quantity registered was 2·01 inches in excess of the fall of the previous year:—

		AVERAGE OF THIRTEEN STATIONS.					
		1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Kharif season ...	July ...	13·03	9·58	10·68	10·65	11·67	8·91
	August ...	9·69	7·45	10·44	9·86	8·49	21·61
	September ...	9·77	11·29	10·08	14·66	6·12	8·36
	October ...	1·78	5·06	4·84	6·87	2·69	1·11
	Total ...	34·27	33·38	36·04	42·04	28·97	39·99
Rabi season ...	November ...	0·15	0·23	1·26	1·56	0·87	2·88
	December ...	1·53	0·07	1·20	0·45	...	...
	January ...	0·09	0·15	0·39	0·48	1·70	0·06
	February ...	1·58	2·63	0·05	...	1·26	0·81
	Total ...	3·35	3·08	2·90	2·49	3·83	3·75
	Whole year ...	57·18	50·42	51·49	60·05	47·79	49·07

The amount of rain and its distribution among the canals of the Orissa system is given in the following statement which covers the last five years:—

Year.	Mahanuddee Series.									Brahminee-Byturni Series.					
	Kendraparah system.			Taldundah system.			High Level Canal, Range I.			High Level Canal, Range II.			High Level Canal, Range III.		
	Kharif.	Rabi.	Whole year.	Kharif.	Rabi.	Whole year.	Kharif.	Rabi.	Whole year.	Kharif	Rabi.	Whole year.	Kharif.	Rabi.	Whole year.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
1884-85	35·65	4·75	54·75	29 52	2·15	47·85	32·24	2·45	52·15	31·78	2·94	46·24	30·24	2·86	48·34
1885-86	34·50	1·82	52·64	36·44	2·82	50·42	31·63	3·14	49·88	34·14	2·64	55·41	36·20	2·60	55·27
1886-87	39 97	2·66	63·59	42·86	3·97	64·76	41·67	1·53	63·16	44·02	1·48	62·18	42·72	2·08	64·79
1887-88	28·93	3·74	49·35	28·59	3·30	46·90	26·48	1·93	44·77	27·98	2·49	47·04	30·15	3·26	52·83
1888-89	37·07	3·28	45·50	44·39	4·54	53·28	38·78	1·93	44·04	42·72	2·37	51·18	44·56	2·87	55·50

IRRIGATION.

14. The following statement shows the areas irrigated and yearly rainfall since the year 1879-80:—

Year.	Kharif.	Rabi.	Perennial.	Total.	Rainfall.
	Acres.	Acres.	Acres.	Acres.	Inches.
1879-80	105,186	3,616	236	109,038	60 85*
1880-81	112,171	4,877	173	117,221	85·10*
1881-82	126,611	5,403	264	132,278	56·92†
1882-83	128,530	4,100	398	133,028	59·03†
1883-84	47,035	1,381	344	48,760	57·21†
1884-85	54,181	2,994	197	57,372	50·40†
1885-86	70,563	1,605	171	72,339	52·59†
1886-87	75,115	2,440	154	77,709	60·07†
1887-88	108,867	502	137	109,506	47·84†
1888-89	156,319	2,779	194	159,292	47·94†

* Mean of observations in Cuttack and Marsaghai.

† Ditto ditto at 13 stations throughout canal-irrigated area.

The spread of kharif irrigation has again been very marked, as the area which has taken water during 1888-89 is greater by 47,452 acres than the irrigated area of 1887-88, and greater by 27,789 acres than the irrigated area of any year since the construction of the canals. The partial failure of the July rains and the drought in October were the main causes which brought about this result.

To compare with 1887-88, of the increase of 47,452 acres in kharif irrigation, 18,019 acres are contributed by the High Level Canal, Range III, where the rate of increase is as much as 241 per cent., and 16,257 acres by the Kendraparah Canal. All the canals, however, show improved results, the lowest rate of increase being on the High Level Canal, Range II, where it was 18 per cent. Of the 2,227 more acres of rabi irrigated, 2,114 acres represent the increase on the Kendraparah Canal.

The whole area of all crops irrigated, being 159,292 acres, bears a ratio of 63 per cent. to the area under command of distributaries, already given as 250,919 acres. The ratio by canals is as follows:—

	1887-88.	1888-89.	Increase.
Kendraparah system	54·2	70·8	16·6
Taldundah ditto	54·9	71·0	16·1
High Level, Range I	32·0	37·0	5·0
High Level, „ II	No distributaries.		
High Level, „ III	35·0	60·3	25·3

15. The whole of the irrigated area was assessed. The figures below show the method of assessment alongside of the figures of the two preceding years for purposes of comparison:—

		1888-89.	1887-88.	1886-87.
		Acres.	Acres.	Acres.
Kharif	Five-year leases ...	152,282	102,868	75,606
	Annual leases ...	57	37	68
	Unauthorized irrigation ...	3,981	5,975	1,354
Rabi	... ...	2,779	501	2,490
Perennial	... Sugarcane	193	130	149
Total, including unauthorized irrigation	...	159,292	109,506	77,709
Total, excluding unauthorized irrigation	...	155,311	103,531	76,355

It is observed, however, that though the figures used in the statements in this and the preceding paragraphs, which give a total of 159,292 acres as the area irrigated, are those adopted by the Superintending Engineer throughout his report of the year's operations, yet it is stated that the area actually under lease at the close of the year was 146,046 acres only. The difference thus observable between the area irrigated and that leased is described by the Superintending Engineer "as due to the areas provisionally entered in the leases of some of the canals, the lands commanded by which have not as yet been cadastrally surveyed, having been smaller than they were afterwards found to be when the measurements of the area actually watered came to be made." And the Deputy Revenue Superintendent summarises the results of the year as follows:—

	Rs.
Area leased and assessed during the year	1,30,258
Unauthorized irrigation	3,981
Assessed area of which measurements were completed after the close of the year	25,053
Total ...	1,59,292

1888-89, AN ANXIOUS PERIOD FOR THE PROSPERITY OF THE CANALS.

16. With the close of the year 1882-83 ended the first period of five-year leases which had been introduced in these canals in 1878-79; and since during that period it was deemed desirable to cause all the leases to end at the same time, with a view to permitting of an alteration of the rate simultaneously over the whole of the Orissa system. Should such alteration be considered advisable, all the leases given subsequently to 1878-79 were given nominally for five years, that is to say, at the five-year lease rate, but they really expired simultaneously on the 31st March 1883. With 1883-84 therefore commenced a new period of five years, and the year happening to be one somewhat favourable to canal irrigation, a considerable area was leased, all the leases for which lapsed on the 31st March 1888, causing the year under review to be opened with a leased area of 45,716 acres only. Up to the end of June very few fresh leases had been entered into, and matters began to wear a serious look so far as the interests of the canals were concerned; and it was not until the demand for canal water arose in July that any good start was made. During that month and August, notwithstanding the heavy rain at the close of the latter month, leases were obtained for some 43,000 acres of either new irrigation or renewals of old leases. A small increase in September and the drought in October added some 40,000 acres more, bringing the total by the end of November to about 131,000 acres. Subsequent measurement and the correction of estimated areas in the leases eventually raised the area to that given above.

RANGE I, HIGH LEVEL CANAL, A SPECIAL CAUSE FOR ANXIETY.

Range I of the High Level Canal was the subject of special anxiety, since leases for no less than 13,000 acres out of the 14,605 acres shown as leased in 1887-88 lapsed at the close of that year. It was feared that many of the leases would not be renewed, but the scantiness of the rainfall in October had a most marked effect, and the area now leased is larger than it has been in any previous year.

17. At first sight the area now reached seems to lead to the conclusion that all the land under lease at the end of 1882-83 had now been re-leased. Such, however, is not the case, and dates given in the Superintending Engineer's Report show that though the area leased up to the end of 1888-89, viz. 146,046 it is fairer to take this figure than 159,292 acres, since the latter is the result of careful measurement which was wanting in 1882-83), is 13,018 acres more than the area leased up to the close of 1882-83, yet that, if the areas by canals be compared, it appears that even if none of the leases on the older canals be for entirely fresh irrigation, *i. e.*, for land which had not been irrigated up to 1882-83, a considerable area of lapsed irrigation has still to be recovered, the increase of 13,018 acres being practically wholly due to increase in the High Level Canal, and especially Range III thereof. The remaining canals have not yet recovered the depression which followed the expiry of the first set of five-year leases as will be seen from the following table:— LAPSED IRRIGATION STILL TO BE RECOVERED.

Name of Canal.	Area leased.		More.	Less.
	1888-89.	1882-83		
	Acres	Acres.	Acres.	Acres.
Kendrapara, including Gobri	53,867	60,374	...	6,507
Gobri Extension	1,499	...	1,499	...
Pattamoondi	10,549	12,094	...	1,545
Taldundah	10,285	10,719	...	434
Machgorig	27,241	34,012	...	6,771
High Level Ranges I and II	19,162	14,244	4,918	...
Ditto Range III	23,443	1,585	21,858	...
Total ...	146,046	133,028	28,275	15,257

18. It is clear from what has been said above that the Orissa Canals are very dependent on the nature of the season at a critical period for their prosperity; and there is no doubt but that, from the point of view of canal interests only, the drought of October 1888 was the most opportune occurrence that could have taken place, inasmuch as it happened just as the former leases had expired and there was no interval during which the cultivators might have come to think that they could do without canal water and to doubt whether it was to their interest to insure their lands against drought by a small yearly payment. The drought made them thoroughly appreciate the benefits of canal irrigation; and, as a matter of fact, it was in the real interests of the cultivators themselves that no such interval should occur; for nothing but continuous irrigation will enable them to be prepared with the means and method of irrigating with success and with universal benefit when drought really comes. THE DROUGHT OF 1888-89 VERY BENEFICIAL IN EVERY WAY.

19. The information regarding five-year leases is not sufficiently exact to permit of a correct conclusion being formed as to how the area under five-year leases is progressing, especially whether lapsed leases are being renewed. It would be as well if this point were properly taken up by the Superintending Engineer and Deputy Revenue Superintendent in their reports for the year now in progress, since the renewal of leases will be a better proof than anything else that the Ooriya is at last taking kindly to canal irrigation. RENEWALS OF LEASES.

20. At the commencement of the year under review the accounts showed an unrealized balance of Rs. 96,567, of which Rs. 92,110 was for water-rates, and Rs. 4,457 for miscellaneous revenue. The additional assessments which fell due within the year on account of previous years, as well as the year under review, came to Rs. 2,04,535, of which Rs. 1,96,765 was for water-rates. Thus, including arrears, the gross amount, which was liable to be collected during 1888-89, was Rs. 3,01,102, of which Rs. 1,60,328 was realized and Rs. 24,003 either remitted or written off as irrecoverable. Accordingly, the year closed with an unrealized balance of Rs. 1,16,771, of which Rs. 1,14,597 was for water-rates. ASSESSMENT AND COLLECTIONS.

This balance is larger than that at the end of the previous year. The increase is due, in a great measure, to the large increase on the assessments during the year. The outstanding balances, however, include considerable demands on account of irrigable but unirrigated beali rice lands—a class of lands which, in cases where beali rice is the only crop grown on them, it has now been decided to strike out of the assessments of the blocks in which they are situated. The outstandings, therefore, will undergo some reduction when these

orders are carried into effect, as well as from the remission recommended by the Deputy Revenue Superintendent, of submerged and damaged leased areas, till now assessed at full rates. The actual realizations during the year, though larger than those of the previous five years, would have been much better, but for the damage to crops caused by drought and abnormal cyclonic weather. The attention of the Deputy Superintendent has, however, been drawn to the steady increase in the outstanding balances, and he has been requested to submit a special report on the measures he would propose for the reduction of these arrears, and on what hopes may be entertained of effecting the reduction at an early date. A detailed account of the balances is given below:—

Year in which amount fell due.	Water-rates.	Miscellaneous.
	Rs.	Rs.
1881-82	327	76
1882-83	108	246
1883-84	435	456
1884-85	1,123	476
1885-86	2,642	458
1886-87	8,040	463
1887-88	32,907	...
1888-89	69,015	...
Total arrears ...	1,14,597	2,175

21. The results of the year as regards water-rate collections are shown below:—

	Outstandings of all years up to and including 1887-88.			Demands due in 1888-89 for the irrigation of that year.		
	Rupees.	Percentage of demands outstanding on 31st March 1889.	Rupees.	Rupees.	Percentage of demands for the year.	Rupees.
Outstandings to end of 1887-88, with assessments made in 1888-89 ...	...	100·0	1,61,837	...	100·0	1,27,038
Adjustments made in 1888-89 ... { Collections ...	93,402	57·7		57,963	45·6	
Adjustments made in 1888-89 ... { Remissions ...	22,851	14·1		62	0·04	
Total adjustments ...	...	71·8	1,16,253		45·7	58,025
Outstanding on 1st April 1889 ...	...	28·1	45,584		54·3	69,013

The percentage of adjustment for old outstandings is 71·8 against 73 6 of the last year, but that for the current demand is 45 7 against 45·1. The proportion of remissions is greater, being 14·1 against 5·7; it was mentioned in last year's report that considerable remissions would have to be made. So far as current demands are concerned, the percentage is the same in both years, being 0·04. The percentage of balances of old arrears still remaining to be collected at the close of the year has risen from 26·4 to 28 1, but the collection of the current year compares favourably with that of the year previous, as the unrealized percentage has fallen from 54·9 to 54·3.

COMPLAINTS. 22. The number of complaints received and the progress made in settling them is shown below:—

	Number pending from last year.	Number filed during year.	Total.	Disposed of during year.	Balance left pending.
Complaints against assessments	1,503	3,789	5,292	4,110	1,182
Miscellaneous	129	887	1,016	957	59
Total ...	1,632	4,676	6,308	5,067	1,241

The diminution in the arrears is satisfactory, and it is stated that all complaints arising out of the assessment of unauthorized irrigation have been disposed of as far as the Canal Revenue office is concerned. The number of new complaints was swollen by applications based on the recent orders of the Bengal Government regarding the remission of beali lands in five-year blocks, and by hose relating to fully assessed lands which had been damaged by inundation.

23. The Superintending Engineer thus compares the kharif duties obtained from the several canals with those obtained in the previous year:— DUTY OF WATER.

NAME OF CANAL.	Rainfall during the kharrif season.		Duty of quantity entering canal per cubic foot.		Duty of quantity utilised per cubic foot.	
	1888-89.	1887-88.	1888-89.	1887-88.	1888-89.	1887-88.
	Inches.	Inches.	Acres.	Acres.	Acres.	Acres.
Kendraparah Canal System ...	37·07	28·93	92·48	67·39	100 25	71·42
Ditto Canal	36·65	25·59	86·22	89·38	97·92	93·77
Pattamoonda do.	41·19	33·10	84·04	30 20	119·16	37·73
Gobri do.	37·91	25 63	92 33	41·36	99·81	81·62
Taldanda Canal System ...	44 39	28·59	82·60	79·60	217·40	98·70
High Level Canal, Range I ...	38 78	26·48	70·73	57·02	112·03	77·72
Ditto ditto, II ...	42·72	27·98	30 99	40·05	30 99	74·24
Ditto ditto, III ...	44·56	30·15	200·07	64·67	200·07	64·67

So that, except in the case of the High Level Canal, Range II, a higher average duty for the whole season was obtained; a natural consequence of the greater rainfall. In the case of the exception noted, a very high discharge was passed into this canal during October, partly in order to raise the level of the pool above the Byturni weir, for the purpose of benefiting the irrigation on Range III, but principally in order to facilitate irrigation from Range II by raising the level of the water. In the return of the Executive Engineer the whole of this discharge was represented as having been utilised, which, as the Superintending Engineer points out, can hardly have been the case. In future, care will be taken to show the quantity utilised by deducting the discharge at the outfall of the canal into the Byturni river.

During October, when the demand for irrigation was at its highest, and great pressure was brought on the canals, the average duty obtained was 53·48 acres per cubic foot entering the canals, and 60·32 acres per cubic foot utilised.

24. During the year 256 experiments on the outturn of crops were made, half on irrigated and half on unirrigated lands. On lands irrigated during 1888-89, the average weight of paddy per acre is 16·23 maunds and of straw 20 12 maunds, against 16·83 and 25·62, which are the respective averages of the five previous years. On unirrigated lands the figures for the year are 11·02 maunds of paddy against 12·46 maunds obtained in previous years, and 14·02 maunds of straw against an average of 19·05. The average yield per acre during the year therefore from irrigated as well as from unirrigated lands, though greater than it was in 1887-88, must both for grain and straw be considered but moderate. CROP EXPERIMENTS.

The difference in favour of irrigation, as shown by these experiments, is 5·21 maunds per acre in grain and 6·10 maunds in straw, the figures obtained from the averages of previous years being 4·37 and 7·57 respectively.

25. The cost of revenue establishment of the year was Rs. 43,161. The following statement shows the details of the year under review with those of the three previous years:— REVENUE ESTABLISHMENT.

	1888-89.	1887-88.	1886-87.	1885 86.
Establishment under Collector.	Rs.	Rs.	Rs.	Rs.
Superior officers and permanent and temporary establishment, including travelling allowance	31,389	28,749	26,007	24,028
Contingencies	2,889	2,218	2,625	1,948
Headmen's fees	1,680	2,208	1,209	1,229
Establishment under Executive Engineer.				
Permanent and temporary establishment ...	3,052	2,964	2,942	2,854
Contingencies	...	...	...	...
Water-regulation establishment ...	4,151	4,161	4,222	4,245
Total ...	43,161	40,300	37,005	34,304
Collections of water-rates and miscellaneous revenue by the Canal Revenue Department	1,60,328	1,46,039	1,05,775	1,16,940
Percentage ...	26·9	27·6	34·98	29·3

26. The management of the navigation of the canals and the collection of the revenue from this source is in the hands of the engineering staff. The NAVIGATION.

receipts, which are tabulated in statistical table ID, include tolls collected on boats and rafts using the canals, and the earnings of the transport service maintained by Government between Bhuddruck on the High Level Canal and Cuttack, a distance of 74 miles. The collections from tolls and transport service for the last ten years are shown below:—

	Tolls.	Transport service.	Total.
	Rs.	Rs.	Rs.
1879-80	62,389	35,686	98,075
1880-81	41,297	30,105	71,402
1881-82	53,219	29.987	83,206
1882-83	66,736	41,737	1,08,473
1883-84	61,602	48,550	1,10,152
1884-85	52,784	27,018	79,802
1885-86	64,093	19.919	84,012
1886-87	58,664	8,384	67,048
1887-88	66,628	4,376	71,004
1888-89	69,830	8,078	77,908

The cost of the establishment employed in collecting tolls during the year was Rs. 9,474, or Rs. 319 in excess of the previous year, due partly to the opening of the Jajepore Canal for traffic in August 1888, on which Rs. 156 was incurred, and partly to the Toll Collector at the Jumboo lock of the Kendrapara Canal having been employed there for a complete year instead of only for a portion of a year, as was the case in 1887-88.

TRAFFIC. 27. The following statement compares the traffic (excluding the transport service) of all the canals in Orissa during the year under review with that of the previous year:—

CANALS.	Miles open.	Tollage on boats and rafts.		Number of boats plying cargo and passengers.		Tonnage of cargo and passenger boats.		Value of cargo and rafts.		Tollage per mile of canal.	
		1888-89.	1887-88.	1888-89.	1887-88.	1888-89.	1887-88.	1888-89.	1887-88.	1888-89.	1887-88.
	No.	Rs.	Rs.	No.	No.	Tons.	Tons.	Rs.	Rs.	Rs.	Rs.
Taldundah and Machgong Canals ...	31	4,310	6,267	926	1,430	25,280	44,566	1,02,110	98,665	139·0	202·1
Kendraparah and Gobri Canals (including extension) ..	75	53,786	46,650	5,160	5,011	81,677	83,718	34,18,030	36,11 925	717·1	622·1
High Level Canal, Range I	83	6,642	8,306	2,058	2,975	22,080	24,118	6,28,530	8,'6,'00	201·3	251·7
Ditto, ditto II	14½	3,392	4,085	1,542	1,905	16 732½	17,378	2,85,81 2	3,71.4'2	271·4	326·8
Ditto, ditto III	19	1,601	1,311	786	673	7,39 ¼	6,216	1,30,472	1,2',511	84·3	69 0
Jajepore Canal*	6½	99	..	103	...	534	...	24,003	...	15·2	...
Total ...	177	69,830	66,628	11,475	12,094	153,674	175,996	45,99,057	50,32 403	394 5	390·7

* This canal was opened to traffic on the 11th August 1888.

This return only takes count of laden boats, of which there is a decrease both in number and tonnage. Of empty boats, on which reduced tollage rates are charged, the number which made voyages is 1,473 more than last year. The gross receipts from tollage are accordingly greater by Rs. 3,202, the total number of boats by 864, and the total tonnage by 30,267 tons. There is a decrease in rafts. Moreover, as the receipts from Government traffic have declined by Rs. 3,183, or 36 per cent., in consequence of the completion of the public works for which materials were boated in the previous year, the general traffic by private boats on the whole shows improvement, for though the actual weight of cargo, as exhibited in statistical table IID, appears to have slightly declined, the data on which that table is based cannot be depended on for accuracy. The classes of goods which show increases are grain, piece-goods, and building materials, while metals and salt have declined.

The number of passengers carried has increased by 10,015, being 17·21 per cent. in excess of the number who travelled in the year previous.

The fluctuations on the various canals are considerable. The increase on the Kendraparah Canal is larger by 7,319 than the decrease which occurred in 1887-88, so that the passenger traffic on this canal appears to have completely recovered from the temporary depression ascribed to the loss of the two ocean passenger steamers running between Calcutta and Chandbali; but the passenger traffic of the High Level Canal although increasing has not yet recovered itself. On the Taldandah Canal there is a still greater decrease than there was last year due to the same cause apparently, viz., that the passengers are not carried the short distance from the head of the canal at Jobra to the canal bridge situated on the crossing of the Pilgrim road.

28. The transport service maintained by Government between Bhuddruck and Cuttack was worked at a loss of Rs. 4,585 as against a loss of Rs. 5,712 in 1887-88. The number of passengers and the weight of goods carried were about double what were carried in 1887-88, but the line was worked at an increased cost of Rs. 3,383, steamers instead of accommodation boats being employed. TRANSPORT SERVICE.

29. The miscellaneous receipts during the year under review are compared by sub-heads with those of the previous year in the following statement:— MISCELLANEOUS RECEIPTS.

SOURCE OF REVENUE.	YEAR IN WHICH RECEIVED.		DIFFERENCE.	
	1888-89.	1887-88.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Plantations	1,450	1,131	319	...
Rent of lands	5,857	5,678	179	...
Canal produce	895	377	518	...
Rents of buildings	4,855	5,000	...	145
Sale of old materials	31	...	31	...
Fisheries	877	768	109	...
Sale of water	41	96	...	55
Miscellaneous	236	1,121	...	885
Total ...	14,242	14,171	1,156	1,085

30. The revenue receipts and working expenses of the Orissa canals for the last ten years are shown in the following statement:— FINANCIAL RESULTS.

PARTICULARS.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Water-rates	1,57,747	1,78,047	1,24,290	1,80,325	1,11,856	51,245	1,06,842	96,976	1,37,809	1,51,365
Navigation	98,075	71,402	83,206	1,08,473	1,10,152	79,302	84,012	67,048	71,004	77,808
Miscellaneous	23,365	20,329	15,655	31,212	15,860	12,538	16,496	15,587	14,171	14,242
Total ...	2,79,187	2,69,778	2,23,151	3,20,010	2,37,868	1,43,085	2,07,350	1,79,611	2,23,044	2,43,515
Less—Refunds of revenue ...	512	777	414	385	68	78	6	92	365	221
Net total receipts ...	2,78,675	2,69,001	2,22,737	3,19,625	2,37,800	1,43,507	2,07,344	1,79,519	2,22,679	2,43,294
WORKING EXPENSES.										
Direct charges.										
I.—Works, maintenance and repairs—										
Works (extensions and improvements) ...	208	...	...	...	...	...	...	...	...	...
Repairs	2,58,450	1,99,554	2,17,753	2,22,431	1,89,617	2,03,137	2,22,690	3,52,761	3,10,980	2,36,094
Establishment, including direction and accounts	51,918	45,896	50,108	51,160	43,600	50,058	51,109	81,117	98,153	70,201
Tools and plant ...	8,380	12,266	13,348	14,923	11,292	15,167	19,159	15,480	16,301	21,156
Direct expenditure in England	1,365	1,262	1,930	2,061	427	...	...	...	...	...
Total ...	3,20,320	2,58,978	2,83,139	2,90,575	2,44,936	2,69,262	2,93,048	4,49,364	4,25,524	3,28,051
II.—Revenue management—										
Irrigation establishment	38,794	38,818	37,022	37,002	33,432	33,999	34,304	37,005	40,300	43,161
Navigation establishment	8,153	7,561	8,085	13,578	14,681	12,398	15,219	15,471	15,125	15,734
Total ...	46,947	46,313	45,107	50,580	48,113	46,397	49,521	52,476	55,425	58,895
Total direct charges ...	3,67,267	3,05,291	3,28,246	3,41,155	2,93,049	3,15,659	3,42,571	5,01,840	4,80,949	3,86,946
*Indirect charges.**										
Capitalised abatement of land revenue, Leave and pension allowances	17,047	15,889	16,407	13,741	12,840	13,629	14,101	18,703	21,501	18,073
Total indirect charges ...	17,047	15,889	16,407	13,741	12,840	13,629	14,101	18,703	21,501	18,073
Total working expenses ...	3,84,314	3,21,180	3,44,653	3,54,896	3,05,889	3,29,288	3,56,672	5,20,543	5,02,450	4,05,019
Net revenue (deficit) ...	1,05,639	52,179	1,21,916	35,271	68,089	1,85,781	1,49,328	3,41,024	2,79,771	1,61,725

* Indirect charges are now, by the suggestion of the Government of India, included in this statement of financial results.

It will be noticed that the deficit which was so great in the years 1886-87 and 1887-88 has now been reduced to one comparable with the years 1884-85 and 1885-86, owing chiefly to the absence of expenditure on account of the breaches in the Mahanadi weir, but also to an improvement in the receipts. If the earnings of the two years 1887-88 and 1888-89, be compared, the deficit of Rs 2,45,842 is found to be reduced to Rs. 70,282; but it must be remembered that, in addition to the causes given above, in the former year the assessments did not include amounts not legally due until after the close of the year, whilst such are included in the year under review.

MAINTENANCE. 31. The outlay on maintenance, exclusive of that on the transport service which amounted to Rs. 6,403, during the year under review and the two preceding years is distributed under the sub-heads as follows:—

	1888-89.	1887-88.	1886-87.
	Rs.	Rs.	Rs.
Head works	71,168	1,94,272	2,34,500
Main canals	1,11,712	76,219	83,735
Distributaries	31,451	25,594	21,458
Drainage and protective works ..	15,960	10,778	6,690
Total	2,30,291	3,06,863	3,46,383

HEAD WORKS. Out of a total expenditure of Rs. 71,168 on head works, Rs. 62,796 represents the cost of maintaining the weirs, divided as follows:—

NAME OF WEIR.	Length.	EXPENDITURE.		RATE PER RUNNING FOOT.	
		1888-89.	1887-88.	1888-89.	1887-88.
	Feet.	Rs.	Rs.	Rs.	Rs.
Narajo	3,833	10,140	26,106	2·64	6·81
Mahanadi	6,349	26,539	1,32,941	4 18	20·93
Beropa	1,980	5,573	5,015	2·81	2·53
Brahmini	4,000	7,471	7,692	1·86	1·92
Pattia	783	5,698	6 526	7·27	8 34
Byturni	1,026	1,440	977	1·40	0 95
Burrah	526	5,935	7,165	11·28	13·62
Total of all weirs ...	18,497	62,796	1,86,432	3·39	10·08

As the rebuilding of the portions of the Naraje and Mahanadi weirs which had been carried away in 1886 was completed in 1887-88, the repairs necessary in 1888-89 were again of a normal character. A portion, however, of the apron of the Mahanadi weir was again injured by floods, involving a special outlay of Rs. 7,658 on its reconstruction.

The maintenance of the remaining head works, including river protective works, embankments and buildings, amounted to Rs. 8,372. Of these the buildings, on which quadrennial repairs were carried out, show an increase of Rs. 1,665.

MAIN AND BRANCH CANALS. 32. The following statement gives the cost of maintenance of each main and branch canal separately for four years:—

CANALS.	Miles.	1888-89.		1887-88.		1886-87.		1885-86.	
		Cost.	Per mile.	Cost.	Per mile.	Cost.	Per mile.	Cost.	Per mile.
	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Kendrapara...	39	39,370	1,000	17,430	446	21,004	538	30,789	789
Ditto extension ...	15	2,611	174	2,385	159	2,741	182	2,996	200
Gobri	15	6,434	429	4,500	300	3,975	265	7,806	520
Do. extension	6	4,725	787	4,047	674	3,599	600	9,101	1,517
Partamoondee	47	8,709	186	11,347	241	14,462	309	18,629	396
Taldanduh	27	17,067	630	8,993	333	9,071	309	14,213	526
Machgong	19	8,360	440	4,163	219	4,041	213	2,901	152
High Level, Range I ...	33	13,771	417	12,220	370	12,862	389	15,892	481
Ditto, do. II ...	12½	4,315	345	4,420	353	5,265	421	6,663	532
Ditto, do. III ...	19	6,330	333	6,805	358	6 215	327	10,021	550
Tota ...	23-½	1,11,712	480	76,219	328	83,735	360	1,19,601	514

The average mileage rate of maintenance, therefore, shows an increase of more than 46 per cent., in which nearly all the canals have shared. On the Kendraparah canal, where the increase is greatest, gate renewals were carried out on three locks, and both on this and other canals navigated by steamers, a great deal of earthwork was carried out in order to repair the erosion of the banks which were in many places protected by bamboo revetments. On the canals generally there has been a great increase in the amount of earthwork carried out, as well as in silt clearance and the removal of weeds. The quantity of silt cleared by hand was 9,904,436 cubic feet, and the cost Rs. 26,217, giving an average rate of Rs 2·65 per thousand, while in the previous year only 3,586,859 cubic feet were cleared at an average rate of Rs. 2·77. The amount of silt dredged was 304,077 cubic feet, and the cost Rs. 2,751, an average rate of Rs. 9 per thousand cubic feet. The cost of repairs to the canals, taking them all together, is far higher than in the two previous years, but is still below the cost in the somewhat abnormal year 1885-86; and an examination of the above figures and of those given in greater detail in the Superintending Engineer's report appears to show that a very large proportion of the increased cost as compared with the previous year is due to the effects of steamer navigation on the canal banks, or to outlay on navigation works, or in meeting the requirements of navigation. This remark applies with more or less force to all the navigable channels of the Kanchraparah system. It may be that the lower expenditure in the two previous years was due to a comparative neglect of the necessary repairs, but there appears to be grave reason for doubting whether these narrow channels are suitable to a heavy steamer traffic. The repairs during the year under review have certainly been effected with care; and should the experiment of planting the screw-pines along the water's edge have the anticipated result, the money will have been well spent, and a great saving in earthwork generally may be anticipated. But the experiment has not been tested sufficiently as yet, and should it not prove a success, either an entirely new method must be adopted for protecting the banks or little or no diminution in cost can be looked for.

The damage caused by steamer traffic cannot, however, be given as an explanation of the high rate on the navigable channel of the Taldandah canal nor on the Machgoing canal which has not yet been made navigable; and yet on both these the expenditure, as will be seen from the statement above, is double that of the previous year. In both cases the increased expenditure is ascribed to the larger amount of dressing and turfing required on the slopes and to increased charges for silt and weed clearing. The conclusion apparently to be drawn is that either these necessary repairs have been neglected in past years, or that a somewhat excessive zeal has been exhibited in "polishing." No special explanation is given for an abnormal collection of silt or an abnormal wear and tear to the slopes.

Of course some of the increased charges are beyond control, such, for instance, as the damage done to buildings by the cyclone of September 1888.

33. The cost per mile for repairs of distributaries for the last four years is shown below:— DISTRIBUTARIES.

	Miles.	1888-89.		1887-88.		1886-87.		1885-86.	
		Cost.	Per mile.	Cost.	Per mile.	Cost.	Per mile	Cost.	Per mile.
DISTRIBUTARIES.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Kendrapara Canal System	334½	15,530	46·53	13,510	40·48	11,073	33·17	13,156	39
Taldunda Canal	71½	2,950	41·25	2,242	31·35	2,232	31·21	2,297	32
Machgong Canal	122½	5,725	46·83	5,182	42·38	4,071	33·30	3,743	30
High Level Canal, Range I	117½	9,246	78·85	4,660	39·74	4,081	34·80	5,325	45
Total ...	644½	31,451	48·77	25,594	39·69	21,457	33·27	24,521	38

On the High Level Canal, Range I, the quantity of earthwork and turfing required for the repairs of the distributary banks was much larger than usual—

an increase in which all the other canals share, though in a less degree. It is possible that this was due to the abnormal heavy rainfall of August, but this is not stated.

DRAINAGE AND PROTECTIVE WORKS.

34. There was also an increase during the year in the cost of drainage and protective works, amounting in all to Rs. 5,182; and occurring on the Kendrapara, Machgong and Gobri Extension Canals, and upon Ranges II and III of the High Level Canal. Besides greater outlay on clearing the drainage channels of silt, expenditure of a special character took place on the repairs of a large stone groyne above the Brahmini weir, and on the slopes and crests of the protective embankments.

NECESSITY FOR CAREFUL CONTROL OF THE EXPENDITURE.

35. As mentioned above, the increased expenditure both on canals and distributaries may have been due to a certain extent to natural causes, heavy rainfall, cyclone, &c., but a careful examination of the figures appears to show a distinct tendency to increased expenditure of a nature which may be guarded against and controlled. There is a happy mean between allowing works to fall into disrepair and a lavish expenditure in aiming at excessive trimness of banks and slopes, and there appears to be reason for doubting whether this happy mean has yet been found on the Orissa Canals, and the Superintending Engineer's earnest attention must be directed to this matter, as the only hope of ever making these canals pay even their working expenses appears to be in reducing expenditure as well as increasing receipts.

FLOODS.

36 The floods in the Mahanadi and Byturni rivers were moderate ones, but the flood in the Brahmini was slightly higher than the flood of 1879, although it was lower than the high flood of 1881 below the weir at Janapore. The highest flood in the Mahanadi river rose to 85 80 on the gauge at Naraje, as compared with 87·70, which was the highest reading obtained during the floods of the previous year, and with 92·10, which was the level reached at the same place by the great flood of 1872. The highest flood of the year in the Byturni river stood at a height of 5·40 feet above the reading of the flood of 1887 below the weir at Acquapadda.

MIDNAPORE CANAL.

CAPITAL ACCOUNT

37. The Capital, Interest and Revenue Accounts of this Canal are given below:—

I.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1888-89.	Outlay to end of 1888-89.
DIRECT CHARGES.	Rs.	Rs
I.—Works ...	(—)11	53,42,663
II.—Establishment	1	19,22,355
III.—Tools and plant	(—)429	8,93,489
IV.—Suspense accounts	3,133	43,496
Loss by exchange	.....	94,800
Total	2,694	82,96,803
V.—*Less* receipts on Capital account ...	29	30,793
Net total direct charges	2,665	82,66,010
INDIRECT CHARGES.		
Capitalization of abatement of land revenue ...	53	141
Leave and pension allowances	.....	1,83,570
Total indirect charges	53	1,83,711

2.—INTEREST ACCOUNT.

INTEREST.

			Rs.
Interest charges to end of 1887-88	...	...	50,87,143
Ditto for 1888-89	...	...	3,30,587
	Total	...	54,17,730

3.—REVENUE ACCOUNT (Actuals).

REVENUE ACCOUNT.

	Expenditure.			Receipts.	
	During 1888-89.	To end of 1888-89.		During 1888-89.	To end of 1888-89.
Direct charges.	Rs.	Rs.		Rs.	Rs.
I.—*Maintenance and repairs.*					
Works (extensions and improvements) ...	.....	40,738	Water-rates ...	91,016	15,43,174
Repairs	1,06,139	19,89,766	Navigation ...	1,49,480	16,78,434
Compensation ..	.....	30	Miscellaneous ...	11,299	1,93,535
Establishment, including direction and accounts	36,111	4,82,981	Total ...	2,51,795	34,15,143
Tools and plant ...	24,335	3,01,424	*Less*—Refunds of revenue	285	1,122
Total ...	1,66,585	28,14,939	Net total receipts ...	2,51,510	34,14,021
II.—*Revenue management.*					
Irrigation establishment	25,927	3,60,442			
Navigation ditto ...	7,550	1,34,738			
Total ..	33,477	4,95,180			
Total direct charges ..	2,00,062	33,10,119			
Indirect charges.*					
Capitalized abatement of land revenue ...	.....	.....			
Leave and pension allowances	9,742	1,53,479			
Total indirect charges...	9,742	1,53,479			
Total working expenses	2,09,804	34,63,598			
Profit	41,706	(—)49,577			
Total ...	2,51,510	34,14,021			

* These are now shown under the suggestion of the Government of India.

The capital outlay during the year was Rs. 2,665, and to the end of the year Rs. 82,66,010 against Rs. 83,16,768, the amount of the estimate sanctioned by the Secretary of State.

The period allowed for the completion of the estimates sanctioned by the Secretary of State for the Midnapore canal expired on the 31st March 1888. At that date, however, certain works, which were regarded as falling within the scope of the original project, and therefore as properly chargeable to capital, still remained to be carried out. In these circumstances, the Government of India decided that no further extension of time for the completion of the project, as such, should be allowed, but, following the procedure laid down in Public Works Code, volume II, Chapter XV, paragraph 156, directed that a schedule of the works chargeable against capital, which it might be found necessary to carry out, should be annually submitted for sanction, and application for funds made in accordance with the provisions of the paragraph quoted.

EARNINGS.

38. The revenue account calculated on "earnings" of the year and expenditure is given below :—

EXPENDITURE.	Amount.	Earnings	Amount.
DIRECT CHARGES.	Rs.		Rs.
I.—Maintenance and repairs.			
Works (extensions and improvements) ...	...	Water-rates	1,31,433
Repairs	1,06,139	Navigation	1,46,760
Compensation	...	Miscellaneous ...	14,019
Establishment, including direction and accounts	36,111		
Tools and plant	24,335		
Total ...	1,66,585	Total ...	2,92,212
II.—Revenue management.			
Irrigation establishment	25,927		
Navigation ditto	7,550		
Total ...	33,477	*Less*—Refunds of revenue	285
Total direct charges ...	2,00,062	Net total receipts ...	2,91,927
INDIRECT CHARGES	9,742		
Total working expenses ...	2,09,804		
Profit	82,123		
Total ...	2,91,927		

Under the rules of the Midnapore canal, water is only supplied, as a general rule, from June to November, and the ordinary water-rates fall due on the 1st February, or within the limits of the year in which the water is supplied. Under ordinary circumstances, therefore, the amount of the 'earnings' of any year should coincide with the assessments of the year. In practice, however, a small portion of the assessments do not fall due till after the close of the year to which they belong; for instance, in cases of boro rice irrigation, where the whole of the assessment cannot well be completed before the close of the official year, or of lands illicitly irrigated, where the justice of the demand is disputed by the cultivator, and the assessment is consequently delayed. It may be stated that, of the sum of Rs. 1,31,433 shown above as the amount of water-rates earned during 1888-89, Rs. 1,18,243 are assessments completed within the year, Rs. 11,900 are assessments completed after the close of the year, while Rs. 1,290 is the estimated amount of the assessments which for various reasons it has not yet been possible to complete.

RAINFALL.

39. The following table shows the rainfall for the year 1888-89 and the four previous years at five registering stations in the Midnapore district:—

STATIONS.	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.	Average of 19 years previous to 1888-89.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Midnapore	68·00	55·38	49·39	76·20	57·19	55·97
Panchkoorah	59·47	56·21	50·56	80·03	48·84	56·27
Luchmapore	60·93	47·00	56·35	81·84	Not available.	
Mowah	60·14	49·76	55·93	81·07	Ditto.	
Contai	59·24	54·41	48·24	76·45	77·30	69·20

Of these stations, the first four only are within or contiguous to the area commanded by the Midnapore canal. The rainfall of the year, though up to

the average, was very unequally distributed, as an examination of the quantity recorded in each month from June to November will show:—

		Inches.
June	1888	3·67
July	,,	18·57
August	,,	21·16
September	,,	6·58
October	,,	1·08
November	,,	0·29

The rainfall here shown for each month is the average of the quantities recorded at the four stations which lie within the irrigated tract.

LEASES AND IRRIGATION.

40. The area of all crops leased and irrigated is returned by the Deputy Revenue Superintendent in charge of the assessments at 69,777 acres. Of this area 62,374 acres were kharif lands leased for five years; while of 4,034 acres of kharif leased for one year, 122 acres were voluntarily leased, and 3,912 acres assessed on the ground of having been surreptitiously irrigated. Lastly, though the right of Government to use the water of the Cossye during the rabi months is restricted, arrangements, such as have been common of recent years, were made for the irrigation of a limited area of boro rice, and 3,369 acres were so irrigated under annual leases.

The Superintending Engineer returns the area leased and irrigated at 65,865 acres, thus differing from the return of the Deputy Revenue Superintendent by 3,912 acres. The explanation appears to be that the latter area was illicitly irrigated, and the assessment was not completed until after the close of the year. For this reason it was not included in the final month's irrigation returns of 1888-89; and the Superintending Engineer appears to have made a mistake in saying in his report that it was included.

The five-year leases in force during 1887-88 amounted to 66,628 acres, of which 32,875 acres expired on the 31st March 1888. During 1888-89 the renewals were 28,620 acres. The area of the leases which lapsed on the 31st March 1889 was 11,377 acres, an error having been made in the figures given in last year's note.

Of 69,777 acres assessed, 60,263 acres were irrigated from the Midnapore weir, 8,914 from the Panchkoorah weir, and 600 from the tidal reaches. Similar information for three years is supplied in the following table, where the percentage which the area irrigated in each year bears to that commanded and provided with distributaries is shown:—

Particulars.	Totals provided for in the revised estimate.	Midnapore Weir, Ranges IV & V.			Panchkoorah Weir, Range III and Tidal reaches, Ranges I and II.			Total.		
		1888-89.	1887-88.	1886-87.	1888-89.	1887-88.	1886-87.	1888-89.	1887-88.	1886-87.
Length of distributaries and branch canals ... Miles.	229·12	229·94	229·94	229·94	53·25	53·25	53·25	283·19	283·19	283·19
Area provided with distributaries ... Acres.	125,000	100,000	100,000	100,000	25,000	25,000	25,000	125,000	125,000	125,000
Area irrigated ... ,,	...	60,363	55,302	62,225	9,514	6,502	7,537	69,777	65,864	69,762
Percentage of area irrigated to that commanded ...	...	60·26	55·30	62·22	37·9	26·01	30·15	55·82	52·64	55·81

In his summary of the irrigation season, the Superintending Engineer quotes as follows from the Executive Engineer's report:—

"The improvement on the previous year's irrigation, though slight, is still satisfactory, when the adverse circumstances under which we were placed last year is taken into consideration. The rains as stated before began to fall from September and ceased altogether in October. The demand for irrigation became general; but with the failure of the rains the discharge of the river Cossye began to diminish until in October only 800 or 900 cubic feet were available to irrigate over 65,000 acres. In November, when the crops were greatly in need of irrigation, the river discharges went down to 300 cubic feet. With careful regulation, this was made to irrigate the area leased, and it is a matter for congratulation that no general failure in the irrigated rice crops occurred on any distributary."

The conditions here described, a demand becoming more intense in proportion as the supply failed, are such as to severely test the administration of any canal; and the dual system of administration in force at Midnapore, where the negotiations with those who require the water on the one hand and the actual control of the supply on the other, rest with distinct and independent officers,

would appear to be inherently weak when subjected to such a strain. As the Collector remarks with much force:—"There was a great rush for water in September and October, and a large number of leases were executed on the mere chance of getting it." And, to quote the words of the Deputy Revenue Superintendent, "this" (the Revenue) "Department was found fault with for taking more leases than the Engineer officers could supply water with." The expediency of a change of system, under which leases should be controlled by the Engineers who already control the supply, has been strongly urged by the Revenue officers, supported by the Engineers. Such a system has, however, been already in force on the Sone canals, where its efficiency has been severely questioned, and has been the subject of prolonged and exhaustive enquiries, the report on which is now about to be submitted to the Government of India. Until a final decision has been pronounced on that report, it would be obviously premature to amend the Midnapore system after the Sone pattern.

In connection with the remarks in last year's note (paragraph 35) on this same subject, the following remarks by the Superintending Engineer are worthy of consideration when any new system is proposed to be introduced:—

"The matter of making the leases of all land irrigable from the same outlet or same distributary terminable on the same date was under consideration, and it is probable that if this system is adopted, and the rate successively year by year increased for subsequent leases entered into on the same distributary, that irrigation would become more general.

"At present the disinclination to renew until forced by absolute failure of rainfall leads largely to surreptitious irrigation, which must be very largely in excess of that reported, at the expense in a dry season of those who have leased honestly. Penalty rates are not enforced, and the dishonest irrigator finds himself admitted to a lease for the remaining years of a five-years' lease or a five-years' lease as the case may be on the same yearly rate as a lessee for the whole term, or at any rate on no worse terms than the applicant for a lease.

"This is the system on which irrigation has been worked for years in Midnapore, and a greater premium on declining to enter into leases till the last moment could not be afforded. The fact is very well appreciated by those who have entered into leases, and it is no matter for surprise if they fall into similar ways as soon as their leases expire. By insuring their crops for five years, they get no corresponding advantage.

"Were the proposed system adopted, it might be possible to apportion water more fairly in years of scanty rainfall by first attending to the wants of the lessees on the oldest leased distributary."

COMPLAINTS.

41. The number of irrigation complaints was 1,731, of which 1,647 were filed during the year and 84 pending from the previous year. 1,218 of the complaints were objections to certificates issued under the Public Demands Recovery Act, most of them in cases of surreptitious irrigation, while in other cases the applicants alleged either that no water was supplied or that the water-rates were excessive. The remaining complaints appear to have been of an ordinary character. Of 1,492 claims disposed of, 216 were decided entirely in favour of the petitioners, while the remainder appear to have been either rejected or in some cases compromised by the applicants entering into leases. The number left pending at the close of the year was 239.

DUTY OF WATER.

42. The kharif duty calculated on the discharge utilized was 164 acres per cubic foot for the area under Midnapore weir and 184 acres for that under Panchkoorah weir. The former figure, which gives a much higher duty than what was obtained last year, must be received with caution, as the calculations of the discharges on which it is based are not trustworthy.

ASSESSMENTS AND COLLECTIONS.

43. The following comparative statement shows the balances, assessments, and recoveries of water-rates on the Midnapore canal since the year 1884-85:—

YEAR.	Amount outstanding at commencement of year.	Amount falling due during the year.	Total for recovery.	Cash realization.	Remitted or written off.	Balance at the end of the year
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1884-85	1,44,691	1,22,321	2,67,012	1,16,807	38,993	1,11,212
1885-86	1,11,212	1,10,868	2,22,080	1,08,709	43,399	69,972
1886-87	69,972	1,06,750	1,76,722	1,08,834	17,139	50,749
1887-88	50,749	1,02,532	1,53,281	90,837	5,951	56,493
1888-89	56,493	1,23,337	1,79,830	91,016	4,041	84,773

Thus, while the whole amount recoverable, including arrears, was Rs. 26,549 more than in 1887-88, the collections were only Rs. 179 more; the percentage of collections being 50·6 as against 59·3.

Out of the sum of Rs. 1,23,337 shown in the above table as falling due within the year, Rs. 1,18,243 were water-rates of the year itself. On this the collections were Rs. 39,863 and the remission Rs. 9, the total adjustments 33·7 per cent.

The amount recoverable on account of previous years was Rs. 61,586, of which Rs. 56,493 were arrears, properly so called, while Rs 5,093 were water-rates earned in previous years, but not recoverable till 1888-89. The amount adjusted was Rs. 55,185, or 89·62 per cent.

This large reduction of arrears and the smallness of the sum (Rs. 4,041) which it was found necessary to treat as irrecoverable are satisfactory features in the returns of the Deputy Revenue Superintendent. A different view must be taken of the collection of the current demand, from which a balance of Rs. 78,372, or 66·9 per cent., is left unsettled. In partial explanation, it is stated that Rs 39,302 had of necessity to stand over; of these, Rs. 5,053 were water-rates on boro rice, which is only reaped at the end of the year, Rs. 19,338 were demands contested by the ryots which could not be collected till the objections were heard and settled, and Rs 14,911 were demands which it will probably be necessary to strike out, as good reasons for remission, in some cases insufficiency of supply, in others loss of crop from breaches in the Cossye embankment, are known to exist.

MISCELLANEOUS RECEIPTS.

44. In miscellaneous revenue, the demand was Rs. 18,870, of which Rs. 5,503 were for arrears. The collections were Rs. 12,287 and the balance Rs. 6,035. The miscellaneous receipts collected by the Executive Engineer amounted to Rs. 1,731.

CERTIFICATES.

45. The number of certificates undisposed of at the end of the previous year was 5,310. In addition, 11,201 new certificates were filed, 5,017 being for surreptitious irrigation and 6,184 for satisfaction of demands under kabulyats: 9,326 were disposed of—in 3,847 cases by the realization of the demand, while the other 5,478 cases were struck off; 7,185 cases, of which only 661 were more than six months' old, were left unsettled at the end of the year, and with these good progress has since been made. It is stated that no certificates were issued for the realisation of the current demand.

REVENUE ESTABLISHMENT.

46. The cost of revenue establishment was Rs. 24,728 against Rs. 21,600 of the year preceding. The percentage of cost on the total collections is 23·93 against 20·34. The increased expenditure is chiefly accounted for by the payment of Rs. 2,135 as headmen's fees, on which nothing was spent in the previous year. The Commissioner remarks that in the report of the Deputy Superintendent nothing is said of the effect produced by the payment of commission to headmen. The Collector says the same, and notes further that, on the other hand, an attempt has been made to reduce expenditure by eliminating one collection with and making over its work to the others; but as this was done on the assumption that the leased area would not extend beyond its then existing limit, the success of the experiment has yet to be assured. Judging by the results the experiments have not so far answered since the collections have fallen off, and the percentage of cost of collection on the demand has increased.

NAVIGATION AND TRANSPORT SERVICE.

47. The receipts under navigation increased from Rs. 1,26,574 in 1887-88 to Rs. 1,46,760 in 1888-89. The usual particulars regarding the traffic carried during the last ten years in vessels other than those of the Calcutta Steam Navigation Company are given below:—

DESCRIPTION.		1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.
Miles open	No.	53	53	53	53	53	53	53	53	53	53
Toll collections ...	Rs.	91,861	77,143	98,060	1,06,157	1,08,931	1,19,797	1,25,331	1,01,054	1,08,..10	(a)1,25,332
Rate of toll per mile	,,	1,733	1,455	1,850	2,002	2,055	2,260	2,364	1,906	2,044	2,365
Number of boats, including empty boats	No.	56,044	45,461	51,408	52,554	52,069	47,653	42,240	45,799	43,628	54,214
Tonnage of boats ...	Tons	320,927	292,452	332,325	360,973	382,979	412,379	372,008	387,440	409,806	470,806
Passengers carried	No.	180,294	166,238	206,089	181,251	170,745	...	...	208,582	160,567	(b)167,259
Estimated value of cargo, including rafts	Rs.	1,59,61,496	1,43,15,008	1,47,79,798	1,60,43,032	1,79,53,400	1,57,92,907	1,27,22,175	97,25,587	1,18,44,844	1,31,70,26

(a) Exclusive of Rs. 21,428 tolls paid by the Calcutta Steam Navigation Company.
(b) By private boats, 81,940, and by the Calcutta Steam Navigation Company's steamer, 85,319.

The tollage receipts both from boats and steamers continue to advance, and are now higher than in any previous year, the increase being distributed over the whole year except for the month of August, when navigation was stopped owing to the excessive accumulation of silt at the Panchkura works. The Superintending Engineer shows that the export traffic in rice and paddy is steadily on the increase in the districts of Midnapore and Hooghly, and appears to be stimulated by a bad harvest, such as that of 1888-89, when the superiority of irrigated over unirrigated crops is more marked. Other goods of which greater quantities were carried are raw cotton, salt, piece-goods, building materials, fuel, timber and miscellaneous.

The Calcutta Steam Navigation Company continue to maintain a double daily service of steamers on the Midnapore canal. The discomfort of these vessels is made the subject of a complaint by the Executive Engineer. The tolls paid by the Company rose from Rs. 18,114 to Rs. 21,428.

FINANCIAL RESULTS.

48. The following statement shows the receipts on revenue account and working expenses of the Midnapore canal since the year 1879-80:—

PARTICULARS.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-889.
Receipts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Water-rates	1,30,140	1,12,960	1,18,588	1,04,060	1,31,060	1,16,807	1,08,709	1,08,634	90,837	91,016
Navigation	1,05,518	93,099	1,20,706	1,46,922	1,20,580	1,28,747	1,37,578	1,09,698	1,26,574	1,46,760
Miscellaneous	11,567	10,407	10,780	17,028	12,996	12,401	16,197	15,638	16,967	14,019
Total ...	2,47,225	2,16,466	2,50,074	2,68,010	2,64,576	2,57,955	2,62,484	2,34,185	2,34,378	2,51,795
Less—Refunds of revenue	...	...	...	...	44	112	...	211	453	285
Net total receipts ...	2,47,225	2,16,466	2,50,074	2,68,010	2,64,532	2,57,843	2,62,484	2,33,974	2,33,925	2,51,510
WORKING EXPENSES.										
DIRECT CHARGES.										
I.—Works, Maintenance and repairs.										
Works and repairs ...	94,488	1,21,607	1,35,114	1,40,007	1,27,628	1,34,036	1,24,857	1,37,752	1,31,181	1,06,139
Compensation ...	...	...	...	...	30	...	...	...	...	...
Establishment, including direction and accounts	19,162	20,100	31,022	32,218	29,342	30,822	28,651	31,077	46,407	36,111
Tools and plant	17,036	17,975	36,448	31,354	31,229	25,591	25,952	25,003	31,409	24,335
Total ...	1,30,686	1,65,682	2,02,584	2,03,639	1,88,229	1,91,449	1,79,460	1,94,432	2,09,057	1,66,585
II.—Revenue management.										
Irrigation establishment	16,377	16,101	18,371	20,337	19,862	24,004	22,790	24,154	22,797	25,927
Navigation ditto ...	7,340	7,437	7,519	14,101	7,511	7,609	7,610	7,575	7,750	7,550
Total ...	23,717	23,538	25,890	34,438	27,373	31,613	30,400	31,729	30,556	33,477
Total direct charges ...	1,54,403	1,89,220	2,28,474	2,38,077	2,15,602	2,23,062	2,09,860	2,26,161	2,39,613	2,00,062
Indirect charges* ...	7,622	8,823	10,116	8,425	7,940	8,741	8,267	8,877	10,783	9,742
Total working expenses...	1,62,025	1,98,043	2,38,590	2,46,502	2,23,542	2,31,803	2,18,127	2,35,038	2,50,396	2,09,804
Net revenue ...	85,200	18,423	11,484	21,508	40,990	26,040	44,357	(—) 1,064	(—) 16,471	41,706

* These are now shown under the suggestion of the Government of India.
If allowance be made for the increase in the establishment charges under the new method, the year under review would compare favourably with any year since 1880-81 at any rate.

EXPENDITURE ON REPAIRS.

49. The actual cost of repairs during the year 1888-89 was less than that in the previous year, and is distributed by sub-heads as shown below:—

	1888-89.	1887-88.
	Rs.	Rs.
Head works, including buildings ...	13,903	11,667
Main canal and branches ...	65,216	89,238
Distributaries	22,464	20,687
Drainage and protective works ...	2,113	1,990
Steamers	2,443	7,599
Total	1,06,139	1,31,181

HEAD WORKS.

The expenditure on the Midnapore head works was Rs. 10,551 and on the Panchkoorah head works Rs. 3,352. The expenditure on weirs was Rs. 2·70 per foot run of the Midnapore weir and Rs. 3·34 of the Panchkoorah weir against Rs. 1·48 and Rs. 5·30 respectively last year. The cost of clearing silt from the locks and lock entrances situated above the two weirs was considerable. A large sum also was expended in replacing the apron of the Midnapore weir and on the shutters on the Panchkoorah weir sluices.

There is a decrease of Rs. 26,819 on the repairs of main canal and head works taken together, and an increase of Rs. 1,777 on those of distributaries. Mileage rates are worked out below:— MAIN CANAL

Year.	Main Canal and Head Works, &c.			Distributaries.		
	Length of canal, exclusive of river crossings.	Total cost of work.	Rate per mile.	Length of distributary channels.	Total cost of work.	Rate per mile.
	Miles.	Rs.	Rs.	Miles.	Rs.	Rs.
1881-82	48	1,03,910	2,164	277	11,854	42
1882-83	48	1,01,821	2,121	277	20,407	73
1883-84	48	1,06,425	2,216	277	21,195	76
1884-85	48	1,15,171	2,399	277	18,865	68
1885-86	48	1,10,350	2,299	277	14,424	52
1886-87	48	1,20,135	2,503	283	17,617	63
1887-88	48	1,10,494	2,301	283	20,687	74
1888-89	48	83,675	1,743	283	22,464	79

The mileage rate of the main canal is much lower than in previous years, economies having been chiefly effected in earthwork charges, which fell from Rs. 59,161 to Rs. 49,758, and in repairs of navigation works, which fell from Rs. 19,162 to Rs. 4,008. In earthwork 4,176,765 cubic feet of silt were cleared by dredgers and removed at a cost of Rs. 26,387, or at an average rate of 6·31 per thousand, which compares favourably with the rate of 7·63 obtained in the previous year, and 1,931,281 cubic feet were cleared by hand and excavators at an average rate of Rs. 5·32 per thousand, which is slightly higher than in 1887-88. In addition 1,755,000 cubic feet were cleared at an average rate of Rs 8-12-6 per thousand from the first three reaches, which were closed for that purpose during April.

The cost of repairs to distributaries was Rs. 22,464 against Rs. 20,687 in the preceding year. The mileage rate for the year was Rs. 79 per mile, which is higher than that of former years; but it is explained that an expenditure of Rs. 8,039 for 4,493,278 cubic feet of earthwork had to be incurred in raising banks and clearing silt and in closing the breaches caused by the excessive floods of July and August. A certain amount of silt clearance and repairs to banks must always have to be done, whilst even if we exclude the whole sum, the balance falls at a rate of Rs. 51 per mile, which was about the rate in 1885-86, when it was Rs. 52 per mile. Since then the yearly rates have been Rs. 63, Rs. 74 and now Rs. 79, and there appears to be sufficient ground for a searching enquiry as to whether the expenditure under this head cannot be reduced, since even Rs. 51 per mile appears to be higher than the rate ought to be. DISTRIBUTARIES.

The expenditure on tools and plant amounted to Rs. 24,335 against Rs. 31,409 of the previous year, and was incurred principally on repairs to the dredging plant. REPAIRS TO DREDGERS.

50. The highest flood in the Cossye river, the result of heavy rainfall following in cyclonic storm in the Bay, occurred on the 25th August, when the gauge reading above Midnapore weir was 88·80 and below it 87·50, against 92·30 and 91·55 respectively, the highest recorded in 1868. Several minor floods came down the river, which caused serious silt deposits both at Mohunpore and Panchkoorah. Though very considerable damage by floods was caused to embankments both north and south of the canal by which irrigated crops are reported to have been destroyed, no damage occurred to the canal or works. FLOODS.

HIDGELLEE TIDAL CANAL.

51. On this canal, which is a major work, no capital expenditure was incurred during the year under report. The expediency, however, of incurring further expenditure on works designed for the most part to overcome the accumulations of silt, which at present interfere with the financial success of the canal, was indicated in the Chief Engineer's note of last year, and it was stated that estimates for remodelling the canal were then under the consideration of the Government of India. These estimates, amounting to Rs. 7,91,963, have now been sanctioned by the Secretary of State, and funds will be assigned as required for the completion of the improvements, with the condition, which has been

accepted by the Lieutenant-Governor, that the province shall accept financial responsibility for the work by agreeing to pay interest at the rate of 4 per cent. on all allotments made from Imperial revenues under this arrangement. The remodelling of the canal, therefore, as opposed to the original project, will be classified as a minor work.

CAPITAL ACCOUNTS.

52. The capital, interest, and revenue accounts of the Hidgellee Tidal Canal are given below :—

1.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	During 1888-89.	To end of 1888-89.
DIRECT CHARGES.	Rs.	Rs.
I.—Works	... ..	12,66,289
II.—Establishment...	.....	4,49,790
III.—Tools and plant	.....	57,585
IV.—Suspense accounts	.....	.....
Loss by exchange	.....	22,790
Total ...	.....	17,96,404
V.—*Less*—Receipts on capital account	.....	915
Net total direct charges ...	.....	17,95,489
INDIRECT CHARGES.		
Capitalization of abatement of land revenue	.....	11,210
Leave and pension allowances	.....	33,597
Total indirect charges ...	.. ...	44,807

INTEREST ACCOUNT.

2.—INTEREST ACCOUNT.

	Rs.
Interest charges to end of 1887-88	12,58,963
Ditto for 1888-89	71,820
Total ...	13,30,783

REVENUE ACCOUNT.

3.—REVENUE ACCOUNT—(Actuals).

	EXPENDITURE.			RECEIPTS.	
	During 1888-89.	To end of 1888-89.		During 1888-89.	To end of 1888-89.
DIRECT CHARGES.	Rs.	Rs.		Rs.	Rs.
I.—*Works, maintenance and repairs.*					
Works (extensions and improvements) ...	1,718	4,751	Water-rates ...	...	2,611
Maintenance and repairs	50,920	4,70,616	Navigation ...	53,921	8,08,635
Establishment, including direction and accounts	16,572	1,14,398	Miscellaneous ...	1,249	19,377
Tools and plant ...	2,868	24,471			
Total ...	72,078	6,14,236	Total ...	55,170	8,25,623
II.—*Revenue management.*					
Navigation establishment	3,195	53,050	*Less*—Refunds of revenue ...	73	983
Total direct charges ...	75,273	6,67,286	Net total receipts...	55,097	8,24,640
INDIRECT CHARGES.*					
Capitalized abatement of land revenue ...	...	...			
Leave and pension allowances	2,767	26,240			
Total indirect charges...	2,767	26,240			
Total working expenses	78,040	6,93,526			
Profit	(—)22,943	1,31,114			
Total ...	55,097	8,24,640			

*These are now shown under the suggestion of the Government of India.

53. The usual particulars regarding the traffic on the Hidgellee Tidal Canal since the year 1879-80 are given in the following statement:— TRAFFIC.

PARTICULARS.		1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.
Miles open	No.	29	29	29	29	29	29	29	29	29	29
Toll collections ...	Rs.	44,918	53,338	45,848	43,694	62,317	41,382	52,143	51,904	40,406	53,910
Rate of toll per mile	,,	1548'89	1839'20	1581'00	1510'00	2148'00	1427'00	1798'03	1789'79	1393'31	1858'96
Number of boats ...	No.	16,311	21,783	20,057	17,445	22,728	17,660	19,316	17,543	13,503	16,481
Tonnage of boats ...	Tons.	120,021	152,781	133,020	132,884	196,764	145,424	163,535	149,747	124,903	165,635
Passengers carried ...	No.	3,061	3,531	3,236	3,510	...	...	...	8,569	11,951	34,032
Estimated value of cargo, including rafts	Rs.	25,86,031	23,34,731	21,19,855	23,83,244	36,42,020	30,06,852	32,74,961	31,48,826	26,13,351	38,01,123

The receipts from tolls during the year under review amounted to Rs. 53,910 against Rs. 40,406 for the previous year, thus showing an increase of Rs. 13,504. The previous year was a year of partial closure of canal for silt clearance.

54. The only receipts other than tolls are miscellaneous. These amounted to Rs. 1,260 against Rs. 1,452 of the previous year. MISCELLANEOUS

55. The following statement shows the receipts on revenue account and working expenses of the canal for the last ten years:— FINANCIAL RESULTS.

PARTICULARS.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.
Receipts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Navigation	44,918	53,338	45,848	43,694	62,317	41,382	52,143	51,904	40,406	53,910
Miscellaneous	863	1,149	1,446	1,338	1,273	2,125	312	2,500	1,452	1,260
Total ...	45,781	54,487	47,294	45,032	63,590	43,507	52,455	54,404	41,858	55,170
Less refunds of revenue ...	...	...	...	...	...	...	...	910	...	73
Net total receipts ...	45,781	54,487	47,294	45,032	63,590	43,507	52,455	53,494	41,858	55,097
WORKING EXPENSES. DIRECT CHARGES.										
I.—Works, maintenance and repairs.										
Works	...	1,886	1,147	...	...	...	...	...	...	1,718
Repairs	30,607	17,015	18,331	29,460	32,994	26,862	34,099	11,988	47,928	50,920
Establishment, including direction and accounts ...	8,794	2,289	4,497	6,775	7,588	6,178	7,843	2,756	11,855	16,572
Tools and plant...	...	1,444	1,834	1,362	2,784	292	3,524	4,155	2,105	2,868
Total ...	39,401	22,634	25,809	37,597	43,366	33,332	45,466	18,899	61,888	72,078
II.—Revenue management.										
Navigation establishment ...	2,883	2,956	2,869	2,973	3,215	3,554	3,143	3,026	3,007	3,195
Total direct charges ..	42,284	25,590	28,678	40,570	46,581	36,886	48,609	21,925	64,895	75,273
Indirect charges	2,071	930	1,306	1,327	1,512	1,362	1,538	810	2,081	2,767
Total working expenses ...	44,355	26,520	29,984	41,897	48,093	38,248	50,147	22,735	66,976	78,040
Net revenue ...	1,426	27,967	17,310	3,135	15,497	5,259	2,308	30,759	(−)25,118	(−)22,943

The deficit in the year's working, notwithstanding a substantial increase of Rs. 13,239 in the receipts, was anticipated in the Chief Engineer's note of last year, where it was stated that of the charges incurred for the thorough clearing of the channels in 1887-88, a large sum would not be paid till the following year. The actual amount of these payments was Rs. 39,580. The influx of silt was largely due to the deterioration which has taken place in the condition of the Russulpore river, from which the canal was formerly supplied. Since the completion of the last silt clearance the feed has been exclusively taken in at the Huldee river, and it is hoped that another closure may not be found necessary for three seasons.

56. After the heavy rains at the end of August, the southern portion of the district of Midnapore was visited by floods of great severity, and the incapacity of the natural drainage channels to relieve the inundated tracts was investigated by a committee of enquiry. The brunt of the inundation fell on the tract of country adjoining range III of the Orissa coast canal. Regarding the Hidgellee canal, it appeared that though the drainage of parts of the affected area had been to some extent obstructed by it, yet this obstruction was not one of the main causes of the floods, and any injury so caused was more than counterbalanced by the enormous benefits conferred on landlords and ryots by the protective works constructed by Government. The defects in the arrangements for passing drainage water across the canals are now being remedied, and it is hoped that by the lowering of the bed, which is a feature in the recently-sanctioned scheme for remodelling the canal, complete facilities for drainage will be afforded. The damage done to the canal was not such as to require special expenditure beyond that provided in the regular maintenance estimates. FLOODS.

SONE CANALS.

CAPITAL ACCOUNT.

57. The Capital, Interest and Revenue Accounts of these canals are given below:—

1.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1888-89.	Outlay to end of 1888-89.
DIRECT CHARGES.	Rs.	Rs.
I.—Works	93,250	1,81,56,556
II.—Establishment	20,691	50,81,927
III.—Tools and plant	21,776	21,12,855
IV.—Suspense accounts	12,770	1,88,341
Loss by exchange	.....	52,240
Total ...	1,48,487	2,55,91,919
V.—*Less* receipts on Capital account	44	3,07,237
Net total direct charges ...	1,48,443	2,52,84,682
INDIRECT CHARGES.		
Capitalization of abatement of land revenue ...	.....	37,834
Leave and pension allowances	2,897	8,60,725
Total indirect charges ...	2,897	8,98,559

INTEREST ACCOUNT.

2.—INTEREST ACCOUNT.

	Rs.
Interest charges to end of 1887-88	1,25,23,888
Ditto for 1888-89	10,08,418
Total ...	1,35,32,306

REVENUE ACCOUNT.

3.—REVENUE ACCOUNT (actuals).

	EXPENDITURE.			RECEIPTS.	
	During 1888-89.	To end of 1888-89.		During 1888-89.	To end of 1888-89.
DIRECT CHARGES.	Rs.	Rs.		Rs.	Rs.
I.—Works, Maintenance and Repairs.					
Works (extensions and improvements) ...	10,426	15,958			
Repairs	3,28,182	35,43,798	Water-rates ...	7,59,556	68,75,460
Compensation ...	.....	2,463			
Establishment, including direction and accounts	1,97,677	11,40,593	Navigation .	57,829	6,77,467
Tools and plant ...	33,920	2,08,592	Miscellaneous	26,504	4,36,466
Total ...	5,70,205	49,11,404	Total ...	8,43,889	79,89,393
II.—Revenue Management.					
Irrigation establishment	1,58,249	13,23,848	*Less* refunds		
Navigation establishment	14,165	1,70,129	of revenue ...	12,611	74,394
Total ...	1,72,414	14,93,977			
Total direct charges ...	7,42,619	64,05,381	Net total receipts ...	8,31,278	79,14,999
INDIRECT CHARGES.*					
Capitalized abatement of land revenue ...	.....	.....			
Leave and pension allowances	51,813	3,85,940			
Total indirect charges ...	51,813	3,85,940			
Total working expenses	7,94,432	67,91,321			
Profit	36,846	11,23,678			
Total ...	8,31,278	79,14,999			

* These are now shown under the suggestion of the Government of India.

The expenditure on capital account during the year was Rs. 1,48,443. The principal works carried out were docks at Bedadi, Nasriganj, and Daodnugger; a warehouse at Bedadi, a syphon aqueduct at mile 10¾, Domraon Branch canal, and numerous permanent outlets in all divisions. The following works were all but completed at the close of the year:—Docks at Baroon Urwal, and Deegah; the Tejpoora distributary taking off from the Patna canal and the Bacheri drainage cut; Telegraph offices at Baroon, Nasriganj and Ugeon; the Rewah escape, and several minor works.

EARNINGS.

58. The income calculated on "Earnings" of the year and expenditure are shown below:—

EXPENDITURE.	Amount.	Earnings.	Amount.
DIRECT CHARGES.	Rs.		Rs.
I.—Works, Maintenance and Repairs.		Water-rates	8,05,790
		Navigation	57,829
		Miscellaneous	26,504
Works (extensions and improvements)	10,426	Total ...	8,90,123
Repairs	3,28,182		
Establishment, including direction and accounts ...	1,97,677	*Less* refunds of revenue ...	12,611
		Net total earnings ...	8,77,512
Tools and plant	33,920		
Total ...	5,70,205		
II.—Revenue Management.			
Irrigation establishment ...	1,58,249		
Navigation ditto ...	14,165		
Total ...	1,72,414		
Total direct charges ...	7,42,619		
INDIRECT CHARGES.			
Capitalized abatement of land revenue	.....		
Leave and pension allowances ..	51,813		
Total indirect charges ...	51,813		
Total working expenses ...	7,94,432		
Profit	83,080		
Total ...	8,77,512		

The water rates now shown as "earned" are the assessments on the irrigation of the year, and include for the first time those assessments which were not completed until after the close of the year.

LENGTHS OF CANALS AND DISTRIBUTARIES.

59. The following table shows the lengths of canals and distributaries open and the areas commanded and irrigable:—

DIVISION.	Navigable canals.	Branch canals.	Distributaries.	Gross area under command.	Maximum discharge of canal.	AREA WHICH CAN BE IRRIGATED.		
						Kharif.	Rabi.	Total.
	Miles.	Miles.	Miles.	Acres.	Cubic feet per second.	Acres.	Acres.	Acres.
Eastern Sone	86½	...	358	400,155	1,613	129,040	180,000	309,040
Arrah	74½	71½	467½	618,354	4,342	347,360	360,000	707,360
Buxar	58	77½	343	704,000				
Total ...	28½	148½	1,168½	1,728,509	5,955	476,400	540,000	1,016,400

An addition of 1¾ miles has been made to the length of distributaries during the year. There are, besides the distributaries included in the

above return, 14 miles of village channel maintained at the cost of Government in the Buxar Division. There is no change in the areas commanded and irrigable; the provision of parallel channels along part of the Buxar canal has, however, enabled land in their neighbourhood to be more easily and satisfactorily supplied with water, and will eventually result in some increase in the area under irrigation.

VILLAGE CHANNELS AND OUTLETS.

60. The following table shows the progress made with village channels and outlets:—

Division.	Total length of village channels completed.	Total number of temporary and permanent outlets.	Number of permanent outlets.
	Miles.	No.	No.
Eastern Sone	204½	2,083	320
Arrah	768½	2,330	737
Buxar	511½	984	274
Total, 1888-89 ...	1,484½	5,397	1,331
Total, 1887-88 ...	1,525	5,999	828

Of the village channels now in use, 185½ miles have been constructed by Government agency and 1,299 by villagers. The figures as regards channels constructed by villagers are only approximate, and the decrease in the total length is partially due to this cause; it is, however, mainly owing to the reduction in the number of outlets from 5,999 to 5,397, which has been accompanied by an increase in the area under irrigation. The construction of permanent outlets was pushed on during the year, 503 having been built in carefully chosen situations with a discharging capacity proportioned as nearly as possible to the area under lease or likely to be irrigated.

RAINFALL.

61. The following statements furnish the rainfall statistics of the Sone canal system and the distribution by canal divisions for the last five years:—

		Average of 22 stations.				
		1888-89.	1887-88.	1886-87.	1885-86.	1884-85.
		Inches.	Inches.	Inches.	Inches.	Inches.
Kharif season ...	August	18·49	9·48	11·73	16·69	9·09
	September	7·35	5·21	12·51	10·57	5·41
	October	0·18	4·18	8·33	0·34	3·50
	Total ...	26·02	18·90	32·57	27·60	18·00
Rabi season ...	November	0·46	...	0·23	...	...
	December	...	...	0·22	2·45	...
	January	1·22	1·09	1·47	0·10	0·55
	February	1·30	...	...	0·11	0·03
	Total ...	2·98	1·09	1·92	2·66	0·58
	Whole year ...	47·34	40·31	59·34	44·99	30·29

Years.	Eastern Sone Division.			Arrah Division.			Buxar Division.		
	Kharif season.	Rabi season.	Whole year.	Kharif season.	Rabi season.	Whole year.	Kharif season.	Rabi season.	Whole year.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
1888-89	23·72	2·86	46·39	25·14	2·35	46·46	24·87	2·33	43·24
1887-88	11·35	0·92	38·11	20·59	1·08	43·57	20·43	1·22	38·18
1886-87	34·60	1·73	62·34	36·40	1·83	62·39	25·48	1·85	51·06
1885-86	30·25	2·15	46·54	27·02	2·84	44·08	27·82	2·02	43·29
1884-85	17·11	0·40	30·67	18·84	0·54	31·62	20·96	0·69	31·87

The Superintending Engineer reports:—"The rainfall for the year (45·43 inches), average for all stations, over the area commanded by the Sone Canals was, it will be noted, considerably in excess of that which fell in the year preceding (40·18 inches), and it was also in excess of the average for 20 years (41·25

inches). The chief characteristics of the season, as regards rainfall, were—*First*, the late date at which the rains commenced. No rain fell at Arrah until the 2nd July, and the rains throughout the area irrigable may be said to have commenced on this date. *Secondly*, the favourable rainfall during July, August, and the first ten days of September. *Thirdly*, the almost entire cessation of the rains from the 11th of September to the 29th of November, the average fall over all canal stations for that period being 1·47 inches only. *Fourthly*, the wide variation in the falls at different stations ranging for the year from 39·03 inches at Sikroul to 52·07 inches at Nasrigunge. This variation had only a comparatively small effect on the area irrigated, as up to the 10th of September the rainfall may be said to have been generally favourable."

62. The following statement shows the area leased and irrigated during the last four years :— AREA LEASED AND IRRIGATED.

Description.	1888-89.		1887-88.		1886-87.		1885-86.	
	Leased.	Irrigated.	Leased.	Irrigated.	Leased.	Irrigated.	Leased.	Irrigated.
	Acres.	Acres.	Acres	Acres.	Acres.	Acres.	Acres	Acres.
Five-year leases	200,275	200,102	210,535	210,164	194,419	194,556	173,829	179,784
Annual leases—								
Kharif	71,794	69,628	43,698	57,595	27,738	30,082	62,107	80,702
Rabi	61,019	69,817	16,738	27,561	10,639	16,632	31,704	50,610
Sugarcane	3,530	4,620	3,891	6,265	5,402	11,626	5,186	10,527
Hot-weather	9,056	11,702	9,313	18,855	5,619	15,278	6,117	16,857
Total annual leases ...	145,447	155,807	72,980	105,216	52,393	73,618	105,174	162,786
Grand total ...	345,682	355,909	283,515	315,380	246,812	268,204	279,003	332,570
Percentage of leased to irrigated area	97·12		89·89		92·02		83·89	

The area irrigated was in excess of any year to date, except 1884-85, when the area irrigated was 370,661 acres. The area under annual leases during the kharif season exceeds the area irrigated. This is partly due to areas leased late in October, to which water could not be supplied in time to be of service, but mainly to the strenuous efforts which were made to confine the water within the leased areas. Unauthorized irrigation in the kharif season has practically disappeared.

It will be noticed that compared with the previous year there has been a decrease of 10,260 acres under five-years' lease. It is not to be inferred that there has been any reduction on the area actually irrigated. Applications for five-year leases for 15,050 acres were either declined by the Canal Officers or withdrawn, chiefly the former for reasons given in the extract from the Sub-Engineer's report quoted in the next succeeding paragraph.

The Sub-Engineer was given authority to cancel five-year leases with the result that no single application was declined, and leases for 1,456 acres only cancelled. This may be taken, with leases for 529 acres subsequently cancelled, as the full area on which the lessees were dissatisfied with their bargain.

Out of the 200,102 acres irrigated under five-years' lease, it is estimated that 154,825 acres, or 77·3 per cent., were cultivated under kharif; 27,408 acres, or 13·6 per cent., under rabi; and 17,869 acres, or 8·9 per cent., under sugarcane crops.

The statement below shows the area irrigated during the year and the two preceding, as well as 1884-85, the largest on record, classified by crops—

	1888-89.	1887-88.	Difference.	1886-87.	1884-85.
	Acres.	Acres.	Acres.	Acres.	Acres.
Kharif	224,453	220,428	+ 4,025	177,510	246,740
Rabi	97,225	56,090	+ 41,135	45,361	99,280
Sugarcane	22,469	25,007	— 2,538	30,055	23,682
Total ..	344,147	301,525	+ 42,622	252,926	369,702
Add—Hot-weather irrigation ...	11,762	13,855	— 2,093	15,278	959
Grand Total ...	355,909	315,380	+ 40,529	268,204	370,661

In 1887-88 there was a sharp demand for canal water during the kharif season checked by a copious fall of rain on the 13th October which had an important effect in limiting the area under rabi irrigation during that year. The year under review is perhaps more fitly comparable with 1884-85, in which 14,752 acres more were irrigated. The rainfall in 1888-89 was 45·43 inches for the year and 24·61 inches during the kharif season, the corresponding figures for 1884-85 being 30·26 inches and 18·00 inches; the period of great demand being during October in 1889 and during August and September in 1884.

63. The system pursued was not altogether the same. In 1884-85 but little attempt was made to restrict the supply of water to the area under lease, and irrigation previous to the issue of a permit was not rigorously suppressed, nor were the rules regarding the existence of proper village channels enforced. In 1888-89 the most strenuous efforts were made to prevent unauthorized irrigation, and generally to enforce the provisions of the law and rules. The procedure adopted is detailed in the extract from the Superintending Engineer's report quoted below:—

"Up to the middle of September the season, though the rains were late in commencing, was not unfavourable, but from the commencement of the *Hathia*, the 26th of September, rain was eagerly looked for, and none falling by the beginning of the *Chitra*, the 9th of October, the demand for canal water became urgent and pressing Applications for permits poured in from all sides, and the greatest eagerness to irrigate leased areas was manifested.

"It had been determined at the beginning of the season to abstain from in any way pressing cultivators to enter into leases. Whilst every possible assistance was given, if desired, they were left to decide the matter entirely in accordance with their own view of their own interests. When applications were tendered, the size of outlet allowed was fixed as nearly as possible in accordance with the discharge required to irrigate the area proposed to be leased, so that unauthorized irrigation on any considerable scale would not be possible. It was explained that a *tatil* would be enforced These measures were in some localities not popular, and several applications were in consequence not completed Many applications for leases, five-year and annual, were refused until proper channels were provided, and altogether declined where there was doubt as to the supply of water available, or where the block proposed was such that unauthorized irrigation was certain to occur. These causes and the hope that holding off from applying for leases might induce Government to reduce the water-rates had considerable effect in lessening the area under lease when the urgent demand for water commenced about the 3rd of October. In many cases it was then too late; channels could not be provided in time, nor could water be given within the few days during which the crop could live without irrigation."

The area irrigated in October was in fact practically limited only by the quantity of water available, and the facilities which existed or could be improvised for leading it to the fields From the 16th to the 25th of October, an average of 2,415 cubic feet of water per second were passed down the Arrah canal, which was designed to carry 1,660 cubic feet per second only. In 1884-85 the sharp demand occurred in August and September, so that the time during which irrigation could be usefully effected was more protracted, and under the same circumstances, the area irrigated in 1888-89 would probably have been in excess of the results of that year. Of the late irrigation about 5,000 acres reported as leased or irrigated chiefly in the Arrah Division could not be assessed on various grounds, and if the financial interests of the canals were the only consideration, there is little doubt that it would be best to refuse permits after the 20th of September. It is a matter for consideration whether under such circumstances previous payment in part at least should not be insisted on. The area noted above, having been decided not to have been irrigated in a legal sense, has been excluded from all the returns.

There was a general failure of the rains in Behar, so that it was considered desirable that an account of the kharif irrigation of the year for the Sone canals should be published at an early date for general information. A note on the subject was accordingly published in the *Calcutta Gazette* for the 9th January 1889.

The large increase in the rabi irrigation was chiefly due to there being no rain in October and November, though the reduction in rate of from Rs. 2-8 to Rs. 2 per acre for flow irrigation for the year only had some influence in inducing applications, the major part of which must in any case have been filed, as the ground was so dry that the seeds would not germinate without artificial irrigation.

64. Whatever difference of opinion may exist as to the procedure to be adopted as regards irrigation or the rates to be charged, the advantage reaped by the country generally from the Sone canals during 1888-89 is unquestionable, and the Superintending Engineer appears to have full justification for the observations made in the extract from his report which follows:—

"There can be no doubt as to the benefits the Sone canals conferred on the districts which they traverse during the year 1888-89. The failure of the rice crop outside the area commanded by the Sone canals was nearly complete; the aharas in which there was any water in the first week of October being few and far between. The situation was complicated by the necessity of blocking early in October four vents in the Dehree river sluices of the Sone weir. As narrated in an extract from a report on the kharif irrigation of the year, quoted in paragraph 4, this operation was carried out in 15 hours, during which time only was the supply of the canals partially shut off. There was at the time considerable sickness amongst the sectional officers, and substitutes, even inefficient, could not be procured. The brunt of the work fell on the Subdivisional officers, amongst whom were one European and three native upper subordinates, and sick or well, they threw themselves into the work with a vigour which in my opinion deserves the commendation of Government. The Divisional officers were no less energetic and self-sacrificing in directing operations. The result of the efforts made is generally admitted to have been successful. A pamphlet by a native gentleman, a pleader and landowner, in which a view, certainly not favourable to canal irrigation, is taken, thus speaks of the operations of the year:—'It is almost admitted that in the year under review the canal authorities have worked better in all the departments than in previous years. The supply of water was satisfactory, the prayers of the cultivators were attended to, and, generally speaking, the arrangements were good.' It is fair to say that he adds:—'In fact, the successful management of this year carries with itself condemnation of the system.' The main difference between the system adopted during the year and that previously in force was the determined effort made to prevent water being taken until permits had been granted. The supply of water was rigorously limited to the area leased, and criminal prosecutions instituted, wherever possible, when water was misappropriated. The system was somewhat relaxed after the 10th of October with decidedly unfavourable financial results to Government, but some benefit to the cultivators. It was remarked in last year's report that efforts were made to remove all well-founded grounds of complaint brought to light during the sittings of the Sone Canal Committee, and this policy was continued during the year. It is fully recognized that lasting contentment will only result by securing irrigating cultivators full crops, and that anything short of this standard will, whatever may be the measure of the benefits derived compared with the water-rates paid, lead to complaints which, though ill-founded, are to be avoided."

65. The areas actually irrigated in each of the executive divisions during the last five years are shown below:—

Eastern Sone Division.				Arrah Division.				Buxar Division.				Total for all Divisions.			
Annual leases.				Annual leases.				Annual leases.				Annual leases.			
Kharif and rabi.	Sugarcane and hot-weather.	Five-year leases.	Total.	Kharif and rabi.	Sugarcane and hot-weather.	Five-year leases.	Total.	Kharif and rabi.	Sugarcane and hot-weather.	Five-year leases.	Total.	Kharif and rabi.	Sugarcane and hot-weather.	Five-year leases.	Total.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
46,831	1,328	25,136	73,295	97,490	4,556	82,573	184,619	64,909	4,537	43,801	113,047	208,930	10,721	151,510	370,601
20,294	1,041	27,945	49,280	54,868	6,821	95,232	157,021	56,140	13,522	56,607	126,269	131,102	21,384	179,784	332,570
11,869	1,216	34,194	47,279	21,710	20,389	98,737	140,747	13,165	5,288	61,625	80,078	46,744	26,904	194,556	268,204
20,399	679	40,123	61,201	25,982	13,079	102,423	141,484	38,715	6,362	67,618	112,695	85,096	20,120	210,164	315,380
29,470	408	37,117	66,995	52,269	11,591	101,489	165,349	57,706	4,363	61,436	123,505	139,445	16,362	200,102	355,909

The reduction in the area under five-year lease is due as has been mentioned in paragraph 62 above to leases being refused where the channels were not in good order or the blocks unsuitable. In some cases applications were withdrawn, as the cultivators were unwilling to accept the outlets proposed which are now recorded in the permit.

The proportion of *flow* to *lift* irrigation for the last five years is shown below:— Flow and lift.

	1888-89.		1887-88.		1886-87.		1885-86.		1884-85.	
	Flow.	Lift.	Flow.	Lift.	Flow.	Lift.	Flow.	Lift.	Flow.	Lift.
Proportion	93·4	6·6	95·2	4·8	96·5	3·5	95	5	93	7

DUTY OF WATER

66. The following statement shows the duty obtaining in the year under review and in the years 1887-88 and 1884-85:—

			Eastern Main Canal Series.	Arrah Canal System.	Buxar Canal System.	Western Main Canal Series.	Sone Canals.
1888-89	Kharif	Acres	55,559	120,758	70,605	191,363	246,922
		Duty on gross supply	49·4	66·7	80·1	71·8	65·2
	Rabi	Acres	15,547	47,165	56,982	104,147	119,694
		Duty on supply utilized	56·5	73·01	94·9	83·5	78·7
1887-88	Kharif	Acres	54,733	112,505	78,197	190,702	245,435
		Duty on gross supply	54·4	85·5	81·2	82·4	73·9
	Rabi	Acres	11,111	31,590	38,396	69,986	81,097
		Duty on supply utilized	43·9	65·9	84·9	75·09	68·5
1885-86	Kharif	Acres	39,532	1,24,441	80,661	205,102	244,634
		Duty on gross supply	45·4	88·7	97·0	93·6	79·9
	Rabi	Acres	12,324	44,946	47,371	92,317	104,641
		Duty on supply utilized	42·6	128·0	116·1	121·7	99·0
1884-85	Kharif	Acres	61,849	133,307	75,266	208,573	270,422
		Duty on gross supply	47·1	79·1	74·3	74·2	65·6
	Rabi	Acres	13,103	64,125	45,734	109,859	122,962
		Duty on supply utilized	37·2	142·5	157·7	148·4	112·6

N B.—Sugarcane is included in both kharif and rabi.

As the year 1884-85 was that in which the largest area was irrigated, it has been selected for comparison in place of 1886-87, which was a year of such plentiful rainfall that as stated last year its results are not of much value as standards of comparison.

The main result for 1888-89 the duty in the kharif season for the Sone canals, 65·2 acres, per cubic foot per second of gross supply approaches very nearly to 65·6, the figures for 1884-85, although in the latter year the rainfall was much more favourable.

For a short base, ten days (11th to 20th October 1889) against fourteen days (29th September to 12th October 1887), the duty *on the rice crop alone* for the Sone canals falls to 42·3 acres in 1888-89, against 45 acres in 1887-88.

In the Arrah Division the quantity of canal water utilized in irrigation during the four months July to October is calculated by Mr. Inglis, Executive Engineer, Arrah Division, to be equivalent to 2·93 feet over the area watered in 1888-89, and 2·6 feet in 1887-88. Taking the drainage area, it is equivalent to 7·2 inches of rainfall of effective rainfall, against 5·7 inches in the previous year.

The Superintending Engineer gives the particulars tabulated below regarding some experiments carried out in the Arrah Division on the quantity of water used in irrigating definite areas from specified outlets:—

Distributary.	Size of outlet.	Number of days discharging.	Average discharge.	Area irrigated.	Area irrigated per cubic foot per second.	Date from which open.
Bichiaon	9″×12″	11	2·8	54·15	2·76	2nd October 1888.
Kaithi	9″ diam	11	2·37	45·6	1·74	6th August ,,
Kaithi	Same outlet	11	2·72	42·28	1·41	23rd Sept. ,,
Kaithi	6″ diam.	12	1·09	21·0	1·6	Ditto ,,
Behcea R P. C.	15″×18″	9	3·46	116·4	3·46	3rd October ,,

The results are discordant, and the omission of information as to the nature of the soil, the distance of the outlet from the block irrigated, the number of days elapsed since the last irrigation and since the last rainfall, and the extent of the latter in inches, &c, prevents any useful deductions being made. At the same time the experiments point to a direction in which much useful work can be done, as with a demand in the kharif season, which even now the canals are unable to meet it, is imperative that whilst a sufficient supply of water shall be allowed the utmost economy, which can only be effected at the outlet, should be practised.

The duty in the rabi season was slightly higher than in the previous year. The matter is not of practical importance, as the area of rabi crops irrigated did not nearly approach that for which water was available.

CROP EXPERIMENTS.

67. The results of experiments carried out by canal officers on the outturn of crops irrigated by canals and otherwise have been noticed in former reports The evidence given before the Sone Canals Committee showed that the value of these experiments was questioned, and accordingly in 1888-89 the matter received more than ordinary care. The extract from the Superintending Engineer's report quoted below deals with the difficulties experienced in obtaining comparative results, and narrates the course pursued during the year under review:—

"Former reports have compared the yield of crops irrigated by the canals and those matured without their aid. It has always been recognized that crop experiments, whilst valuable as showing the quantities of grain and straw produced in each case, could not be relied on as an absolute test of the producing power of the land under canal and non-canal irrigation. It was not possible to select plots cultivated under precisely similar conditions, differing only in the means of irrigation employed, and in many parts of the country it was difficult to find rice crops not under canal irrigation. Again, it had been asserted before the Sone Canals Committee that not only was the crop produced by the aid of canal water inferior, but that the longer the land was irrigated, the less the produce became. Complaints were also made that the experiments were not conducted under conditions where the public could have the opportunity of being present and watching the process. Independently of the circumstances of the year, it had been determined to confine the experiment for the most part to canal-irrigated crops, and, as a matter of fact, no other course would have been possible, as rice crop over the area commanded failed where canal irrigation was not available.

"The services of a Covenanted Civilian were placed at the disposal of the Public Works Department, so that the result of a series of experiments carried out by an officer not belonging to the Canal Department might be recorded. The co-operation of Messrs. Burrows, Thomson and Mylne, who have always been ready to assist, in every way, the officers of the Irrigation Department, was solicited, and the Collectors of the districts concerned asked to instruct Subdivisional Magistrates to themselves make a few experiments if possible. In the case of experiments carried out by canal officers, the nearest Magistrates, as well as zemindars and ryots, were asked to be present. The publicity thus given to the experiments did not, in all cases, meet with the approval of the cultivators, who would have preferred the matter to have remained a subject of controversy. The instructions issued were to the effect that the crops experimented on should be good crops, and that the weighment should take place on the field."

The results of the experiments are given in the table which follows, which is abstracted from the figures contained in Mr Luson's report:—

Crop.	Name of officer conducting experiments.	Number of experiments.	Average yield, dhan.		Number of experiments.	Average yield, straw.	
			Mds.	s.		Mds.	s.
Transplanted ...	Mr. H. Luson, c s. ...	25	33	$39\frac{15}{25}$	25	47.	$17\frac{11}{25}$
Aghani dhan ...	Messrs Burrows, Thomson, and Mylne	26	31	$5\frac{11}{13}$	26	52	$22\frac{8}{13}$
	Canal Subdivisional Officers	33	35	$6\frac{37}{44}$	31	68	$14\frac{15}{15}$
	Canal subordinates ...	138	31	$30\frac{175}{138}$	134	55	$38\frac{11}{18}$
Kartika dhan...	Mr. H. Luson, c.s. ...	3	35	$1\frac{1}{3}$	3	46	$36\frac{4}{75}$
	Messrs. Burrows, Thomson, and Mylne	25	26	$37\frac{7}{24}$	25	46	$5\frac{107}{225}$
	Mr. G. C. Maconchy, c.s. ...	2	31	$4\frac{1}{6}$	2	56	$29\frac{1}{3}$
	Subordinate, Agiaon ...	1	14	$19\frac{1}{3}$	1	33	6
Broadcast dhan	Mr. H. Luson, c.s. ...	2	22	22	2	31	$22\frac{6}{25}$
	Messrs. Burrows, Thomson, and Mylne	1	23	14	1	36	32
	Canal Subdivisional Officers	3	37	$11\frac{4}{9}$	1	54	0
	Canal subordinates ...	2	33	$7\frac{1}{3}$	2	39	$13\frac{1}{3}$
	Average ...	261	31	$32\frac{9}{16}$	253	54	$32\frac{1}{4}$

The figures given above are not the actual weighments, but the weighments reduced by one-twelfth in the case of dhan and one-third in the case of straw in those cases where the crop was weighed wet on the field, this representing the loss which Mr. Luson found by actual experiment to occur in drying.

It must not be forgotten that the experiments were not on the yield of average crops, which were those selected in former years, but of the yield of the best crops. Mr. Luson, however, states that after a personal inspection of

nearly half the whole irrigated area in Shahabad, Patna, and Gya, he estimates the average outturn of irrigated dhan for the year to be $18\frac{7}{10}$ maunds of paddy per acre, or $12\frac{7}{15}$ maunds of rice.

The average of 1,227 experiments made by canal officers and subordinates from 1880-81 to 1887-88 on the yield of *average* crops is $16\frac{5}{20}$ maunds per acre of paddy, against $18\frac{7}{10}$ maunds, the yield of *average* crops in 1888-89, as estimated by Mr. Luson, based on experiments on good crops. Of the 26 experiments carried out by Mr. Luson himself, 23 were on land which had been continuously irrigated for nine years and upwards, and 16, by either Mr. Luson or Messrs. Burrows, Thomson, and Mylne, were on crops produced on *kerail* soil which has been stated to be unsuited for canal irrigation; the average yield of good crops being, nevertheless, 34 maunds $15\frac{7}{16}$ seers.

The fact that almost any soil will under favourable circumstances if regularly irrigated produce 34 maunds of dhan per acre can scarcely for the future be questioned.

In wheat, 57 experiments were made, and the balance both in grain and straw is in favour of canal water; but this result is reversed in three experiments made on barley.

DEMANDS AND COLLECTIONS.

68. The following statement shows the demands, collections, and balance of water-rates for the last five years:—

YEAR.	DEMAND.			Remissions.	Net demand.	Collections.	Balance.	Percentage of collections to current demand.
	Arrears	Current.	Total.					
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1884-85	4,23,793	11,15,399	15,39,192	73,625	14,65,567	7,70,359	6,95,208	69·0
1885-86	6,95,208	8,07,702	15,02,910	1,26,266	13,76,644	9,78,323	3,98,321	121·1
1886-87	3,98,321	6,95,086	10,93,407	35,364	10,58,043	8,26,461	2,31,582	118·9
1887-88	2,31,582	7,25,810	9,57,392	26,525	9,30,867	5,19,586	4,11,281	71·5
1888-89	4,11,281	7,53,217	11,64,498	25,329	11,10,169	7,59,556	3,80,613	100·8

As usual, the figures given above are taken from those compiled by the Examiner of Accounts. The balance at the commencement of the year agrees exactly, and that at the close of the year very nearly, with the figures given by the Commissioner and Collector; there are differences in the remaining columns which approximately balance each other, the discrepancy at the close of the year being Rs. 4 only. The current demand includes Rs. 1,45,277 which, though due, are not legally recoverable until after the 1st of April.

ARREARS.

69. The extent to which not only the current demand, but also the arrears of 1887-88 and earlier years have been worked off, is shown in the statement following. The figures are obtained from statements attached to the Commissioner's report:—

	Demand of 1888-89 how composed.	Collected or remitted.	Percentage of demand adjusted.	Balance outstanding at close o year.
	Rs.	Rs.		Rs.
Arrears of 1885-86 and previous years... ...	33,330	16,648	49·9	16,682
„ 1886-87	25,848	17,066	66·0	8,782
„ 1887-88	3,52,103*	2,95,630	83·9	56,473
Total of arrear demand outstanding on 1st April 1888	4,11,281	3,29,344	80·0	81,937
Current demand of 1888-89...	7,50,340	4,51,660	60·2	2,98,680†
Gross demand, including arrears	11,61,621	7,81,004	67·2	.....
Total outstanding at close of year	.....	.....	.....	3,80,617†

* Includes Rs. 1,30,559 not legally recoverable within the year 1887-88.

† Includes Rs. 1,45,277 not legally recoverable within the year 1888-89.

There has been a small diminution in the arrear balance on the 1st of April 1889, as compared with that on the 1st of April 1888. The balance due on account of the year immediately preceding that current has increased from Rs. 25,846 to Rs 56,423, whilst the balance an account of previous years has been reduced from Rs. 33,329 to Rs. 25,464.

The effect of the agitation which led to the appointment of the Committee had an unfavourable effect on the collections of the year, the Collector of Shahabad giving it as his opinion that "the work was thrown back by nearly two years." He adds "that instances have come to the notice of our officers where the rate-payers of certain villages expressed their regret that they ever joined the agitation and withheld payment, inasmuch as the pressure of accumulated arrears was too much for them." As regards the current year's demand, the Superintending Engineer notices that the demand statements reached the Collector at a later date than usual, a result ascribed to two causes—1st, the detention of demand statements including items to which objections had been preferred until a decision had been arrived at, and 2nd, the increased area under irrigation. Complaint is made in the Collector's reports of the delay which, as noted above, occurred in the receipt of the demand statements, the reasons given by the Sub-Engineer for their late despatch must be accepted as fairly satisfactory.

70. The following statement compares by districts the operations of the year under review with those of the preceding year:—

District.	ARREARS DUE FOR IRRIGATION EFFECTED IN PREVIOUS YEARS.				DEMANDS FOR IRRIGATION EFFECTED IN 1888-89.			
	Percentage of total demand.				Percentage of total demand.			
	Demand.	Collections.	Remissions.	Outstanding at end of year.	Demand.	Collections.	Remissions.	Outstanding at end of year.
Shahabad—								
1888-89	100·0	78·7	4·8	16·3	100·0	66·2	0·3	33·4
1887-88	100·0	66·0	13·8	20·2	100·0	54·8	0·7	44·5
Patna—								
1888-89	100·0	53·2	8·7	38·0	100·0	18·6	0·02	81·3
1887-88	100·0	45·5	5·6	48·9	100·0	22·0	0·2	77·8
Gya—								
1888-89	100·0	88·4	0·3	11·2	100·0	48·6	1·0	50·3
1887-88	100·0	89·0	1·7	9·3	100·0	42·2	0·2	57·6
Average—								
1888-89	100·0	74·9	5·1	19·9	100·0	59·8	0·3	39·8
1887-88	100·0	64·8	9·7	25·5	100·0	50·7	0·5	48·8

The Commissioner of Patna makes the following observations on the percentage of the total demand, arrears and current, collected during the year:—

"From the above figures it will be seen that in Shahabad 72 per cent. of the total demand was adjusted during the year under report—a result which may be considered fair; while the adjustment in Patna was only 41, which is not satisfactory. The Collector of Patna states that the present circle officer has effected some improvement in the collections, but there is yet much room for further improvement."

The Executive Engineer of the Eastern Sone Division states that the delay in recovering arrears must cause loss of revenue to Government, and has generally a demoralizing effect on the cultivators.

If the demands received in March, which are practically not recoverable during the year, are excluded, the percentage of collections to the total demand, including arrear balances, is for Gya 65 per cent., Patna 38 per cent., and Shahabad 77 per cent.

The result of the year's collecting operations has been good in Shahabad, fair in Gya, but very bad in Patna.

REMISSIONS.

71. The remissions granted during the year are Rs. 2,196 less than those of the preceding year, as shown below:—

	1888-89.	1887-88.
	Rs.	Rs.
By canal officers	10,776	6,911
By civil officers	13,553	19,614
Total ...	24,329	26,525

The statement above is based on the figures contained in the Examiner's accounts.

For the purpose of comparing the accuracy of the demand statements of the year with those of that previous it is necessary to take into account refunds and cancelled demand statements not replaced by others of equal amount. Taking into account these items, which are equally remissions and excluding remissions by civil officers the figures for the last two years are shown below:—

	Rs.
1888-89	16,234
1887-88	18,813

Remissions by civil officers are those arrears which it was found necessary to write off as irrecoverable owing to the persons assessed having absconded or become bankrupt.

The remissions by canal officers may be divided thus:—

	Percentage of remissions and refunds to gross demand.	
	1888-89.	1887-88.
Eastern Sone Division	1·09	0·74
Arrah Division	0·72	1·95
Buxar Division	1·20	1·24

showing, except in the case of the Eastern Sone Division, a further advance on last year's results, which were considered to be satisfactory.

From the Examiner's accounts it would appear that the totals of refunds, remissions and irrecoverable item amounted to Rs. 36,940 in 1888-89 and Rs. 41,856 in 1887-88. These are *actuals* and include items of former years finally dealt with in 1888-89. On this question of remissions and refunds further information is necessary, so as to show what percentage of the assessments of any year are finally remitted, refunded or written off as irrecoverable. The percentage in Bengal on account of the peculiar circumstances under which irrigation there is effected, must always be considerable as compared with other Provinces, but undoubted progress is being made, and it is desirable to show this. The matter should not be lost sight of.

REVENUE ESTABLISHMENT.

72. The expenditure on the Revenue establishments employed during the last two years is shown below:—

	1888-89.		1887-88.	
	Amount.	Percentage on collections.	Amount.	Percentage on collections.
	Rs.		Rs.	
Permanent and temporary establishments, such as zilladars, ameens, &c. ...	(*a*)54,325	7·15	(*b*)53,254	10·25
Establishment employed under Collectors ..	33,316	4·38	30,466	5·85
Headmen's and patwaries' fees ...	70,608	9·30	51,523	9·92
Total ...	1,58,249	20·83	1,35,243	26·02

(*a*) Inclusive of Rs. 2,270 for water regulation establishment.
(*b*) Ditto 2,334 ditto ditto.

The above figures have been taken from the Examiner of Accounts' memorandum.

78. COMPARISON OF TRAFFIC. TRAFFIC.

		1888-89.	1887-88.	1886-87.	1885-86.	1884-85.
Number of miles open ...	No.	218½	218½	218½	218½	218½
Toll collections ...	Rs.	52,412	51,542	49,936	41,719	37,895
Rate of toll per mile ...	„	240	236	229	191	171
Boats, including empties	No.	8,096	8,116	8,573	7,210	6,434
Tonnage of boats ...	Tons	103,788	95,082	104,835	77,006	61,744
Estimated value of cargo, including rafts ...	Rs.	58,04,029	56,80,508	64,65,651	36,41,863	41,10,598

The decrease in the tollage levied on the Patna canal system, which is wholly under the head Tollage on rafts, is more than covered by increased tollage assessed during the year in the other canal systems. The decreased tollage on rafts is stated to be due to the stock of bamboos at Patna being in excess of the demand. The remaining variations do not appear to call for remark.

79. The expenditure on navigation establishment was Rs 13,071, against Rs 13,212 in the previous year NAVIGATION ESTABLISHMENT.

80. There is no Government Steam Transport Service on the Sone canals, but three steamers, the property of Government, are hired to a contractor, who maintains a weekly service on the Patna canal, and a bi-weekly service on the Arrah and Buxar canals. The services are regularly maintained, and are understood to be popular, though the speed, owing to various considerations, is slow, barely averaging, including stoppages, four miles an hour. TRANSPORT SERVICE.

81. The miscellaneous receipts for the last five years are given in the following statement:— MISCELLANEOUS RECEIPTS

		1888-89.	1887-88.	1886-87.	1885-86.	1884-85.
		Rs.	Rs.	Rs.	Rs.	Rs.
Sale of water		387	370	702	1,742	582
Plantations		383	394	319	307	178
Other canal produce		1,816	2,145	2,904	2,424	1,339
Water power		835	708	668	469	488
Rent of buildings		8,247	7,197	7,198	7,213	6,409
Fines		224	317	169	653	734
Miscellaneous	Rent of lands	7,995	10,997	15,231	14,369	13,770
	Fisheries	734	502	565	421	732
	Cost of process	3,739	2,474	6,302	6,414	7,066
	Sale of old materials	102	60	443	355	405
	Other items	2,042	3,295	3,213	3,713	8,651
	Total	26,504	28,459	37,714	38,080	40,354

The only considerable decrease has been under the head rent of lands. It was last year explained that it had been found necessary to retain possession of land likely to be required for repair purposes owing to difficulties experienced in reclaiming it when required.

82. The state of the plantations in each division at the close of the years 1887-88 and 1888-89 is shown in the following statement:— PLANTATIONS.

Division.	1888-89. Trees over 12 feet in height.	1888-89. Saplings between 4 and 12 feet.	1888-89. Seedlings under 4 feet.	1888-89. Total.	1887-88. Trees over 12 feet in height.	1887-88. Saplings between 4 and 12 feet.	1887-88. Seedlings under 4 feet.	1887-88. Total.	Increase.	Decrease.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Eastern Sone ...	71,478	30,308	53,530	155,376	64,280	28,334	59,440	152,054	3,322	...
Arrah ...	35,871	23,379	61,019	120,268	31,503	15,274	54,944	101,021	19,247	...
Buxar ...	13,438	6,972	23,306	43,716	9,693	14,765	18,327	42,785	931	...
Total ...	120,787	60,719	137,854	319,360	105,476	58,373	132,911	295,860	23,500	...

The expenditure on plantations was Rs. 8,929, and the receipts Rs. 383 against Rs. 8,300 and Rs. 394, the respective amounts in the previous year The plantations have not yet arrived at a stage in which any substantial sum

can be expected to be received as earnings, but there is a satisfactory progressive increase in the number of trees which require little or no outlay in keeping up.

FINANCIAL RESULTS.

83. The receipts on revenue account and working expenses of the Sone Canals for the year 1888-89 and the nine preceding years are shown in the statement below:—

	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.	1883-84.	1882-83.	1881-82.	1880-81.	1879-80.
Receipts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Water-rates	7,59,556	5,19,586	8,20,461	9,78,323	7,70,359	4,84,209	5,06,455	6,03,930	3,78,266	4,44,716
Navigation	57,829	55,904	54,254	46,243	51,761	85,193	71,206	93,116	61,148	39,859
Miscellaneous	26,504	28,429	37,714	38,080	40,364	34,405	47,007	39,246	39,233	47,013
Total ...	8,43,889	6,03,919	9,18,429	10,62,646	8,62,474	6,03,807	6,54,677	7,36,292	4,78,644	5,31,589
Less refunds of revenue	12,611	15,331	15,737	10,657	7,455	5,429	1,237	1,329	1,637	1,945
Net total receipts ...	8,31,278	5,88,618	9,02,692	10,51,989	8,55,019	5,98,378	6,53,440	7,34,963	4,77,007	5,29,643
WORKING EXPENSES.										
DIRECT CHARGES.										
I.—Works, Maintenance and Repairs.										
Works (extensions and improvements).	10,426	5,532	...	..	...	...	..	...	...	...
Repairs, including compensation.	3,28,182	3,08,448	3,08,705	2,83,315	3,44,838	2,76,335	3,17,991	2,60,891	2,85,049	1,91,820
Establishment, including direction and accounts.	1,97,677	2,10,227	71,066	65,163	79,300	63,477	73,042	63,943	71,610	41,029
Tools and plant	33,020	28,221	27,698	32,451	26,175	34,983	11,898	3,198	580	4,586
Total ..	5,70,205	5,52,428	4,07,529	3,80,929	4,50,313	3,74,795	4,02,841	3,28,032	3,57,839	2,38,335
II.—Revenue Management.										
Irrigation establishment	1,58,249	1,35,243	1,43,660	1,46,028	1,29,308	1,14,005	1,05,883	1,14,988	1,02,476	1,06,534
Navigation establishment.	14,105	14,308	14,535	14,756	16,885	20,218	19,880	13,078	10,618	10,483
Total ...	1,72,414	1,49,551	1,58,195	1,60,784	1,46,193	1,34,253	1,25,763	1,27,961	1,13,094	1,17,017
Total direct charges ...	7,42,619	7,01,979	5,65,724	5,41,713	5,96,506	5,09,048	5,28,604	4,55,993	4,70,933	3,55,352
*Indirect charges.**										
Capitalization of abatement of land revenue.	...	...	...	...	...	...	...	...	...	...
Leave and pension allowances.	51,813	50,369	32,097	31,632	31,569	27,682	19,933	32,871	31,638	27,326
Total indirect charges ...	51,813	50,369	32,097	31,632	31,569	27,682	19,933	32,871	31,638	27,326
Total working expenses ..	7,94,432	7,52,348	5,97,821	5,73,345	6,28,075	5,36,730	5,48,537	4,88,864	5,02,571	3,82,678
Net revenue	36,846	(—)1,63,730	3,04,871	4,78,644	2,26,944	61,648	1,34,903	2,46,099	(—)25,564	1,47,065

* These are now shown under the suggestion of the Government of India.

Compared with 1887-88, the net revenue is Rs. 36,846 against a deficit of Rs. 1,63,730, which is mainly due to the increase in the total receipts from Rs. 5,88,618 to Rs. 8,31,278.

The working expenses during the year have exceeded those incurred in any year up to date, and, considering the small revenue derived from the canals, it is essential that any increase under this head shall be jealously watched.

In respect to the area irrigated, the year has been compared with 1884-85, and on referring to the table above it will be seen that the working expenses were Rs. 6,28,075 in that year, against Rs. 7,94,432 in 1888-89, showing an increase of Rs. 1,66,357, out of which Rs. 118,377 is in one item—"Establishment employed on maintenance, including direction and accounts." This increase in cost is apparent only. In 1884-85 a charge of 23 per cent. on the expenditure incurred on maintenance and repairs was made the balance being debited to the provincial establishment Roads and Buildings Branch, whilst at present the actual cost of the establishment employed, which is less than that actually engaged on the same work in the former year, is debited to this head. The new method of charging establishment has in fact added upwards of Rs. 1,10,000 to the permanent yearly working expenses of the Sone canals.

In 1888-89, Rs. 10,426 was expended on Extensions and Improvements, whilst in 1884 85 there was no expenditure under that head.

Under the head Maintenance, the expenditure in 1884-85 was Rs. 16,656 in excess of that incurred during the current year.

The expenditure on Tools and Plant was in excess in 1888-89 by the sum of Rs. 7,745, chiefly owing to the increased number of dredgers and mud punts now in use.

There is a small increase in the expenditure on the establishment employed under both the Engineers and Collectors, due to the larger area irrigated and the increased collections. The increased sum disbursed on account of headmen's fees includes Rs. 10,949 wholly in the Arrah Division of arrears previous to 1887-88 disbursed in 1888-89, and to that extent the expenditure is unduly high; the remaining increase is a consequence of the increase in the area irrigated and in the collections.

COST OF MEASUREMENTS, &C., PER ACRE.

73. The following statement shows the approximate cost of measuring lands brought under assessment during the year under review and of preparing demand statements:—

Divisions.	Areas measured during the year and assessed.	Cost of measuring crops.		Cost of preparing demand statements.	
		Total.	Per acre.	Total.	Per acre.
	Acres.	Rs.	Pies.	Rs.	Pies.
Eastern Sone	34,356	713	3·98	1,017	5 68
Arrah	70,483	2,838	7 73	2,518	6·85
Buxar	72,469	2,483	6 57	1,630	4·32
Total, 1888-89 ...	177,308	6,034	6·53	5,165	5 59
Total, 1887-88 ...	151,069	5,533	7 00	4,594	5·83

It will be seen from the above table that the increase in the area assessed has been followed by a reduction in the cost per acre of making the assessment.

COMPLAINTS.

74. The Superintending Engineer has attached to his report very complete lists of complaints and applications received during the year divided under three main heads:—(I) Objections to demand statements or ordinary applications for remission; (II) Complaints against orders actually passed other than those imposing an assessment; (III) Applications in connection with irrigation not involving complaints against orders passed by or the action of canal officers. Both complaints and applications are classified under numerous heads and sub-heads in appendices XIV and XV to the Superintending Engineer's report. In former years a less elaborate classification was adopted, but the numbers of complaints for the last two years can to a certain extent be classified under the main heads mentioned above, and figures showing the results are given in the subjoined table:—

Division.	(I.)—Ordinary remission.				(II to IV.)—Other complaints.			Total complaints received during year, excluding those pending from previous year.	Pending
	Received during the year and pending from previous year.	Disposed of.		Pending.	Received during the year and pending from last year.	Disposed of.	Pending.		
		Remission allowed.	Remission refused.						
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Eastern Sone ...	1,512	493	559	470	56	47	9	1,518	479
Arrah	3,591	1,094	1,502	935	441	357	84	3,688	1,019
Buxar	1,867	624	939	404	220	207	13	1,864	417
Total, 1888-89 ...	6 970	2,201	2,960	1,809	717	611	106	7,070	1,915
Total, 1187-88 ...	6,748	2,385	3,838	025	Not recorded.				

Of the 5,161 complaints regarding assessment disposed of, remission was allowed in 42·6 per cent. of the cases, against 37 3 per cent. in the previous year. The Superintending Engineer remarks that the small increase in the number of complaints is apparent rather than real owing to the fact that not unfrequently the same complaint is made to the Subdivisional Officer, the Executive Engineer, the Collector, and the Superintending Engineer, each of which now appears as a separate number in the register. The demand for water in October for new irrigation also led to many complaints, as the cultivator is never satisfied to pay water-rates unless the crop is satisfactory, and this was necessarily not the case where water was applied for and received at the last moment. The explanation may be accepted as sufficient as regards the apparent increase in the numbers of complaints, there being no doubt that it is due to a more rigid enumeration of the number of complaints, and the character of the season being such as to induce objections to the assessments. The same cannot, however,

be said as to the number of complaints pending at the close of the year, especially in the Arrah Division, for which no sufficient reason has been given.

APPEALS. 75. During the year 23 appeals against the orders of canal officers were prefered to the Collector; of these 3 were allowed, 15 dismissed, and 5 pending at its close.

CERTIFICATE PROCEDURE. 76. The number of certificate cases filed and disposed of during the year under review, as compared with the year preceding, in the districts of Shahabad, Patna, and Gya, is shown below:—

	Shahabad.				Patna.				Gya.			
	1888-89		1887-88.		1888-89.		1887-88.		1888-89.		1887-88.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.
Cases for disposal—		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
1. Cases pending at the close of the preceding year.	967	17,943	6,692	44,195	4,045	21,154	2,421	14,058	167	2,991	48	417
2. Cases instituted during the year	2,948	36,974	1,617	25,295	1,129	6,103	3,802	13,811	139	9,044	244	3,230
Total ...	3,915	54,917	8,309	69,490	5,174	27,257	6,223	27,869	306	12,035	292	3,647
Cases disposed of—												
1. By being struck off owing to the demand having been remitted.	516	5,512	2,846	16,054	1,425	4,226	465	1,943	90	4,463	30	205
2. By being wholly satisfied ...	2,879	42,838	4,466	35,493	1,427	3,496	1,713	4,773	116	577	95	451
Total ...	3,395	48,350	7,312	51,547	2,852	7,722	2,178	6,715	206	5,040	125	656
Balance outstanding at the close of the year.	520	6,567	997	17,943	2,322	19,535	4,045	21,154	100	6,995	167	2,991

From the above it will be seen that inclusive of 5,179 cases pending at the commencement of the year, there were 9,395 for disposal, covering a sum of Rs. 94,207. In 2,031 cases for Rs. 14,200 the demand was remitted, whilst in 4,422 for Rs 46,910 the demand was fully satisfied. The number of cases pending at the close of the year was 2,942, the sum outstanding being Rs. 33,097. The Collector of Shahabad observes that remissions were mostly due to the cases covering bad and irrecoverable debts, and draws attention to the satisfactory decrease, compared with the preceding year, in the number of cases pending at its close. The excessive percentage of cases struck off in the Patna district is probably not unconnected with the delay in making collections, commented on in paragraph 65 of this note.

NAVIGATION RECEIPTS. 77. The tables below show the navigation revenue and tollage receipts for the last five years:—

NAVIGATION RECEIPTS.

Year.	Eastern Main Series.			Western Main Series.			Total.	Total tollage only.
	Number of miles open.	Tollage receipts.	Transport service receipts.	Number of miles open.	Tollage receipts.	Transport service receipts.		
	No.	Rs	Rs.	No.	Rs.	Rs.	Rs.	Rs.
1884-85	86½	23,055	1,304	132½	14,280	13,122	51,761	37,335
1885-86	86½	19,579	...	132½	22,133	4,531	46,243	41,712
1886-87	86½	22,500	54*	132½	27,159	4,538*	54,254	49,936
1887-88	86½	27,672	95*	132½	23,363	4,823*	55,904	51,542
1888-89	86½	24,876	60*	132½	27,236	5,607*	57,829	52,162

* There is no longer any Government transport service. These receipts are on account of hire of steamers, boats, and sundries.

TOLLAGE (ASSESSED).

Year.	Patna Canal System—Eastern Main Canal Series.	Arrah Canal System.	Buxar Canal System.	Total.
	Rs.	Rs.	Rs.	Rs.
1884-85	23,142	10,316	3,937	37,395
1885-86	19,523	14,808	7,388	41,719
1886-87	22,646	18,289	9,001	49,936
1887-88	28,206	15,306	8,030	51,542
1888-89	25,165	18,421	8,826	52,412

Under the head Revenue Management irrigation establishment there is an excess of Rs. 28,941 in 1888-89 wholly on the item headmen's fees. The actual expenditure on irrigation establishment was Rs. 1,07,411 in 1884-85 and Rs. 85,371 in 1888-89.

There was a reduction of Rs. 2,720, compared with 1884-85, under the head Navigation establishment.

Setting aside former years, there was special expenditure in 1888-89 on the following items:—

I.—Substituting masonry arches in place of wooden platforms in the case of 14 bridges over the Chowsa and Gurra Chowbey Canals.

II.—Rebuilding the piers of the river sluices on the Dehree side of the Sone weir. On this work Rs. 50,024 were expended during the year.

III.—The payment of one year's arrears of headmen's fees, amounting to Rs. 10,949, for 1886-87 in the Arrah Division.

In future years, now that the whole of the piers of the river sluices of the Sone weir have been reconstructed, the expenditure on works (extensions and improvements and maintenance) should be kept within Rs. 3,00,000, and there ought also, compared with 1888-89, to be a reduction of Rs. 10,000 in the item headmen's fees.

84. The cost of repairs to head-works during the last five years is shown below:— REPAIRS TO HEAD WORKS.

	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.
	Rs.	Rs	Rs.	Rs.	Rs.
Sone weir	63,245	47,150	68,570	34,908	29,922
Other works	10,097	12,997	10,419	7,697	9,462
Total ...	73,342	60,147	78,989	42,605	39,384

The extra cost of maintaining the head-works was wholly due to special expenditure, amounting to Rs. 50,024, on the remodelling of the Dehree river sluices of the Sone weir. Work on rebuilding the piers was commenced in December, and the whole of the masonry work completed by the 31st March; the gates and fittings were finished before the present rains; the total expenditure on the new piers was Rs. 56,826. The whole of the piers of the river sluices of the Sone weir have now been rebuilt. Excluding special repairs to the river sluices, the expenditure on the head-works was Rs. 23,318 in 1888-89, against Rs. 25,139 in 1887-88.

85. The outlay on main canals and distributaries in each division during the last two years is shown below:— MAINTENANCE OF MAIN CANALS AND DISTRIBUTARIES.

	Arrah Division.		Buxar Division.		Eastern Sone Division.	
	1888-89.	1887-88.	1888-89.	1887-88.	1888-89.	1887-88.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs
Western Main canal	44,298	42,388	20,109	10,456	...	...
Eastern ditto	...	...	...	...	22,722	30,672
Canals	34,443	25,717	10,766	11,686	23,015	26,395
Branch canals	14,559	16,874	14,206	12,710	...	...
Distributaries	29,453	27,136	15,172	12,604	17,216	19,806
Drainage and protective works ...	2,358	3,044	153	888	2,753	2,944
Total ...	1,25,111	1,15,159	60,406	47,844	65,706	79,817

These figures are taken from the Superintending Engineer's report. The cost of maintenance, excluding head-works and telegraph lines, is Rs. 2,51,223, against Rs. 2,42,820 shown last year.

Both in the Arrah and Buxar Divisions the expenditure during the year was more than that of the year 1887-88. The increase is mainly due to special silt clearing in the 9th to the 13th miles of the Main Western canal and in miles 28 to 58 of the Arrah canal which had not been carried out for many years. The renewal of the Pakri bungalow roof with iron beams has also contributed

SILT CLEARING AND DREDGING.

somewhat towards the excess expenditure. The outlay in the Eastern Sone Division was Rs. 14,111 less than in the year preceding.

86. The quantity of silt dredged from the Eastern and Western Main canals, and the rate at which the work was done during the last two years, are given below :—

CANALS.	1888-89.			1887-88.		
	Cubic feet dredged.	Cost, including removal over spoil bank or discharge into river.	Rate per 1,000 cubic feet.	Cubic feet dredged.	Cost, including removal over spoil bank or discharge into river.	Rate per 1,000 cubic feet.
		Rs.	Rs. A. P.		Rs.	Rs. A. P.
Eastern Main and Patna	23,27,518	12,944	5 9 0	30,56,923	17,521	5 11 6
Western Main ...	75,44,478	49,724	6 9 5	77,69,065	46,049	5 14 10

The Superintending Engineer makes the following observations in the increase in rate per 1,000 cubic feet in the case of the Western Main canal, and on the charge for interest and depreciation adverted to in last year's report :—

The rates compare unfavourably with those of the previous year, when for the most important item, Main Western canal, the rate was Rs. 5-14-10 per 1,000 cubic feet of silt dredged. This is in part due to liabilities for 1887-88, amounting to Rs. 2,209,* having been paid in 1888-89. Deducting this amount from the whole expenditure for 1888-89 and adding it on to that of 1887-88, the rates for the Main Western canal become Rs. 6-5-4 per 1,000 cubic feet for 1888-89 and Rs. 6-2-11 for 1887-88. The rate for 1886-87 was Rs. 7-6-6 per 1,000 cubic feet. It may be added that during 1888-89 the work was spread over 13 miles instead of being confined to the first 9 miles of the canal as usual

* On 86,55,367 cubic feet dredged.

Turning to the cost of dredging only, leather belting and rope cost Rs. 3,693 in 1888-89 and Rs. 1,313 in 1887-88. The extra cost during the year was partly owing to silt having been to a greater extent than usual thrown into the river requiring an extra length of rope, and partly to the month in which the ropes and belting were renewed falling in 1888-89. The extra rate owing to this cause in the Main Western canal is annas 4-4 per 1,000 cubic feet Amongst other causes for the extra cost was Rs. 400 charged during the year for making a road through the spoil bank to the river.

The expenditure on repairs to dredgers was as follows :—

		Rs.
Fouracres' dredgers	(12)	7,704
Bruce's „	(2)	754
English „	(2)	4 300
Mud punts	(64)	2,870

If the total cost of dredging is required, the following sums, details regarding which are given in the Revenue Report for 1886-87, should be added to the rates mentioned above :—

	C. ft.	Rs. A. P.
For Fouracres' dredgers	per 1,000	2 12 8
„ Bruce's	„ „ 1,000	4 14 4
„ English	„ „ 1,000	8 13 3
„ Mud punts	„ „ 1,000	2 14 1

The dredgers are laid up during part of the year, but this will have no effect on the charge for interest and depreciation, as the number of dredgers and punts cannot be diminished, every dredger and mud punt at times during the rains barely sufficing to keep the canal open, and it is a question whether the dredgers do not suffer nearly as much when laid up as when at work : it is the difference between rubbing and rusting. In any case the interest would be the same, as the dredgers cannot be employed on other work. The dredging accounts are perhaps not in such detail as might be desired, but further minute accuracy would involve increased clerical establishment. Instructions will be given that in future liabilities and not payments only during the year are to be taken into account.

In future reports the actual cost based on liabilities should certainly be shown, and it would be well to show the number of days during which the dredgers have been employed and been laid up.

The quantity and cost of silt clearances by hand in the Eastern Main and Patna canals during the last two years is shown in the following table:—

	1888-89.			1887-88.		
	Cubic feet cleared by hand.	Cost.	Rate.	Cubic feet cleared by hand.	Cost.	Rate.
		Rs.	Rs. A. P.		Rs.	Rs. A. P.
Eastern Main and Patna canals ...	2[illegible],668	10,542	3 12 9	1,981,102	9,681	4 13 6

In the case of the Western Main canal, in addition to the charge for dredging, Rs. 3,460 was spent in the Arrah Division and Rs. 258 in the Buxar Division on silt clearing by hand.

In the Arrah canal silt clearing on a more extensive scale than usual was carried out during the year, the quantity removed by hand being 28¼ lakhs cubic feet at a cost of Rs. 8,282, and Rs. 1,444 was also expended on dredging silt accumulated in front of locks.

The expenditure incurred during the year on dredging and clearing silt in the branch canals and distributaries is shown below:—

	Rs.
Eastern Sone Division.	
Distributaries, Patna Canal System	1,359
Arrah Division.	
Doomraon branch canal	938
Behea branch canal	88
Distributaries	4,934
Drainage and protective works	813
Buxar Division.	
Buxar canal	453
Chowsa branch canal	56
Distributaries	479

87. The cost of weed-clearing for the last five years is shown in the following table:— WEED CLEARING.

	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.
	Rs.	Rs.	Rs.	Rs.	Rs.
Eastern Sone Division	217	558	314	2,115	1,589
Arrah Division	1,725	3,342	2,218	2,491	3,976
Buxar ,, ...	869	1,015	2,065	77	...
Total ...	2,811	4,915	4,597	4,683	5,565

It will be seen from above table that the cost of weed clearing during the year was about half of that incurred during preceding year.

This decrease in expenditure is attributed partly to the heavy discharge of the canals in October, which had apparently some effect in retarding the growth of the weeds, and partly to the silt clearance in the lower part of the Arrah canal previous to the rains which, for the time being, destroyed nearly all the weeds there. In the previous year the weeds in these miles had been very troublesome.

88. The mileage rates of cost of repairs are worked out below both for canals and distributaries, and compared with the rates of the two previous years in the statement below:— MILEAGE RATES OF REPAIRS.

Canal.	Division.	1888-89.		1887-88.		1886-87.	
		Number of miles.	Cost per mile.	Number of miles.	Cost per mile.	Number of miles.	Cost per mile.
		No.	Rs.	No.	Rs.	No.	Rs.
Eastern Main Canal	Eastern Sone	7¼	3,134	7¼	4,230	7¼	2,245
Western ditto	Arrah	5	8,859	5	8,477	5	7,385
	Buxar	16¼	1,218	16¼	633	10¼	546
Buxar Canal	Do.	45¼	238	45¼	258	45¼	406
Patna do.	Eastern Sone	79	291	79	334	79	305
Arrah do	Arrah	65¼	527	65¼	392	65¼	455
Doomraon Branch	Do.	40¼	187	40¼	242	40¼	152
Behea ditto	Do.	31	226	31	229	31	182
Chowsa ditto	Buxar	39¼	246	39¼	195	39¼	200
Gurra Chowbey Branch	Do.	38	119	38	131	38	131
Distributaries	Arrah	467¼	63	467¼	88	447¼	54
	Buxar	343	44	341¼	37	333¼	53
	Eastern Sone	358	48	358	55	357	45

The increase in the mileage rates, where such occur, is wholly due to the larger quantity of silt removed, which is itself a consequence of the larger area irrigated during the last two years.

CLOSURES OF CANALS.

89. The Western Main series of canals were closed from the 1st to the 12th June 1888, the Eastern Main series from the 17th April to the 25th May 1888, and the Arrah canal from the 28th mile downwards from the 2nd May to the 12th June 1888.

FLOODS.

90. There were high floods during the year both in the river Sone and in the river Ganges. Little or no damage, however, was caused to the canal works. The highest readings on the gauges are noted below :—

RIVER SONE.

LOCALITY.	1888-89—17TH AUGUST 1888.		1887-88—12TH JULY 1887.		HIGHEST KNOWN, 1876-77—7TH JULY 1876.	
	Above weir.	Below weir.	Above weir.	Below weir.	Above weir.	Below weir.
Dehree	340·50	339·50	338·40	337·40	342·10	341·00
Baroon	342·60	340·40	340·13	338·10	343·50	342·70

RIVER GANGES.

LOCALITY.	Date.	Reading.	HIGHEST KNOWN SINCE 1874.	
			Date.	Reading.
Buxar	20th September 1888 ..	119·21	6th September 1875...	200·71
Deegah	19th „ „ ...	168·53	14th August 1879...	169·20
Hajipore, confluence of rivers Ganges and Gunduck.	19th „ „ ...	165·60	August „ ...	166·20

The Dehree canal head sluices were closed for 58½ hours and the Baroon canal head sluices for 136 hours during floods to avoid the influx of water heavily charged with silt.

CALCUTTA AND EASTERN CANALS.

CAPITAL ACCOUNT.

91. The Capital and Revenue Accounts of these canals are given below :—

1.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1888-89.	Outlay to end of 1888-89.
DIRECT CHARGES.	Rs.	Rs.
Old outlay prior to the year 1861-62	.....	24,91,612
I.—Works	40,448	20,35,318
II.—Establishment	10,765	3,85,196
III.—Tools and plant	229	3,45,816
IV.—Profit and loss	.....	847
V.—Suspense accounts	(—) 3,580	10,797
Total ...	47,862	52,68,981
Less receipts on Capital account	.....	41,553
Net total direct charges ...	47,862	52,27,428
INDIRECT CHARGES.		
Leave and pension allowances	1,507	61,057

2—REVENUE ACCOUNT—(ACTUALS).

REVENUE ACCOUNT.

	EXPENDITURE.			RECEIPTS.	
	During 1888-89.	To end of 1888-89.		During 1888-89.	To end of 1888-89.
DIRECT CHARGES.	Rs.	Rs.		Rs.	Rs.
I.—Works, Maintenance and Repairs.					
Old outlay prior to the year 1861-62 ..	...	13,63,615	Old revenue prior to the year 1861-62.	...	80,17,101
Works (extensions and improvements) ...	4,573	9,01,017	Navigation ...	5,69,920	1,18,16,300
Repairs	1,63,656	29,72,469	Miscellaneous	5,224	4,17,028
Establishment, including direction and accounts...	46,981	10,23,917	Total ...	5,75,144	2,02,50,429
Tools and plant ...	29,054	90,759	*Less* refunds of revenue ...	19	19
Total ...	2,44,264	63,51,777			
II.—Revenue Management.					
Navigation establishment	37,684	11,61,263			
Total direct charges ...	2,81,948	75,13,040			
INDIRECT CHARGES.*					
Capitalized abatement of land revenue ...	...	...			
Leave and pension allowances	11,853	1,90,064			
Total direct charges ...	11,853	1,90,064			
Total working expenses...	2,93,801	77,03,104			
Profit	2,81,324	1,25,47,306			
Total ...	5,75,125	2,02,50,410	*Net* total receipts ...	5,75,125	2,02,50,410

* These are now shown under the suggestion of the Government of India

92. The following statement shows the financial results of these canals for the last ten years. The figures are both for direct and indirect charges:— FINANCIAL RESULTS.

YEAR.	CAPITAL OUTLAY		RECEIPTS AND WORKING EXPENSES.			Percentage of net revenue to capital outlay to end of year.
	During the year.	To end of the year.	Gross revenue.	Charges (direct and indirect).	Net revenue.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1879-80	2,60,998	35,60,495	3,44,565	1,93,049	1,51,616	4·2
1880-81	6,26,886	42,16,381	4,14,145	2,19,323	1,94,822	4·6
1881-82	5,58,268	47,74,649	4,82,467	3,32,221	1,50,246	3·1
1882-83	3,21,351	50,96,000	5,64,194	3,26,897	2,37,297	4·6
1883-84	1,55,534	52,51,534	5,64,101	2,32,031	3,32,070	6·3
1884-85	9,013	52,60,547	(*a*) 5,69,726	2,91,214	2,78,512	5·3
1885-86	(—)42,566	52,17,981	(*b*) 4,79,484	1,96,209	2,83,275	5·4
1886-87	5,293	52,23,274	4,83,654	1,92,264	2,91,390	5·5
1887-88	15,842	52,39,116	5,79,034	2,24,056	3,55,278	6·7
1888-89	49,369	52,88,485	5,75,125	2,93,801	2,81,324	5·3

(*a*) Is Rs. 35,185 larger than it should be by reason of error of amount.
(*b*) Is Rs. 35,185 smaller than ditto ditto ditto.

The expenditure on Capital account was larger than it has been of recent years, and amounted to Rs. 49,369. Of this sum, Rs. 27,745 was spent on two wrought-iron caissons, to be used for closing the large locks at Dhappa and Chitpore, when these are under repair, and Rs. 12,258 on buildings, of which the chief are the new Dhappa toll-house, an inspection bungalow at Busseerhaut on the Eastern canals boat route, and a godown at Bhangore for the storage of goods recovered from wrecks.

The gross revenue, though less than that of 1887-88, is greater than that of any other preceding year since 1879-80, while the net revenue, though better than that of the first six years of the decade, is worse than that of either of the

three immediately preceding years. The receipts and working expenses for the last ten years are shown in greater detail in the following statement:—

	1888-89.	1887-88.	1886-87.	1885-86.	1884-85.	1883-84.	1882-83.	1881-82.	1880-81.	1879-80.
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Navigation	5,69,592	5,74,766	4,77,109	5,01,141	5,20,495	5,51,713	5,55,103	4,72,086	4,02,427	3,31,950
Miscellaneous	5,552	5,168	6,455	(—)21,657	49,231	12,388	9,091	9,781	11,718	13,500
Total	5,75,144	5,79,934	4,83,564	4,79,484	5,69,726	5,64,101	5,64,194	4,82,467	4,14,145	3,44,565
Less refunds of revenue.	19	...	...	...	...	...	...	...	...	...
Net total receipts ..	5,75,125	5,79,934	4,83,564	4,79,484	5,69,726	5,64,101	5,64,194	4,82,467	4,14,145	3,44,565
WORKING EXPENSES.										
Direct charges.										
Works (extensions and improvements).	4,573	1,478	5,092	32,277	78,575	27,897	...	...	...	...
Maintenance and repairs ...	1,63,656	1,04,527	1,02,480	67,942	99,262	1,02,316	2,27,078	2,63,218	1,55,941	1,26,988
Establishment	84,665	88,103	66,969	67,584	93,013	81,478	92,587	64,030	50,660	61,790
Tools and plant	20,054	18,139	8,347	18,944	7,342	8,933	...	...	...	...
Total direct charges ...	2,81,948	2,12,312	1,82,888	1,86,747	2,78,192	2,20,624	3,20,265	3,27,254	2,15,601	1,88,778
*Indirect charges.**										
Capitalization of abatement of land revenue.	...	...	...	...	...	...	...	...	...	...
Leave and pension allowances.	11,853	12,344	9,376	9,462	13,022	11,407	6,632	4,967	3,722	4,171
Total indirect charges ...	11,853	12,344	9,376	9,462	13,022	11,407	6,632	4,967	3,722	4,171
Total working expenses ...	2,93,801	2,24,656	1,92,264	1,96,209	2,91,214	2,32,031	3,26,897	3,32,221	2,19,323	1,92,949
Net revenue ...	2,81,324	3,55,278	2,91,300	2,83,275	2,78,512	3,32,070	2,37,297	1,50,246	1,94,822	1,51,616

* These are now shown under the suggestion of the Government of India.

COLLECTIONS.

93. As compared with 1887-88, the navigation receipts show a falling off of Rs. 5,174, or 0·9 per cent., corresponding to a decline of 622, or 0 4 per cent., in the number of boats which paid toll. Miscellaneous revenue has increased by Rs. 384. The fluctuations in receipts from each source are shown below:—

CANALS.	Number of boats and rafts.	COLLECTIONS BY COLLECTOR AND SUPERVISOR.						COLLECTIONS BY EXECUTIVE ENGINEER.	GRAND TOTAL GROSS REVENUE.
		Tolls from boats and rafts.	Demurrage.	Ferry tolls.	Tolls from steamers and flats.	Rents of buildings, lands, and other miscellaneous receipts.	Total.	Rents of buildings, lands, and other miscellaneous receipts.	
	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Calcutta and Eastern	90,090	4,22,869	4,748	3,500	4,670	3,224	4,30,071	1,780	5,75,144
Tolly's Nullah ...	78,219	1,32,292	912	807	...	222	1,34,293		
Total, 1888-89 ...	168,309	5,55,161	5,660	4,427	4,670	3,446	5,73,364	1,780	5,75,144
Total, 1887-88 ...	169,031	5,62,405	5,022	2,894	4,445	3,522	5,78,288	1,646	5,79,934

BOATS.

94. On the Circular and Eastern Canals, which is the chief outlet to the Eastern boat-route, the number of boats rose from 88,959 to 90,068:—

		NUMBER AND CLASS OF BOATS.					
		Up to 100 maunds.	Between 100 & 1,000 maunds.	Between 1,000 and 2,500 maunds.	Between 2,500 and 5,000 maunds.	Over 5,000 maunds.	Total.
Circular and Eastern Canals	1888-89 ...	36,376	31,020	20,492	2,100	72	90,068
	1887-88 ...	34,968	30,866	21,227	1,809	89	88,959

The tolls collected on this route also show an increase of Rs. 1,874. On Tolly's Nullah, however, the number of boats is less by 1,819, and the takings by Rs. 8,193:—

		NUMBER AND CLASS OF BOATS.					
		Up to 100 maunds.	Between 100 and 200 maunds.	Between 1,000 and 2,500 maunds.	Between 2,500 and 5,000 maunds.	Over 5,000 maunds.	Total.
Tolly's Nullah ...	1888-89 ...	18,766	24,104	6,067	56	...	48,993
	1887-88 ...	18,244	24,793	7,202	59	...	50,298

The shallowness of the channel is the chief cause of the falling off.

Besides the boats enumerated in these tables, the boats which are unclassified, being chiefly small boats of 100 maunds, paying toll at Russa on Tolly's

Nullah, numbered 29,127 against 29,641 in the previous year. Rafts show a decrease of 12 in number, and steamers and flats an increase of 45.

The traffic in rice was unfavourably affected by a disposition on the part of mahajuns to lock up their stocks in view of a rise in price. On the other hand, the jute trade was brisk.

TRAFFIC.

95. The following statement compares the traffic on the Calcutta canals and Tolly's Nullah during the year 1888-89 with the preceding year :—

		Number of boats.	Tonnage of boats by canal measurement.	Weight of cargo carried.	Value of cargo carried.	Tollage, including demurrage.	Percentage of toll on value of cargo.
		No.	Tons.	Tons.	Rs.	Rs.	
1888-89	Calcutta canals ...	90,068	2,005,703	701,543	5,48,07,758	4,32,288	
	Tolly's Nullah ...	78,120	796,275	250,456	1,62,07,771	1,33,203	
	Total ...	168,188	2,801,078	951,999	7,10,75,529	5,65,491	0·79
1887-88	Calcutta canal ...	88,959	2,065,967	696,752	4,78,07,746	4,30,417	
	Tolly's Nullah ...	79,939	914,938	259,775	1,56,04,747	1,41,455	
	Total ...	168,898	2,980,905	936,527	6,35,62,493	5,71,872	0·89

There is decrease in all heads except in value of cargo, which shows an increase of Rs. 75,13,036, attributable to the higher prices of goods.

MISSING TICKETS.

96. In the number of missing tickets there is a very satisfactory decrease of 348, or about 51 per cent.

RENTS OF SURPLUS LANDS.

97. The disposal of the revenue derived from the rents of surplus lands on these canals has recently been the subject of some discussion, and may be briefly referred to here. The income from this source aggregates about Rs 38,000, of which Rs. 28,000 has always been collected by the Collector of the district, while the collection of the remaining Rs. 10,000, which was formerly in the hands of the canal officers, was, in consequence of the recommendations of the Committee appointed in 1886, also transferred to the Collector. It has been decided by the Government of India, in the Finance Department, that, as the whole of this income is now collected by the Collector, it should be credited under the head of "Land Revenue," and, as a consequence of this decision, the further question has arisen of the propriety of making a reduction in the amount shown as capital expenditure in the accounts. It is true that the importance of this question is lessened by the fact that no interest is paid on capital in the case of these canals; but the financial position of any work cannot be said to be accurately stated so long as capital is debited with expenditure, the profits of which do not appear in the revenue account; and, for this reason, the Officiating Chief Engineer has recorded his opinion that the reduction in the capital account should be made; and further, as the value of the lands has been enhanced by the successful development of the canals, that the sum so credited to the capital account should be the present value of the lands, and not their original cost.

REVENUE ESTABLISHMENT.

98. The statement below compares the entire cost of the Revenue establishment under the Collector and Supervisor with the gross collections made by him for the last four years :—

	Gross collections made by Collector and Supervisor.	Cost of entire Revenue establishment.	Percentage.
	Rs.	Rs.	
1888-89	5,73,364	37,684	6·57
1887-88	5,78,288	38,920	6·73
1886-87	4,81,048	42,714	8·84
1885-86	5,13,839	44,751	8·70

Although the collections of the year were less than the amount of the previous year the Supervisor's commission was greater on account of the unusually heavy commission for March 1888 being paid in April. This was more than counterbalanced by the reduction under other heads on account of the transfer of an Inspector to the Nuddea Rivers and the pensioning of the head clerk, the places in both cases being taken by men on lower salaries.

Although there has been a small reduction in the number of boats entering the canals, yet the result of a further reduction in the cost of establishments is again a small decrease in the cost per boat measured from 3·68 to 3·58 annas.

WRECKS. 99. The total number of boats wrecked owing to various causes during the year was 106, against 128 of the previous year.

MAINTENANCE CHARGES. 100. From the statement already given in paragraph 86, it will be seen that the working expenses, including all charges, direct and indirect, have increased from Rs. 2,24,656 to Rs. 2,93,801, and that this increase has taken place mainly in the cost of maintenance and repairs, which has risen from Rs. 1,04,527 to Rs. 1,63,656. Under "Channels and Banks," on which the increase in the cost of maintenance is Rs. 39,158, is included the greater portion of the outlay on the Bhyrub and Assassooni khalls, two links in the chain of rivers and tidal creeks forming the Eastern boat route, both of which were laid dry and the work carried out at the end of 1887-88, the silt being cleared by hand. The clearance of the Tetooa khall and some extensive piling work near Hastings on Tolly's Nullah were also charged under this sub-head. Under "Towpaths," on which the increase is Rs. 5,616, much of the repairs carried out in 1887-88 was paid for in 1888-89, while on "Rustic Bridges," on which only ordinary charges had been incurred for some years, the renewals now found necessary caused an increase of Rs. 8,671.

DREDGING. 101. On "Dredging" the expenditure has increased from Rs. 4,254 to Rs. 10,979. 979,700 cubic feet of silt were dredged by two dredgers for Rs. 8,698; an average rate of Rs. 8-14 per thousand cubic feet. The quantity dredged in the previous year was 350,700 cubic feet, and the rate Rs. 9-8-4 per thousand.

ORISSA COAST CANAL.

CAPITAL ACCOUNT. 102. The Capital and Revenue accounts of this canal are given below:—

1.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1888-89.	Outlay to end of 1888-89
	Rs.	Rs.
DIRECT CHARGES.		
I.—Works	70,302	32,19,103
II.—Establishment	24,963	7,26,121
III.—Tools and plant	3,464	1,74,816
IV.—Suspense accounts	(—) 911	37,311
Total	97,818	41,57,351
V.—*Less* receipts on Capital account ...	7	3,278
Net total direct charges	97,811	41,54,073
INDIRECT CHARGES.		
Capitalized abatement of land revenue	.....	784
Leave and pension allowances ...	3,495	1,01,572
Total indirect charges ...	3,495	1,02,356

A revised estimate for this canal was sanctioned by the Secretary of State in August 1889, and amounted to Rs. 43,46,873 (direct charges), or Rs. 1,92,800 over the total expenditure to end of the year 1888-89. The canal has been open throughout its entire length of 97½ miles during the year. The works in progress under "Original works" comprised the finishing up of the canal banks, locks, and ferry ghâts, and the completion of the Panchpara supply pipe.

The canal is practically complete, though certain details, such as the provision of accommodation for the tolls establishment, ferry ghâts, &c., remain to be carried out. Some 2,900,000 cubic feet too of earth has still to be taken out of the bed, but as it offers no serious obstacle to navigation, and to dredge it would be expensive, its removal has been deferred.

The expenditure has been entirely from Provincial Funds with the exception of Rs. 8,66,000 contributed from Imperial Protective Funds. There is no interest account.

2—REVENUE ACCOUNT (ACTUALS).

REVENUE ACCOUNT.

	EXPENDITURE.			RECEIPTS.	
	During 1888-89.	To end of 1888-89.		During 1888-89.	To end of 1888-89.
DIRECT CHARGES.	Rs.	Rs.		Rs.	Rs.
I.—Maintenance and Repairs.					
Maintenance and repair	42,606	1,63,007	Navigation ...	65,047	1,60,088
Establishment, including direction and accounts	11,377	41,112	Miscellaneous ...	1,381	3,400
Tools and plant	14,462	27,428	Total ...	66,428	1,63,488
Total	68,445	2,31,547	*Less*—Refunds of revenue	254	271
II.—Revenue Management.					
Navigation Establishment	6,123	13,474	Net total receipts	66,174	1,63,217
Total direct charges ..	74,568	2,45,021	Deficit ...	10,844	89,446
INDIRECT CHARGES.*					
Capitalized abatement of land revenue ...					
Leave and pension allowances ...	2,450	7,642			
Total indirect charges...	2,450	7,642			
Total working expenses	77,018	2,52,663	Total ...	77,018	2,52,663

* These are now shown under the suggestion of the Government of India

103. The receipts and working expenses of the Orissa Coast canal since the year 1885-86, when the Revenue account was first opened, are shown in the following statement:— FINANCIAL RESULTS.

	1888-89.	1887-88.	1886-87	1885-86
RECEIPTS.	Rs.	Rs.	Rs.	Rs.
Water-rates	...	...	(—)1	1
Navigation	65,010	52,828	28,587	13,663
Miscellaneous	1,418	1,026	902	54
Total	66,428	53,854	29,488	13,718
Less refunds of revenue ...	254	17		
Net total receipts ...	66,174	53,837	29,488	13,718
WORKING EXPENSES.				
DIRECT CHARGES.				
I.—Maintenance and Repairs.				
Repairs	42,606	53,277	43,969	23,155
Establishment, including direction and accounts	11,377	14,289	10,120	5,326
Tools and plant	14,462	8,743	3,432	791
Total ...	68,445	76,309	57,521	29,272
II.—Revenue Management.				
Navigation establishment ...	6,123	4,559	2,183	699
Total direct charges ...	74,568	80,868	59,704	29,881
INDIRECT CHARGES.				
Capitalized abatement of land revenue	...	...	...	...
Leave and pension allowances ...	2,450	2,639	1,722	831
Total indirect charges ...	2,450	2,639	1,722	831
Total working expenses ...	77,018	83,507	61,426	30,712
Net revenue ...	(—)10,844	(—)29,670	(—)31,938	(—)16,994

IRRIGATION.

108. These canals were, as last year stated, primarily intended for the supply of water for the manufacture of indigo. The water available is to a certain extent used for irrigation, but the areas returned as irrigated are not reliable, there being no special establishment employed to assess water-rates, which are collected by the gentlemen who have guaranteed a revenue of Rs. 21,850. There are no distributaries and but few village channels, and the guarantors are understood to have considerable difficulty in assessing lands watered direct from the canals, which are in fact the old nullahs of the country.

There was a complete failure of the *Hutia* rain, and in consequence a demand for water for rice irrigation, and also to a limited extent for rabi irrigation, as seeds could not be sown in many places for want of moisture without artificial irrigation.

The areas irrigated for all years since 1881-82 are shown below:—

	Acres.
1881-82	666
1882-83	1,741
1883-84	21,122
1884-85	7,223
1885-86	4,565
1886-87	2,146
1887-88	4,218
1888-89	7,213

COLLECTIONS.

109. The amount of the guarantee is recovered by the Collector of Sarun. The assessments, remissions, and recoveries for the canals are shown below:—

	Rs.
Balance unrecovered on the 1st April 1888	24,321
Assessment of the year's guarantee	21,850
Miscellaneous revenue collected by Executive Engineer ...	399
Total ...	46,570
Remitted	Nil
Net demand ...	46,570
Recovered on account of guarantee by Collector	...
Guarantee paid by canal managers	19,384
Fisheries	4
Miscellaneous	20
Realized by guarantors for water-rates	83
Realized by Collector for water-rate under Certificate Act ...	924
	20,415
Recovered by Executive Engineer	399
Total collections ...	20,814
Balance on 1st April 1889	25,756

The outstanding balance has increased slightly during the year.

PLANTATIONS.

110. The plantations are of but trifling extent. The number of trees in existence is shown in the table below:—

	1888-89.	1887-88.
	Rs.	Rs.
Trees over 12 feet in height	3,988	1,710
Saplings between 4 and 12 fee	1,751	694
Seedlings under 4 feet	3,693	1,915
Total ...	9,432	4,319

The expenditure on plantations up to the end of the year has amounted to Rs. 1,485.

FLOODS.

111. There were no floods during the year of any importance. The river Gunduck did not even reach the embankment; the highest flood was on 20th July 1888 when the gauge registered 240·50, which was 2·10 feet below the highest flood on record, viz., 242·60 in August 1883.

112. The guarantee expires on the 1st of April 1890. Preparations have been made to build a regulator at Hatpokur, but it will be necessary to determine what measures will be necessary to prevent the Rupan Chap *sata* forcing a passage into the river Gunduck at Chattahi before expending a considerable sum of money on a regulator below that place. GENERAL.

NUDDEA RIVERS.

113. The channels comprising the Nuddea rivers system are situated in the districts of Moorshedabad and Nuddea. Their approximate lengths are as follows:—

Bhagiruthee	... 167	miles to Nuddea.
Bhyrub-Jellinghee ...	... 41	ditto.
Matabhanga	... 138	miles to outfall on the Hooghly.
Hooghly	... 31	miles from Nuddea to Chogda.
	477	miles.

The management of the revenue has passed from the hands of the Board of Revenue to the Public Works Department. A revenue account also has been opened for these rivers. Both changes were effected at the commencement of the year under report.

The Revenue Account is given below:— REVENUE ACCOUNT.

	EXPENDITURE			RECEIPTS	
	During 1888-89.	To end of 1888-89.		During 1888-89.	To end of 1888-89.
DIRECT CHARGES	Rs.	Rs.		Rs.	Rs.
I.—Works, Maintenance and Repairs.			Old revenue prior to the year 1870-71 ...	...	38,79,660
Old outlay prior to the year 1870-71 ...	...	23,95,857	Navigation ...	1,91,791	39,25,243
Works (extensions and improvements) ...	...	29,124	Miscellaneous ...	97	17,305
Repairs .	88,933	9,00,167	Total ...	1,91,888	78,22,208
Establishment, including direction and accounts ...	20 389	3,51,049	*Less*—Refunds of revenue	...	...
Tools and plant ...	2,380	1,66,515			
Suspense accounts .	(—)14	4,891	Net total receipts ...	1,91,888	78,22,208
Total ...	1,11,688	38,47,603			
II.—Revenue Management.					
Navigation Establishment	23,006	3,96,603			
Total direct charges ...	1,34,694	42,44,206			
INDIRECT CHARGES *					
Capitalized abatement of land revenue ...	...	...			
Leave and pension allowances ...	6,075	2 21,813			
Total indirect charges	6,075	2,21,813			
Total working expenses	1,40,769	44,66,019			
Profit	51,119	33,56,189			
Total ...	1,91,888	78,22,208			

* These are now shown under the suggestion of the Government of India.

MADHUBAN CANAL.

irrigated was 5,000 acres, including 3,000 acres of opium. The expenditure incurred on maintenance was Rs. 4,194 against Rs. 9,821 spent in the year previous, which, however, included Rs. 4,729 for special repairs against Rs. 582 required for this purpose in 1888-89.

GENERAL REMARKS.

NET REVENUE

121. The working of the canals classed as Major irrigation works in Bengal resulted in a net deficit of Rs. 23,721, as below:—

	Rs.
Gross direct receipts	13,94,369
Ditto charges	14,18,090
Deficit ...	23,721

The budget estimate of net revenue was (—) Rs. 42,000, and the revised estimate, which provided for an additional Rs. 26,000 in working expenses, was (—) Rs. 68,000.

In 1887-88 the revenue on the Sone canals had been seriously affected by the local agitation against the canal administration, and consequently the net result of the year on Major works had been a loss of Rs. 4,00,356. The budget estimate for 1888-89 was framed with the expectation that this adverse influence would gradually be brought to rest; and though many indications in the course of the year made it clear that this expectation was being fulfilled, and that the benefits of irrigation were being freely admitted by the users of water, still the state of the collections at the time the revised estimate was issued was not such as to justify any substantial advance on the figures of the original estimate. Ultimately the receipts exceeded the estimate by Rs. 36,369, while the working expenses were less by Rs. 7,910.

	Budget estimate.	Revised estimate.	Actuals.
	Rs.	Rs.	Rs.
Direct receipts	13,58,000	13,58,000	13,94,369
Do. charges	14,00,000	14,26,000	14,18,090
Net revenue ...	—42,000	—68,000	—23,721

EARNINGS.

122. The net income from Major works calculated on the earnings of the year is shown below—

	1888-89. Rs.
Orissa canals	(—)76,282
Midnapore canal	82,123
Hidgellee Tidal canal	(—)22,943
Sone canals	83,080
	71,978

The result shown in this statement is calculated on the actual navigation and miscellaneous receipts, as well as the whole amount of the water-rates assessable on crops raised by canal water supplied during the year. In the Revenue Reports of previous years, earnings have been calculated on the demand on which it was possible to make recoveries. In the present report the whole of the liability incurred, whether recoverable within the year or not, is taken as revenue earned, less actual refunds. This is in accordance with the instructions

of the Government of India, and is the same as the method followed in the Upper Provinces. On the expenditure side actual charges, direct and indirect, have been taken.

123. The approximate value of crops irrigated by Major irrigation works during the last two years is shown below:— VALUE OF CROPS.

CANALS.	1887-88.		1888-89.	
	Area irrigated.	Value of crops.	Area irrigated.	Value of crops.
	Acres.	Rs.	Acres.	Rs.
Orissa canals	109,506	19,06,362	159,292	51,64,168
Midnapore canal	65,864	13,17,280	69,777	17,44,425
Sone canals	315,380	76,89,808*	355,909	1,10,07,607
Total ...	490,750	1,09,13,450	584,978	1,79,16,200

* This is the correct figure.

This statement is compiled from returns submitted for the Orissa and Midnapore canals by the Deputy Revenue Superintendents, and for the Sone canals by the Superintending Engineer. The percentage of increase shown in the area irrigated is 18, while that of the value of crops raised by canal water is 64; a result brought about by a general rise in prices, as well as a general improvement in the outturn from irrigated lands. Several glaring inaccuracies in the returns of valuation for 1887-88, some of which were noticed in the Chief Engineer's note of that year, have been corrected in the comparative statement given above. For instance, Rs. 12 per acre, given by the Deputy Revenue Superintendent as the value of the Orissa rice crop of 1887-88, is now admitted to have been much too low an estimate, and is raised to Rs. 18 per acre, which compares to Rs. 32 per acre, the valuation of the same crop in 1888-89. Similar errors noticed in the returns received from the Sone canals have also been corrected. The following abstract, compiled from the corrected figures, shows that on these canals there has been an increase in the value per acre of food-grains and sugarcane and a decrease in the value of opium:—

CROPS.	RATES PER ACRE.					
	1887-88.			1888-89.		
	Eastern Sone.	Arrah.	Buxar.	Eastern Sone.	Arrah.	Buxar.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sugarcane	96·6	50	100	105·4	100	100
Wheat	28	17·5	28	28	24	28
Barley	22·5	12·5	22	22	15	22
Rice	24	19	22	30	29·8	28
Miscellaneous cereals	12·5	12	14	24	18·4	13·7
Opium	75	40	48	49	39·	48

124. The state of the canal plantations on Major works is shown in the following statement:— PLANTATIONS.

CANALS.	1887-88.			1888-89.		
	Trees 12 feet high and above.	Saplings between 4 and 12 feet.	Seedlings.	Trees 12 feet high and above.	Saplings between 4 and 12 feet.	Seedlings.
	No.	No.	No.	No.	No.	No.
Orissa Canals ...	46,329	23,039	59,459	50,318	21,571	49,932
Midnapore Canal ...	6,959	4,640	4,788	8,128	5,517	6,315
Hidgellee Tidal Canal	1,172	3,875	3,121	1,632	4,299	2,594
Sone Canals ...	105,476	58,373	132,011	120,787	60,719	137,854
Total ...	159,936	89,927	199,379	180,865	92,106	196,695

NAVIGATION RECEIPTS.

125. The toll collections on each canal system, with the percentage of cost of collection on receipts, and the cost of measuring each boat, are given below:—

	Toll collections.		Percentage of charges for collection to amount collected.		Cost of measuring each boat.	
	1887-88.	1888-89.	1887-88.	1888-89.	1887-88.	1888-89.
Works partly for Irrigation and partly for Navigation.	Rs.	Rs.	Rs.	Rs.	Annas.	Annas.
Orissa Canals	66,628	69,880	13·7	13·6	5·8	7·1
Midnapore Canal	1,26,574	1,46,760	6·1	5·1	2·5	2·2
Sone Canals	50,984	52,162	28·0	25·1	28 2	25·8
Total ...	2,44,186	2,68,752	12·7	11·2	6·0	5·8
Works for Navigation only.						
Hidgellee Tidal Canal ...	40,406	53,910	7·4	5 9	3·5	3·1
Calcutta and Eastern Canals ...	5,71,872	5,65.491	6·8	6·7	3·7	3 5
Orissa Coast Canal	52,828	65,010	8·6	9·4	6·0	7·2
Nuddea Rivers	1,98,318	1,91,749	11·1	12·0	5 4	6·0
Total ...	8,63,424	8,76,160	7·9	8·0	4·2	4·3
GRAND TOTAL ...	11,07,610	11,44,912	.....	.....	.....	.....

The revival of trade on the Midnapore canal, which had set in in the previous year, has continued to gain strength. The two river systems alone show decreased incomes, and it is probable that the introduction of lower rates on the railways which compete with these routes was beginning to make itself felt in 1888-89, since it is found to have caused a very sensible decrease on the boat traffic in 1889-90.

126. It has not been the custom, at least of late years, to bring to notice in the Revenue Report the names of members of the establishment who may have specially distinguished themselves by their conduct of their duties; and, finding such the case, I have hitherto refrained from altering the custom, although I have by no means failed to appreciate the good work of those who have been serving under me. Where officers, as a body, are so earnest, conscientious, self-sacrificing, and hard-working, as those with whom I have been connected during my stay in the province, and where the men who do not give satisfaction are so few and far between, it must always be felt a somewhat invidious duty to select officers for special mention, and the custom of omitting all individual notice has, I confess, afforded me a sense of relief. Now, however, that I am about to sever my connection with the province, I feel that I ought not to lose this opportunity, when submitting the last Revenue Report of the province which will issue under my signature, of showing my appreciation of the more special services which some members of the establishment have rendered, and of thanking all, with but few exceptions, for their excellent work, and all without exception for their good-will, kindliness and thorough loyalty towards one, who, however anxious he might be not to appear in that character, could scarcely fail to be considered as somewhat of an interloper.

The officers in charge of Circles during my tenure of office have been:—

Orissa Circle—Major McArthur, Mr. Rhind.

South-Western Circle—Messrs. Wickes and Vertannes (now retired) and Major McArthur.

Sone Circle—Mr. Odling and Major McArthur, the latter for a short time only.

One and all have conducted their duties to my entire satisfaction; but if any one is to be specially noticed, I would mention Mr. Odling for the exceptionally able manner in which he has managed his Circle at a most trying period in the existence of the Sone Canals.

Amongst officers who have been in charge of divisions during the same period, whilst nearly all have conducted their duties in an excellent manner, I would specially mention Messrs. Faulkner, Horn, Inglis, Livesay, Scotland, Shawe, Stephen, Frost, Carter; and amongst sub-divisional officers, Messrs. A. S. Thomson, Lees, Coy, Frost, Carter, C. A. White, Arnott, Silk, Barlow, Clowes, Stawell, and Searight.

During the year under review and its predecessor, the strain on the canal officers, divisional and sub-divisional, has been specially severe, and excellent service has been rendered by all in a very trying season More especially has this been the case on the Sone Canals, where, owing to the system in force, the work thrown on the engineering staff is heavier than it is elsewhere, and the Superintending Engineer brings prominently to notice the excellent service rendered by the divisional and sub-divisional canal officers in an exceptionally trying season.

I travelled over the greater part of the main canals in 1888, just when the severe demand was commencing to subside, so that I have personal konwledge of the difficulties experienced. The Divisional Engineers, Mr. Horn, Buxar; Mr. Inglis, Arrah; and Mr. Frost, Eastern Sone, are distinctly entitled to praise for the successful exertions they made to extend the benefits of irrigation as widely as possible, and Mr. Stephen, the Executive Engineer at Dehree, is equally deserving of credit for the promptitude with which he conducted the difficult operation of closing the vents in the under-sluices at Dehree. The Superintending Engineer's commendation of the sub-divisional officers was well earned.

Lastly, I thank heartily for their good work the officers who have performed the duties of Under-Secretary—Major McArthur and Messrs. Buckley and Shawe. I have invariably found them most helpful and loyal, and of the greatest assistance in every portion of the duties of my office.

127. The date for the submission of Revenue Reports to the office of the Chief Engineer is the 15th September. The dates when the different reports were received are shown below:—

		In 1888.	In 1889.
Orissa Circle ...	Commissioner's report	... 26th October...	3rd October.
	Superintending Engineer's report	3rd ditto ...	9th ditto.
South-Western Circle	Commissioner's report	... 24th September	16th September.
	Superintending Engineer's report	24th ditto ...	28th ditto.
Sone Circle	Commissioner's report	... 6th October ..	28th September.
	Superintending Engineer's report	17th September	14th ditto.

The reports were punctual, with the exception of those of the Commissioner of the Orissa Division and the Superintending Engineer, Orissa Circle. The Finance and Administrative Accounts of the year 1888-89 due on the 1st were received from the Examiner on the 22nd August.

C. W. I. HARRISON, LT.-COL., R.E.,

The 6th January 1890. *Offg. Chief Engineer.*

IA.

PUBLIC WORKS DEPARTMENT.

STATEMENT OF CANALS IN THE PROVINCE OF BENGAL.

	Orissa Canals.			Midnapore Canal.	Hidgellee Tidal Canal.	Sone Canals.			Sarun Canals.	Calcutta and Eastern Canals.	Orissa Coast Canal.
	Mahanuddy Series.	Brahmini-Byturni Series.	Total.			Eastern Main Canal Series.	Western Main Canal Series.	Total.			
Source of supply of water ...	River Mahanuddy.	Rivers Brahmini and Byturni.		River Cossye.	Rivers Rupnarain and Russulpore.	River Sone.			River Gunduck.	River Hooghly and Soonderbund Creeks.	Rivers Russulpore, Subunreka, Panchpara, Burrabolong, and Metai.
Minimum discharge of river—cubic feet per second ... ... Kharif ...	Not observed	1,205 82	1,25·802	700	Tidal canal for navigation only.	5,257, October 22nd, 1883.			5,082	Tidal canal for navigation only.	Tidal canal for navigation only.
Rabi ...	1,558	725·56	2,283·56	200		1,868, February 16th, 1884.					
Hot-weather	417	172·33	589·33	100		447, May 27th, 1879.					
Maximum discharge of canal—cubic feet per second	3,902	2,156·00	6,058·00	1,400		1,613	4,342	5,955	1,084		
Average annual rainfall ... Inches	48·36	51·40	49·88	62·13		41·68	41·06	41·25	41·36		
Gross area commanded ... Acres	373,772	137,500	511,272	180,000		406,155	1,322,354	1,728,509	64,000		
Culturable ditto ... ,,	439,951	137,500	577,451	173,160		317,307	1,033,089	1,350,396	50,000		
Area irrigable by complete project ... ... ,,	439,951	137,500	577,451	125,000		309,040	707,360	1,016,400	50,000		
Area irrigable at present ... ,,	208,419	42,500	250,919	125,000		309,040	707,360	1,016,400	30,000		
Sanctioned estimate—											
Direct charges ... Rs.	3,13,96,220		3,13,96,220	83,16,768	17,72,699	2,78,88,697		2,78,88,697	6,63,521	.....	24,45,742
Indirect do. ... ,,	9,19,625		9,19,625	1,84,215	44,807	13,99,607		13,99,607	33,111	.....	1,56,555
Interest during construction ... ... ,,	1,21,54,723		1,21,54,723	38,60,294	2,17,460	29,67,227		29,67,227	.....	.....	.....
Total estimate ... ,,	4,44,70,568		4,44,70,568	1,23,61,277	20,34,966	3,22,55,531		3,22,55,531	6,96,632	.....(a)	26,02,297

Expenditure to end of 1888-89—											
Direct charges ...	Rs.	2,35,37,322	2,35,37,322	82,66,010	17,95,489	2,52,84,682	2,52,84,682	6,69,230	52,27,428	41,54,073
Indirect do ...	,,	5,31,481	5,31,481	1,83,711	44,807	8,98,559	8,98,559	27,183	61,057	1,02,356
Interest during construction	,,	1,37,83,108	1,37,83,108	54,17,730	2,17,460	1,35,32,306	1,35,32,306	.....	.....	.....
Total expenditure ...	,,	3,78,51,911	3,78,51,911	1,38,67,451	20,57,756	3,97,15,547	3,97,15,547	6,96,413	52,88,485	42,56,429(*b*)
Works as now sanctioned—										
Main canals, irrigation ...	Miles	138¾	31½	170¼	53(*c*)	29(*c*)	86¼	132¼	218½	6½	27	99(*c*)
Branch do., do ...	,,	107¾	6½	114¼	19	Nil	Nil	148¾	148¾	12½	Nil	Nil
Distributaries ...	,,	1,763	384	2,147	304·69	Nil	358	827½	1,185½	.....	Nil	Nil
Of above—												
Navigable channels ...	Miles	199½	38	237½	72	29	86¼	132¼	218½	.....	27	99
Works completed at end of 1888-89—												
Main canals, irrigation ...	Miles	114	31½	145½	53	29	86¼	132¼	218½	6½	27	97½
Branch do., do ...	,,	100	6½	106½	19	Nil	Nil	148¾	148¾	12½	Nil	Nil
Distributaries ...	,,	713	47½	760½	283·19	Nil	358	810½	1,168½	.....	Nil	Nil
Of above—												
Navigable channels ...	Miles	139	38	177	72	29	86¼	132¼	218½	.....	27	97½

(*a*) There is no general sanctioned estimate for this project.
(*b*) Includes Rs [illegible] expended from famine relief funds.
(*c*) Includes length of river crossings.

IB.

PUBLIC WORKS DEPARTMENT, BENGAL.

CAPITAL ACCO S OF IRRIGATION WORKS IN BENGAL FOR AND TO END OF 1888-89

		Direct Charges—net expenditure.						Indirect charges, exclusive of interest.	Total capital, excluding interest.	Simple interest.
		Works.	Establishment.	Tools and plant.	Suspense account.	Loss by exchange.	Total.			
Major Irrigation Works.		Rs.	Rs.	Rs.	Rs	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa project ...	To end of previous year	1,63,78,368	41,83,995	19,58,232	1,25,218	2,68,070	2,29,13,883	5,16,202	2,34,30,085	1,28 54.084
	During 1888-89 ..	4,80,714	1,06,375	15,043	21,307	.....	6,23,439	15,279	6,38.718	9,29,024
Midnapore canal...	To end of previous year	53,30,800	19,15,054	8,82.328	40,363	94,800	82,63,345	1,83,658	84,47.003	50.87,143
	During 1888-89 ...	—40	1	—429	3,133	...	2,665	53	2.718	3,30,587
Tidal canal ...	To end of previous year	12,66,239	4.49,790	56,670	.....	22,790	17,95,489	44,807	18,40,296	12,58.963
	During 1888-89 ...	.....	.....	.....	.....	.....	.....	.....	.....	71.820
Sone project ...	To end of previous year	1,79,22,464	50,28,525	19.57,439	1,75,571	52,240	2,51,36,239	8,95.662	2,60,31,901	1,25,23,888
	During 1888-89 ..	93,206	20,691	21,776	12,770	...	1,48,443	2,897	1,51,340	10,08,418
Total ...	To end of previous year	4,08,97,871	1,15,77,364	48,54,669	3,41,152	4,37,900	5,81,08,956	16,40,329	5,97,49,285	3,17.24,078
	During 1888-89 ...	5,73,880	1,27,067	36,390	37,210	.....	7,74,547	18,229	7,92,776	23,39,849
Minor Works and Navigation.										
Tirhoot project ...	To end of previous year	90,685	4.33,943	6.797	.....	.....	5,31,425	74,650	6,06,075	.....
	During 1888-89	.....	.. ...	.. ...	.....	.....	.....	.....	.....	... ..
Damudar project...	To end of previous year	52,677	94,864	4,800	.....	.....	1,52,341	16,239	1,68,580	.....
	During 1888-89 ...	—1,200	.....	....	.....	.....	—1,200	.....	—1,200	.....
Sarun project ...	To end of previous year	4,79,448	1,64,170	25,612	.....	.....	6,69,230	27,183	6,96,413	.. ...
	During 1888-89 ...	.....	..	..	.....	.....	... ..	.....	.....	.....
Orissa coast canal	To end of previous year	31,45,795	7,00,898	1,71,347	38,222	.....	40,56,262	98,861	41,55,123	.....
	During 1888-89 ...	70,295	24,963	3.464	—911	.....	97,811	3,495	1,01,306	.....
Calcutta and Eastern canals.	To end of previous year	44,45,171	3,74,431	3,45,587	14,377	.....	51,79,566	59,550	52,39,116	.....
	During 1888-89 ...	40.448	10,765	229	—3,580	.....	47,862	1,507	49,369	.....
Total ...	To end of previous year	82,13,776	17,68,306	5,54,143	52,599	... ..	1,05,88,824	2,76,483	1,08.65,307	.....
	During 1888-89 ...	1,09,543	35,728	3,693	—4.491	.....	1,44,473	5,002	1,49,475	.....
Grand Total	To end of previous year	4,91,11,647	1,33,45,670	54,08,812	3,93,751	4,37,900	6,86,97,780	19,16,812	7,06,14,592	3,17,24,078
	During 1888-89 ...	6,83,423	1,62,795	40,083	32,719	.....	9,19,020	23,231	9,42,251	23,39,849

NOTE.

Receipts on capital account deducted from the following heads:—

		Works.	Establishment.	Tools.	Total.
		Rs.	Rs.	Rs.	Rs.
Orissa project ...	To end of previous year...	36,459	13,300	28,280	78,039
	During 1888-89 ...	7,738	.....	.....	7,738
Midnapore canal	To end of previous year...	11,874	7,300	11,590	30,764
	During 1888-89 ...	29	.....	.....	29
Tidal canal ...	To end of previous year...	.....	.....	915	915
	During 1888-89 ...	.....	.....	.....	.....
Sone project ...	To end of previous year...	1,40,842	32,711	1,33,640	3,07,193
	During 1888-89 ...	44	.....	.....	44
Tirhoot project ...	To end of previous year...	45	74	39	158
	During 1888-89 ...	.....	.....	.....	.....

		Works.	Establishment.	Tools.	Total.
		Rs.	Rs.	Rs.	Rs.
Damudar project	To end of previous year...	37,949	.....	2,300	40,249
	During 1888-89 ...	1,200	.....	.....	1,200
Sarun project ...	To end of previous year...	498	.....	.....	498
	During 1888-89 ...	.....	.....	.....	.....
Orissa coast canal	To end of previous year...	3,006	260	5	3,271
	During 1888-89 ...	7	.....	.....	7
Calcutta and Eastern canals.	To end of previous year...	41,553	.....	.....	41,553
	During 1888-89 ...	.....	.....	.....	.....

I

PUBLIC WORKS

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION

Realisations under Main heads of

Irrigation Works.	REVENUE (ACTUAL RECEIPTS).									
	Irrigation.			Navigation.	Plantations and land.	Water-power.	Miscellaneous.	Total.	Refunds of revenue.	Gross revenue, less refunds.
	Water-rates directly paid.	Share of land revenue.	Total.							
1	2	3	4	5	6	7	8	9	10	11
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Major Irrigation Works.										
Orissa project	1,51,365	.....	1,51,365	77,908	1,450	.....	12,792	2,43,515	221	2,43,294
Midnapore canal	91,016	.....	91,016	1,49,480	44	.....	11,255	2,51,795	285	2,51,510
Tidal ,, ...	.....	.....	.....	53,021	64	.....	1,185	55,170	73	55,097
Sone project	7,59,556	.....	7,59,556	57,829	383	835	25,286	8,43,889	12,011	8,31,278
Total ...	10,01,937	.....	10,01,937	3,39,138	1,941	835	50,518	13,94,369	13,190	13,81,179
Minor Works and Navigation.										
Tirhoot project	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Damoodur ,, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sarun ,, ...	20,415	.....	20,415	.....	6	.....	393	20,814	.....	20,814
Orissa coast canal	.....	.....	.....	65,047	.....	.....	1,381	66,428	254	66,174
Calcutta and Eastern canals	.....	.....	.....	5,69,920	711	.....	4,513	5,75,144	19	5,75,125
Nuddea rivers	.....	.....	.....	1,01,791	.....	.....	97	1,01,888	.....	1,01,888
Total ...	20,415	.....	20,415	8,26,758	717	.....	6,384	8,54,974	273	8,54,001
Grand Total ...	10,22,352	.....	10,22,352	11,65,896	2,658	835	56,902	22,48,643	13,463	22,35,180

(a) Irrigation revenue officers specially

NOTE.—The charges for "Direction" and "Executive" establishment have been equally

C.

DEPARTMENT, BENGAL.

WORKS IN BENGAL FOR THE YEAR ENDING 31ST MARCH 1889.

Revenue and Working expenses.

WORKING EXPENSES.																	
REVENUE MANAGEMENT.					MAINTENANCE OF WORKS.												
Establishment.					Establishment.												
Direction.	Executive.	Navigation.	Civil Officers (a).	Total revenue management.	Direction.	Executive.	Medical.	Total.	Works.	Repairs.	Sundries.	Tools and plant.	Plantations.	Total cost of maintenance.	Indirect charges.	Grand total, working expenses.	Net revenue.
13	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
5,917	20,183	15,754	43,161	93,995	5,918	29,183	...	35,101	.....	2,35,092	...	21,156	1,602	2,92,951	18,073	4,05,019	*-1,61,725*
2,654	15,402	7,550	25,927	51,533	2,053	15,402	...	18,055	.....	1,05,104	...	24,335	1,035	1,48,529	9,742	2,09,804	41,766
1,316	6,970	3,195	.....	11,481	1,316	6,970	...	8,286	1,718	50,468	...	2,868	452	63,792	2,767	78,040	*-22,943*
8,465	90,373	14,165	1,58,249	2,71,252	8,465	90,374	...	98,839	10,426	3,19,166	...	33,920	9,016	4,71,367	51,813	7,94,462	86,846
18,352	1,41,928	40,644	2,27,337	4,28,261	18,352	1,41,929	...	1,60,281	12,144	7,09,830	...	82,279	12,105	9,70,639	82,395	14,87,295	*- 1,06,116*
.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
600	4,525	.....	.....	5,125	599	4,524	...	5,123	.....	23,737	...	673	1,239	29,772	1,435	36,332	*-15,518*
1,065	4,623	6,123	.....	11,811	1,065	4,624	...	5,689	.....	42,606	...	14,462	.....	62,757	2,450	77,018	*-10,844*
4,205	19,285	37,684	.....	61,174	4,206	19,285	...	23,491	4,573	1,63,230	...	20,054	426	2,20,774	11,853	2,93,801	2,81,324
2,223	7,971	23,006	.....	33,200	2,224	7,971	...	10,195	.....	88,933	*-14*	2,380	.....	1,01,494	6,075	1,40,769	51,119
8,093	36,404	66,813	.....	1,11,310	8,094	36,404	...	44,498	4,573	3,17,506	*-14*	46,569	1,665	4,14,797	21,813	5,47,920	
26,445	1,78,333	1,07,457	2,27,337	5,39,571	26,446	1,78,333	...	2,04,779	16,717	10,27,336	*-14*	1,28,848	13,770	13,91,436	1,04,208	20,35,215	1,99,965

employed in collection of revenue.
(approximately) apportioned under he heads "Revenue Management" and "Maintenance."

IIC.

PUBLIC WORKS DEPARTMENT, BENGAL.

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION WORKS IN BENGAL FOR THE YEAR 1888-89 BASED ON ACTUAL RECEIPTS.

Principal results of operations for the year ended 31st March 1889.

Irrigation Works.	Direct and indirect outlay to end of 1888-89.	Gross receipts, direct and indirect, from all sources.	Working expenses, direct and indirect.	Net revenue (excluding charges for interest).	Interest at 4 per cent. on direct capital outlay at commencement of year and at 3 per cent. on outlay during the year.	Surplus revenue after paying interest on direct capital outlay.		Excess charges, including interest on direct capital outlay.	
						Amount.	Percentage on total sum at charge.	Amount.	Percentage on total sum at charge.
1	2	3	4	5	6	7	8	9	10
Major Irrigation Works.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
In operation.									
Tidal Canal	18,40,296	55,097	78,040	—22,943	71,820	.....	.....	94,763	5·15
In progress.									
Orissa Project	2,40,68,803	2,43,294	4,05,019	—1,61,725	9,29,024	.....	.....	10,90,749	4·53
Midnapore Canal	84,49,721	2,51,510	2,09,804	41,706	3,30,587	.....	.....	2,88,881	3·42
Sone Project	2,61,83,241	8 31,278	7,94,019	36,846	10,08,418	.....	.....	9,71,572	3·71
Total ...	6,05,42,061	13,81,179	14,87,295	—1,06,116	23,39,849	.....	.....	24,45,965	4·04
Minor Works and Navigation.									
In operation.									
Sarun Project	6,96,413	20,814	36,332	—15,518	.....	.....	.....	.....	.....
Calcutta and Eastern Canals ...	52,88,485	5,75,125	2,93,801	2,81,324	.....	.....	.....	.....	.....
Nuddea Rivers	.....	1,91,888	1,40,769	51,119	.....	.....	.....	.....	.....
In progress.									
Orissa Coast Canal	42,56,429	66,174	77,018	—10,844	.....	.....	.....	.....	.....
Abandoned or held in abeyance.									
Tirhoot Project	6,06 075	.....	.....	.....	.....	.....	.....	.....	.....
Damoodar Project	1,67,380	.....	.....	.....	.....	.....	.....	.....	.....
Total ...	1,10,14,782	8,54,001	5,47,920	3,06,081	.....	.....	.....	.....	.....

IIIC.

PUBLIC WORKS DEPARTMENT, BENGAL.

DEMANDS AND REALIZATIONS DURING THE YEAR 1888-89.

	Balance of demand unrealized at commencement of year.	Demands of the year.	Total.	Deduct remissions not including cash refunds.	Net total.	Deduct amount unrealized at close of the year.	Actual receipts of the year.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Major Irrigation Works.							
Orissa project	92,109	2,88,915	3,81,024	22,912	3,58,112	1,14,597	2,43,515
Midnapore canal	56,493	2,84,116	3,40,609	4,041	3,36,568	84,773	2,51,795
Tidal do	.....	55,170	55,170	.....	55,170	.....	55,170
Sone project	4,11,281	8,37,550	12,48,831	24,329	12,24,502	3,80,613	8,43,889
Total ...	5,59,883	14,65,751	20,25,634	51,282	19,74,352	5,79,983	13,94,369
Minor Works and Navigation.							
Sarun project	33,492	22,249	55,741	.....	55,741	34,927	20,814
Orissa Coast canal	.....	66,428	66,428	.....	66,428	.....	66,428
Calcutta and Eastern canals ..	.....	5,75,144	5,75,144	.....	5,75,144	.....	5,75,144
Nuddea rivers	.....	1,91,888	1,91,888	.....	1,91,888	.....	1,91,888
Total ...	33,492	8,55,709	8,89,201	.....	8,89,201	34,927	8,54,274
GRAND TOTAL ...	5,93,375	23,21,460	29,14,835	51,282	28,63,553	6,14,910	22,48,643

NOTE A.—Refunds of revenue have not been deducted from actual receipts of the year.
NOTE B.—The demand of the year, as shewn in this table, is that portion of the demand which was both legally recoverable and of which the assessments were completed, within the year.

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PUBLIC WORKS DEPARTMENT, BENGAL.

[AL RESULTS OF : BASED ON ASS]

888-89

Principal results of operations for the year ended 31st March 1889.

Irrigation Works.	Capital outlay (direct and indirect) to end of the year.	Revenue assessed during the year.								Working expenses, direct and indirect.	Net assessed revenue of the year.	Percentage on capital outlay to end of the year.
		Direct Assessed Revenue.						Indirect revenue. Land revenue due to operations of canal.	Grand Total.			
		Occupiers' rate (water-rates.)	Owners' rate.	Plantations.	Water power.	Navigation.	Miscellaneous.	Total.				
Major Irrigation Works.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Orissa project	2,40,68,803	2,42,808	.....	1,450	.....	77,908	12,792	3,34,958	.....	3,34,958	4,05,019	—70,061	·29 Deficit.
Midnapore canal	84,49,721	1,31,433	.....	44	.....	1,49,480	11,255	2,92,212	.....	2,92,212	2,09,804	82,408	·97
Tidal canal	18,40,296	.....	.....	64	.....	53,921	1,185	55,170	.....	55,170	78,040	—22,870	1·24 Deficit.
Sone project	2,61,83,241	8,05,790	.....	383	835	57,829	25,286	8,90,123	.....	8,90,123	7,94,432	95,691	·36
Total ...	6,05,42,061	11,80,031	.....	1,941	835	3,39,138	50,518	(a)15,72,463	.....	15,72,463	14,87,295	—85,168	·14
Minor Works and Navigation.													
Sarun project	6,96,413	21,850	.....	6	.....	.....	393	22,249	.....	22,249	36,332	—14,083	2·02 Deficit.
Orissa Coast canal	42,56,429	.....	.....	.....	.....	65,047	1,381	66,428	.....	66,428	77,018	—10,590	·24 Deficit.
Calcutta and Eastern canals ...	52,88,485	.....	.....	66	.....	5,69,920	5,158	5,75,144	.....	5,75,144	2,93,801	2,81,343	5·32
Nuddea rivers	.....	.....	.....	.....	.....	1,91,791	97	1,91,888	.....	1,91,888	1,40,769	51,119	.....
Total ...	1,02,41,327	21,850	.....	72	.....	8,26,758	7,029	(a)8,55,709	.....	8,55,709	5,47,920	3,07,789	3·00

ID.

PUBLIC WORKS DEPARTMENT, BENGAL.

STATEMENT OF TRAFFIC ON CANALS IN BENGAL DURING THE YEAR 1888-89.

	Orissa canals.	Midnapore canal.	Hidgellee Tidal canal.	Sone canals.	Calcutta and Eastern canals.	Orissa Coast canal.	Total.	Nuddea rivers.
Length of canal open for navigation ... ... Miles	177	72	29	218½	(a)27	97½	621	477
Receipts—Tollage on private boats ... ... Rs.	62,136	(b)1,44,694	53,448	34,746	5,65,337	64,217	9,24,568	1,00,910
,, Government boats ... ... ,,	5,476	.....	208	9,232	.....	453	15,369	.....
,, Rafts ... ... ,,	2,218	2,076	254	8,184	154	340	13,226	839
Carrying operations or transport services. } Government boats ... ,,	8,078	.....	.....	(c)5,667	.....	.....	13,745	.....
Fines and sundries ... ... ,,	.....	2,720	11	.....	4,429	37	7,197	42
Total receipts ... ,,	77,908	1,49,490	53,921	57,829	5,69,920	65,047	9,74,105	1,91,791
Maintenance charges, including special navigation establishment ... ... ,,	46,606	12,480	78,040	40,373	2,93,801	77,018	5,48,318	1,40,769
Net revenue of year ... ... ,,	31,302	1,37,000	(−)24,119	17,456	2,76,119	(−)11,971	4,25,787	51,022
Total number of boats plying cargo ... ... No.	10,156	21,077	15,411	4,610	104,340	12,188	168,091	28,269
,, ,, passenger ... ... ,,	1,319	13,483	1,070	411	8,687	1,479	26,449	10,955
,, registered tonnage of boats by canal measurement, cargo ... ... Tons	123,884½	318,520	153,955	83,775	2,778,743	120,854	3,579,731½	826,306
,, registered tonnage of boats by canal measurement, passenger ... ... ,,	29,780½	73,023	11,089	9,474	23,235	20,367	167,568½	13,196
Ton mileage—Up ...	1,906,462	5,477,255	1,929,286	1,549,826	22,135,832	2,216,041	35,214,802	.....
Down ...	2,400,666	3,849,311	1,220,153	3,392,800	2,994,862	1,585,910	15,443,702	... ,,
Total ...	4,307,128	9,326,566	3,149,539	4,942,626	25,130,694	3,801,951	50,658,504	.....
Estimated value of cargoes—Up ... Rs.	22,47,397	60,56,942	16,14,108	20,95,493	6,28,62,526	13,11,721	7,61,88,186	1,43,80,845
Down ... ,,	22,92,402	70,27,254	16,69,290	34,48,954	82,13,003	10,42,269	2,36,93,181	2,23,04,456
Total ... ,,	45,39,799	1,30,84,196	32,83,407	55,44,446	7,10,75,529	23,53,990	9,98,81,367	3,66,94,301
r of passengers—Total ... No.	68,203	107,259	34,032	40,635½	52,937	52,670	415,736½	50,555
), feet×feet×feet—Up ... c. ft.	47,745	182,974	5,373	18,425	21,032	16,240	291,789	7,485
,, ,, ,, Down ... ,,	288,783	3,701	28,244	2,701,651	21,222	10,109	3,053,710	106,102
Total ... ,,	336,528	186,675	33,617	2,720,076	42,254	26,349	3,345,499	113,587
Estimated value of rafts—Total ... Rs.	60,158	86,073	17,716	2,59,583	79,306	9,579	5,13,415	1,04,248
Tollage on boats per ton per mile ...	3·01 pies	2·9 pies	3·3 pies	1·7 pies	.....	3·3 pies	.....	...
Tollage on rafts per 100 cubic feet ...	0·65 rupees	1-1-0 rupee	1·4 annas	4·7 annas	.....	1·20 rupees	.....	0·84 rupees

(a) This length is that of the Calcutta and new canals and Tolly's nullah. The Eastern canals are 313 miles in length, of which the inner boat route 186 miles, outer boat route 127 miles, and steamer route 350 miles,—total length 690 miles.
(b) Includes toll, amounting to Rs. 21,428, paid by Messrs. Hoare, Miller & Co., who maintain a transport service on the canal.
(c) This consists of (1) hire of three Government steamers, Rs. 4,000; (2) hire of four Government cargo boats, Rs. 1,300; and (3) hire of the accommodation, jolly-boats and mud punts, Rs. 367.

IID.

PUBLIC WORKS DEPARTMENT, BENGAL.

DESCRIPTION AND QUANTITIES OF GOODS, &c., CARRIED ON CANALS IN BENGAL DURING THE YEAR 1888-89.

	ORISSA CANALS.						MIDNAPORE CANAL.						HIDGELLEE TIDAL CANAL.						SONE CANALS.					
	TOTAL.				PRIVATE.		TOTAL.				PRIVATE.		TOTAL.				PRIVATE.		TOTAL.				PRIVATE.	
	Quantity—Tons.			Value.	Quantity.	Value.	Quantity—Tons.			Value.	Quantity.	Value.	Quantity—Tons.			Value.	Quantity.	Value.	Quantity—Tons.			Value.	Quantity.	Value.
	Up.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down	Total.	Rs.	Tons.	Rs.
Grain	14,801	7,685	22,486	12,27,000	22,486	12,27,000	67,388	6,665	74,053	33,65,036	74,053	33,65,036	37,551	48	37,599	14,04,500	37,599	14,04,500	834	12,719	13,553	10,47,029	13,553	10,47,029
Cotton ...	1½	55½	57	11,988	57	11,988	26	45	71	29,862	71	29,862	...	...	...	...	...	...	45	4	49	40,660	49	40,660
Oilseeds	401½	1,350	1,751½	1,73,337	1,751½	1,73,337	1,214	1,654	2,868	3,24,861	2,868	3,24,861	48	4	52	3,250	52	3,250	87	6,972	7,059	6,90,252	7,059	6,90,252
Salt	371½	1,741½	2,113	1,95,292	2,113	1,95,292	...	16,244	16,244	15,06,964	16,244	15,06,964	...	4,515	4,515	5,00,915	4,515	5,00,915	3,788	148	3,936	3,79,976	3,936	3,79,976
Piece-goods ...	24½	428½	453	64,778	453	64,778	78	300	378	11,69,081	378	11,69,081	...	388	388	2,75,950	388	2,75,950	2,295	208	2,503	7,83,769	2,467	7,81,269
Metals	2	...	2	1,240	2	1,240	506	870	1,376	12,64,225	1,376	12,64,225	22	60	91	18,237	69	12,237	146	29	175	7,05,437	108	6,96,412
Building materials	1,037½	22,636½	23,674	1,32,430	11,817	1,09,967	3,158	328	3,486	18,583	3,486	18,582	500	357	857	6,622	815	6,452	1,597	3,113	4,710	52,215	2,602	22,944
Miscellaneous ...	7,276½	7,538½	14,815	27,24,952	14,767	27,20,719	12,859	9,693	22,552	53,61,113	22,552	53,61,113	6,964	5,766	12,730	10,61,366	12,726	10,60,866	2,824	11,835	14,659	17,96,555	10,720	17,86,766
Fuel	1,640	586	2,226	8,713	1,970½	6,275	1,331	2,592	3,923	44,472	3,933	44,472	441	1,280	1,721	12,567	1,571	11,198	589	2,681	3,270	23,543	2,820	18,155
Timber	C. ft. 7,056	C. ft. 27,462	C. ft. 34,518	45,917	C. ft. 34,518	45,884	C. ft. 165,377	C. ft. 3,271	C. ft. 168,648	85,403	C. ft. 168,648	85,403	C. ft. 3,473	C. ft. 21,619	C. ft. 25,092	16,873	24,376	16,893	498	8,077	8,575	79,987	8,119	63,856
	No. 6,715	No. 11,948	No. 18,663		No. 18,640																			
Bamboos	No. 1,600	No. 758,536	No. 760,136	14,290	No. 760,136	14,290	C. ft. 17,597	C. ft. 430	C. ft. 18,027	670	C. ft. 18,027	670	C. ft. 1,900	C. ft. 6,625	C. ft. 8,525	843	8,225	843	897	12,899	13,796	2,04,606	13,796	2,04,606
Total Tons ...	25,556	42,021½	67,577½	45,99,957	55,417	45,69,790	86,560	38,391	124,951	1,31,70,269	124,951	1,31,70,269	45,526	12,427	57,953	33,01,123	57,735	32,92,784	13,609	58,685	72,285	58,94,029	65,229	57,33,925
Total C. ft. ...	7,056	7,462	34,518		34,518		182,974	3,701	186,675		186,675		5,373	28,244	33,617		33,161		...	...	...	...	...	...
Total No. ...	8,315	770,484	778,799		778,776		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

IID—*concluded.*

PUBLIC WORKS DEPARTMENT, BENGAL.

DESCRIPTION AND QUANTITIES OF GOODS, &c., CARRIED ON CANALS IN BENGAL DURING THE YEAR 1888-89.

	ORISSA COAST CANAL.						CALCUTTA AND EASTERN CANALS.						NUDDEA RIVERS.					
	TOTAL.				PRIVATE.		TOTAL.				PRIVATE.		TOTAL.				PRIVATE.	
	Quantity—Tons.			Value.	Quantity.	Valu.	Quantity—Tons.			Value.	Quantity.	Value.	Quantity—Tons.			Value.	Quantity.	Value.
	Up.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.
Grain	32,414	2,692	35,106	12,89,972	35,106	12,89,972	327,264	81	327,345	2,91,97,911	327,345	2,91,97,911	6,711	100,384	107,095	62,42,813	107,095	62,42,813
Cotton	...	7	7	2,200	7	2,200	717	...	717	3,61,550	717	3,61,550	1	19	20	4,080	20	4,080
Oilseeds	154	...	154	12,435	154	12,435	9,882	89	9,971	10,85,358	9,971	10,85,358	599	29,932	30,531	28,66,198	30,531	28,66,198
Salt	10	2,583	2,593	2,21,858	2,593	2,21,858	12,832	65,340	78,172	75,16,884	78,172	75,16,884	39,824	675	40,499	35,74,866	40,499	35,74,266
Piece-goods... ...	...	217	217	1,53,215	217	1,53,215	...	...	...	...	...	...	27	3	30	42,275	30	42,275
Metals	11	24	35	8,465	24	6,750	668	344	1,012	2,32,060	1,012	2,32,060	1,461	254	1,715	7,42,104	1,715	7,42,104
Building materials	297	338	545	9,690	345	9,406	91,229	1,305	92,534	11,56,829	92,534	11,56,829	2,782	1,554	4,336	60,376	4,336	60,376
Miscellaneous ...	2,007	4,222	6,229	6,36,610	6,226	6,36,322	242,319	12,873	255,192	3,00,21,360	255,192	3,00,21,360	44,654	131,104	175,758	2,30,00,913	175,758	2,30,00,913
Fuel	564	1,265	1,829	19,545	1,695	17,660	162,354	24,702	187,056	15,03,577	187,056	15,03,577	13,507	1,287	14,794	1,60,676	14,794	1,60,676
Timber	C. ft. 8,678	C. ft. 2,037	C. ft. 10,715	8,211	C. ft. 10,715	8,211	C. ft. 10,062	C. ft. 21,222	C. ft. 31,284	78,208	C. ft. 31,284	78,208	C. ft. 5,949	C. ft. 49,744	C. ft. 55,693	98,622	C. ft. 55,693	98,622
Bamboos	C. ft. 7,562	C. ft. 8,072	C. ft. 15,634	1,368	C. ft. 15,634	1,368	C. ft. 10,970	...	C. ft. 10,970	1,098	C. ft. 10,970	1,098	C. ft. 1,536	C. ft. 56,358	C. ft. 57,894	5,626	C. ft. 57,894	5,626
Total Tons ...	35,367	11,348	46,715	23,63,569	46,367	23,59,397	847,265	104,734	951,999	7,11,54,835	951,999	7,11,54,835	109,566	265,212	374,778	3,67,98,549	374,778	3,67,98,549
Total C. ft. ..	16,240	10,109	26,349		26,349		21,032	21,222	42,254		42,254		7,485	106,102	113,587		113,587	

Supplementary statement giving details of "Miscellaneous" articles of traffic on the Calcutta and Eastern Canals.

DESCRIPTION.	Quantity.	Value.
	Tons.	Rs.
Jute	137,854	1,63,63,405
Jaggery	12,265	13,27,185
Sugar	1,162	2,82,830
Tobacco	1,532	3,01,026
Fish	1,804	5,03,139
Hides	209	49,114
Poultry	306	2,06,613
Hay and straw	16,548	3,58,148
Oil	13,195	12,47,495
Earthenware	3,190	67,116
Other miscellaneous	67,127	87,15,289
Total ...	255,192	3,00,21,360

IE.

PUBLIC WORKS DEPARTMENT, BENGAL.

STATEMENT OF AREAS IRRIGATED BY IRRIGATION WORKS IN BENGAL DURING THE YEAR 1888-89.

Name of Canal.	Areas irrigated in acres.							Average discharge, cubic feet per second.				Areas irrigated per cubic foot per second.			
	Kharif.	Rabi.	Total.	Flow.	Lift.	Double-cropped.		At Head.		Utilised.		Discharge at head.		Utilised.	
						Area irrigated.	Percentage of total area.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	Rabi.
Irapara Canal and its branches	70,274	2,522	72,796	68,524	4,273	.....	.....	759·84	231·42	700·97	213·32	92·48	10·89	100·25	11·82
undah ditto ditto	40,165	226	40,391	38,930	1,461	.....	.....	456·25	62·25	184·75	17·00	82·60	3·63	217·40	13·29
Level Canal, Range I	18,091	1	18,092	16,451	1,641	.....	.....	255·76	146·32	161·48	36·51	70·73	.....	112·03	0·02
Total Mahanuddy Series ...	128,530	2,749	131,279	123,905	7,374	.....	.....	1,501·85	439·99	1,047·20	266·83	85·58	6·24	122·73	10·30
High Level Canal, Range II	2,355	30	2,385	2,334	51	.....	.....	75·97	14·84	75·97	2·30	30·99	2·02	30·99	13·04
Ditto, ditto III	25,628	.....	25,628	25,426	202	.....	.....	128·09	38·46	128·09	38·27	200·07	.....	200·07	.....
Total Brahmini-Byturni Series ...	27,983	30	28,013	27,760	253	.....	.....	204·06	53·30	204·06	40·57	137·13	0·56	137·13	0·74
Total Orissa Canals ...	156,513	2,779	159,292	151,665	7,627	.....	.....	1,705·91	493·29	1,251·26	307·40	91·74	5·63	125·08	9·04
Under Midnapore weir	60,263	.....	60,263	60,263	.....	.....	.....	370	.....	344	.....	152	.....	164	.....
Under Panchkoorah weir	9,514	.....	9,514	9,450	64	.....	.....	50	49	30	3	111	68	185	1,123
Total Midnapore Canal ...	69,777	.....	69,777	69,713	64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eastern Main Series	55,569	11,436	66,995	63,972	3,023	.....	.....	1,123	525	996	275	49·4	29·6	55·7	56·5
Western ditto	191,363	97,551	288,914	268,473	20,441	.....	.....	2,664	1,733	2,216	1,246	71·8	60·09	86·3	83·5
Total Sone Canals ...	246,922	108,987	355,909	332,445	23,464	.....	.....	3,787	2,258	3,212	1,521	65·2	53·	76·8	78·7
Saran Canals	3,897	3,316	7,213	.....	.....	.....	.....	282	333	282	333	13·8	9·9	13·8	9·9

IIE.

PUBLIC WORKS DEPARTMENT, BENGAL.

STATEMENT SHOWING INCIDENCE OF WORKING EXPENSES AND ASSESSED WATER-RATES ON CANALS IN BENGAL DURING 1888-89.

Name of Canal.	Average discharge of the year at canal head in cubic feet per second.	Water-rate assessed in 1888-89.					Gross assessed revenue from all sources.	Working expenses, direct and indirect.	Area irrigated during the year 1888-89.	Working expenses.			Occupier's rate (water-rate).		Total water-rates, direct and indirect.	
		Occupiers rate).	Owners.	Total direct.	Indirect.	Total of direct and indirect.				Per cent. on gross revenue.	Per acre irrigated.	Per cubic foot per second of discharge at canal head.	Per acre irrigated.	Per cubic foot per second of discharge at canal head.	Per acre irrigated.	Per cubic foot per second of discharge at canal head.
Major Irrigation Works.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Acres.							
Orissa project	.....	2,42,808	.....	2,42,808	.....	2,42,808	3,34 958	4,05,019	159,292	120·92	2·54	.....	1·52	.....	1·52	.....
Midnapore canal	.....	1,31,433	.....	1,31,433	.....	1,31,433	2,92,212	2,09,804	69,777	71·80	3·00	.....	1·88	.....	1·88	.....
Tidal canal	.....	.....	.....	.....	.....	.....	55,170	78,049	.....	141·45	.....	.....	.....	.....	.....	.....
Sone project	.....	8,05,790	.....	8,05,790	.....	8,05,790	8,90,123	7,94,432	355,909	89·25	2·23	.....	2·26	.....	2·26	.....
Total ...	.....	11,80,031	.....	11,80,031	.....	11,80,031	15,72,463	14,87,295	584,978	94·58	2·54	.....	2·02	.....	2·02	.....
Minor Works and Navigation.																
Sarun project	.....	21,850	.....	21,850	.....	21,850	22,249	36,332	7,213	163·29	5·03	.....	3·03	.....	3·03	.....
Orissa coast canal	.....	.....	.....	.....	.....	.....	66,428	77,018	.....	115·94	.....	.....	.....	.....	.....	.....
Calcutta and Eastern canal	.....	.....	.....	.....	.....	.....	5,75,144	2,93,801	.....	51·09	.....	.....	.....	.....	.....	.....
Nuddea rivers	.....	.....	.....	.....	.....	.....	1,91,888	1,40,769	.....	73·36	.....	.....	.....	.....	.....	.....
Total ...	.....	21,850	.....	21,850	.....	21,850	8,55,709	5,47,920	7,213	64·03	.....	.....	.....	.....	.....	.....

Note A.—Columns 2, 13, 15 and 17 cannot be filled in.

Note b.—In this table the water-rates shown as assessed during the year are the amounts for which occupiers have rendered themselves liable in return for canal water supplied during the year, and include some demands which were not legally recoverable, and others of which the assessment papers were not completed, till after the close of the year.

IIIE.

PUBLIC WORKS DEPARTMENT, BENGAL.

STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED IN BENGAL DURING THE YEAR 1888-89.

Description.	Orissa canals.		Midnapore canals.		Sone canals.		Sarun canals.		Total.	
	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.	Area irrigated.	Value.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.
Gardens and orchards ...	102	18,360	...	...	33	940	...	...	135	19,300
Sugarcane	196	78,400	...	...	22,468	22,69,245	...	...	22,664	23,47,645
Cereals ... Wheat ...	...	...	...	...	42,742	11,51,410	...	...	42,742	11,51,410
Barley ...	...	...	...	...	15,521	2,87,002	..	...	15,521	2,87,002
Rice ...	156,308	50,01,856	65,865	16,46,625	221,961	65,14,164	3,785	68,130	447,919	1,32,30,775
Maize ...	...	...	...	...	...	...	...	...	...	...
Juar ...	...	...	...	...	...	...	...	...	...	...
Cheena ...	1	12	...	...	6	60	...	...	7	72
Miscellaneous...	26	260	...	...	4,355	65,347	2,808	56,160	7,189	1,21,767
Pulse ... Gram ...	...	...	...	...	4,640	60,186	...	...	4,640	60,186
Peas ...	...	...	...	...	2,169	1,31,855	...	...	2,169	1,31,855
Miscellaneous...	292	8,760	...	...	4,027	4,788	...	...	4,319	13,548
Fodder crops... Grass, lucerne	...	...	...	...	...	...	...	...	...	...
Fibres ... Cotton, &c. ...	2,125	42,505	...	...	1	30	..	...	2,126	42,535
Dyes ... Indigo, &c. ...	186	12,825	...	...	1,001	40,012	112	5,600	1,299	58,437
Drugs ... Opium ...	...	...	...	...	1,785	81,479	...	...	1,785	81,479
Tobacco ...	...	...	...	...	...	...	371	61,215	371	61,215
Oilseeds ... Mustard ...	2	60	...	...	216	6,430	...	...	218	6,490
Linseed, &c. ...	44	880	...	...	13	195	...	...	57	1,075
Miscellaneous	10	250	...	...	24,209	3,94,464	137	2,740	24,356	3,97,454
Total ...	159,292	51,64,168	65,865	16,46,625	345,147(a)	1,10,07,607	7,213	1,93,845	577,517	1,80,12,245
Land insufficiently irrigated ...	...	...	3,912	97,800	...	...	...		3,912	97,800
Grand Total ..	159,292	51,64,168	69,777	17,44,425	345,147	1,10,07,607	7,213	1,93,845	581,429	1,81,10,045

(a) 345,147 acres together with 10,762 acres *hot-weather irrigation* make up the total 355,909. The *hot-weather irrigation* is not valued, as it is almost entirely sugarcane which is already included in the above statement.

IVE.

WORKS DEPARTMENT, BENGAL.

COMPARATIVE STATEMENT OF IRRIGATION AND RAINFALL FOR THE YEARS 1888-89 AND 1887-88 IN BENGAL.

Works supplying irrigation.	Civil districts.	Total area in acres.	Cultivated area in acres.	Areas irrigated in acres.						Rainfall.	
				1888-89.			1887-88.				
				Kharif, inclusive of sugarcane.	Rabi, inclusive of hot-weather.	Year.	Kharif, inclusive of sugarcane.	Rabi, inclusive of hot-weather.	Year.	1888-89.	1887-88.
										Inches.	Inches.
Orissa canals ...	Cuttack	.....	.....	130,885	2,779	133,664	101,435	502	101,937	47·34	46·52
	Balasore	.....	... ..	25,628	.....	25,628	7,569	.....	7,569	51·77	53·20
	Total Orissa Canals ...	.....	.....	**156,513**	**2,779**	**159,292**	**109,004**	**502**	**109,506**	**49·55**	**49·86**
Midnapore canal ...	Midnapore	.....	... ..	66,408	3,369*	69,777	64,702	1,162*	65,864	68·00	55·38
Sone canals ...	Shahabad	2,806,400	2,192,500	191,363	97,551	288,914	190,702	63,477	254,179	44·78	41·23
	Patna	1,329,920	1,039,000	25,783	5,637	31,390	25,583	2,537	28,120	48·91	39 47
	Gya	3,015,680	2,356,000	29,806	5,799	35,605	29,150	3,931	33,081	51·88	38·95
	Total Sone canals ...	**7,152,000**	**5,587,500**	**246,922**	**108,987**	**355,909**	**245,435**	**69,945**	**315,380**	... ..	.....
Sarun canals ...	Sarun	1,680,000	1,312,500	3,897	3,316	7,213	1,904	2,314	4,218	42·40	39·66
	GRAND TOTAL ...	.....	.. ...	473,740	118,451	592,191	421,045	73,923	494,968	.....	.....

* Boro rice.

No. IF (*vide* GOVERNMENT OF INDIA'S ORDER No 1101, DATED 6TH JUNE 1889.)

STATEMENT SHOWING THE WATER-RATES PER ACRE IN FORCE ON CANALS IN BENGAL DURING THE YEAR 1888-89.

Canals.	DESCRIPTION OF LEASES AND CROPS	OCCUPIERS' RATES PER ACRE.	
		Flow irrigation.	Lift irrigation.
	ORISSA CIRCLE.		
		Rs. A. P.	Rs. A. P.
ORISSA CANALS ...	I.—For the whole irrigable or rice cultivated area of any village if application is made for a lease of five years	1 8 0	1 0 0
	For the rice crop.		
	II.—For any fractional area of a village or for other terms	3 0 0	2 0 0
	For cold-weather crops.		
	III.—Dalua rice	1 8 0	1 0 0
	IV.—For cotton, tobacco, huldi, ginger, wheat, vegetables, indigo, and all garden produce grown in villages the rice lands of which are leased under rate I ...	1 0 0	0 10 0
	V.—For the above produce when grown in villages the rice lands of which are not leased under rate I	2 0 0	1 8 0
	VI.—For linseed, oilseed, dál and all pulses grown in villages the rice lands of which are not leased under rate I ...	0 8 0	0 5 0
	VII.—For the above produce when grown in villages the rice lands of which are not leased under rate I	1 0 0	0 10 0
	For perennial crops.		
	VIII.—For sugarcane	6 0 0	4 0 0
	IX.—The charge of filling tanks is Re. 1 per 10,000 cubic feet of water used.		
	SOUTH-WESTERN CIRCLE.		
	For the rice crop.		
MIDNAPORE CANAL	I.—Under five-year leases	1 8 0	1 0 0
	II.—Under annual leases	2 8 0	1 10 0
	For winter crops.		
	III.—In exceptional cases when water is available	1 8 0	1 8 0
	IV.—The charge for the unauthorised use of canal water is Rs. 5 per acre per annum or such less sum as is fixed by the Collector.		

Canals.	Description of leases and crops.	Occupiers' rates per acre.	
		Flow irrigation.	Lift irrigation.
	SONE CIRCLE.		
	For water supplied between the 25th June and the 1st April.	Rs. A. P.	Rs. A. P.
	I.—Leases for one year.		
Sone canals ...	Rice	*3 0 0	2 0 0
	Bhadoi, except rice	2 8 0	1 10 8
	Rabi	*2 0 0	1 10 8
	Sugarcane	5 0 0	3 5 4
	II.—Leases for five years.		
	For all crops	2 0 0	2 0 0
	Note.—An extra rate in addition to the above rate is charged for water taken between the 1st April and the 25th June.		
	For water taken between the 1st April and the 25th June.		
	Annual leases only.		
	Special rate for hot months.		
	For all crops	4 0 0	2 10 8
	Note.—For indigo, water is allowed to be taken under this schedule from the 15th March without extra charge. Charges under this schedule are in addition to charges under the Schedules I and II.		
Sarun canals ...	The Sarun canals are not primarily irrigation canals, and the return to Government is in the shape of a guarantee amounting at present to Rs. 21,850 per annum. Guarantors are authorised to charge Re. 1 per acre irrigated, or in the case of water being used for manufacture, Rs. 2 per maund of indigo manufactured.		

* The rate for flow irrigation was reduced from Rs. 2-8 to Rs. 2 per acre for the current season only—*vide* Bengal Government Notification No. 50, dated 19th February 1889.

List of Officers in charge of Irrigation Circles and Divisions during 1888-89.

Circle or Division.	Name of Officer.	Period of charge.
	SECRETARIAT.	
Joint-Secretary, Irrigation Branch.	Colonel J. M. McNeile, R.E.	On special leave.
Officiating ditto, ditto ...	Lieutenant-Colonel C. W. I. Harrison, R.E.	From 1st April 1888 to 31st March 1889. [Acted as Secretary in the Public Works Department, in addition to his other duties, from 15th April to 1st June 1888.]
Under-Secretary, ditto ...	Major A. D. McArthur, R.E.	From 1st April to 3rd June 1888.
Officiating ditto, ditto ...	Mr. G. A. G. Shawe ...	„ 4th August 1888 to 31st March 1889.

Circle or Division.	Name of Officer.	Period of charge.
SUPERINTENDING ENGINEERS IN CHARGE OF CIRCLES.		
Orissa Circle	Mr. R. H. Rhind ...	From 1st April 1888 to 31st March 1889.
Ditto, Personal Assistant	„ J. T. Boase	„ 26th June 1888 to 31st March 1889.
South-Western Circle ...	„ T. H. Wickes ..	„ 1st April to 3rd June 1888.
	Major A. D. McArthur, R.E.	„ 4th June 1888 to 31st March 1889.
Ditto, Personal Assistant	Mr. J. T. Boase ..	„ 7th to 25th June 1888.
	Rai Sahib Krith Chunder Chowdry.	„ 17th December 1888 to 22nd January 1889.
Sone Circle	Mr. C. W. Odling ..	„ 1st April 1888 to 31st March 1889.
Ditto, Personal Assistant	„ K. H. Stephen ...	„ 14th January to 28th February 1889
EXECUTIVE ENGINEERS IN CHARGE OF DIVISIONS.		
Orissa Circle.		
Mahanuddy Division ...	Mr. G. W. Faulkner ...	From 1st April 1888 to 31st March 1889
Acquapada-Jajepore Division	„ A. Monies	„ 1st April to 15th July 1888.
	J. P. Cleghorn	„ 16th July 1888 to 31st March 1889.
Pooree Division	Rai Sahib Raj Kissen Banerjee.	„ 1st to 8th April 1888.
	Mr. J. R. Swinden ...	„ 9th April 1888 to 31st March 1889.
Brahmini-Byturni Division ...	„ C. Taylor	„ 1st April to 24th July 1888.
	„ A. Monies	„ 26th July 1888 to 31st March 1889.
South-Western Circle.		
Cossye Division	Mr. J. P. Scotland	From 1st April 1888 to 31st March 1889
Northern Drainage and Embankment Division.	„ R. E. Carter	„ 1st to 30th April 1888.
	„ T. M. L. Thompson ...	„ 1st May 1888 to 31st March 1889.
Nuddea Rivers Division ...	„ C. E. Livesay	„ 1st April 1888 to 31st March 1889.
Circular and Eastern Canals Division.	„ G. A. G. Shawe	„ 1st April to 3rd August 1888.
	„ C. Taylor	„ 4th August 1888 to 31st March 1889.
Balasore Division	„ A. Hayes	„ 1st April 1888 to 31st March 1889.
Sone Circle.		
Arrah	Mr. W. A. Inglis	From 1st April 1888 to 31st March 1889. (On privilege leave from 10th October 1888 to 10th January 1889.)
	„ K. H. Stephen	From 10th October 1888 to 13th January 1889.
Buxar	„ D. B. Horn	From 1st April 1888 to 31st March 1889.
Eastern Sone	„ M. J. Monckton... ...	„ 1st April to 30th June 1888.
	„ H. F. B. Frost	„ 1st July 1888 to 31st March 1889.
Gunduck	„ M. J. J. P. Norman ...	„ 1st April 1888 to 31st March 1889.
Canal Revenue Officers.		
Deputy Collector, Shahabad...	Baboo Sarada Prasad Chatterjee.	From 1st April 1888 to 31st March 1889.
Sub-Deputy Collector, Shahabad.	Baboo Siva Sunker Sing ...	Ditto ditto. (On privilege leave from 13th to 29th September 1888.)
	„ Jagdam Sahai ...	From 1st April 1888 to 31st March 1889.
Circle Officer, Patna district...	Syud Mahomed Kabeer ...	Ditto ditto.
Ditto, Gya do. ...	Baboo Moti Lall	Ditto ditto.
Deputy Revenue Superintendent, Orissa.	Mr. S. C. Roberts	Ditto ditto.
Ditto, Midnapore ...	Baboo K. C. Ghose	Ditto ditto. (On privilege leave from the 24th January to 31st March 1889.)
	„ Rajendra Nath Roy ...	From 24th January to 31st March 1889.
Collector of Tolls, Calcutta ...	Mr. W. R. Cooksey	„ 1st April 1888 to 31st March 1889.

STATEMENT SHOWING THE ACTUAL RECEIPTS AND EXPENDITURE OF PROVINCIAL SERVICES FOR 1888-89, AND THE REVISED ESTIMATES FOR 1889-90.

Receipts.	Actuals, 1888-89.	Revised estimate, 1889-90.
	Rs.	Rs.
Opening balance ...	33,08,991	26,58,000
Principal Heads of Revenue—		
I.—Land Revenue	90,02,398	88,68,000
III.—Salt	88,105	1,18,000
IV.—Stamps...	1,03,79,239	1,05,75,000
V.—Excise	27,22,910	25,50,000
VI.—Provincial Rates	41,50,323	42,27,000
VII.—Customs	48,891	50,000
VIII.—Assessed Taxes	19,55,698	20,00,000
IX.—Forests	3,38,454	3,85,000
X.—Registration	5,46,772	5,75,000
Total ...	2,93,26,880	2,93,48,000
XII.—Interest	97,383	1,15,000
Post Office, Telegraph and Mint—		
XIV.—Telegraphs	920	1,000
Receipts by Civil Department—		
XVI.—Law and Justice—		
Courts of Law	7,89,538	7,90,000
Jails	7,75,021	7,45,0 0
XVII.—Police	3,38,197	4,06,000
XVIII.—Marine	9,11,734	8,60,000
XIX.—Education	6,11,884	5,70,000
XX.—Medical	1,30,165	1,36,000
XXI.—Scientific and other Minor Departments.	1,05,154	1,76,000
Total ...	37,27,693	36,83,000
Miscellaneous—		
XXII.—Receipts in aid of Superannuation	48,849	46,000
XXIII.—Stationery and Printing	1,75,074	1,60 000
XXV.—Miscellaneous	8,34,785	8,28,000
Total ...	10,58,708	10,34,000
Railways—		
XXVI.—State Railways (gross earnings)		
Eastern Bengal State Railway ...	61,64,804	63,50,000
Other Railways	55,69,065	59,39,000
Total ...	1,17,33,869	1,22,89,000
Irrigation—		
XXIX.—Major Works (direct receipts) ...	13,94,369	14,26,000
XXX.—Minor Works and Navigation—		
By Public Works Department ...	8,67,844	8,39,000
„ Civil Department	1.02,154	1,03,000
Total ...	23,64,367	23,68,000
Buildings and Roads—		
XXXII.—Civil Works—		
By Public Works Department ...	4,74,639	3,50,000
„ Civil Department		3,00,000
Total ...	4,74,639	6,50,000
Contributions	.....	.....
Total ...	4,87,84,465	4,94,88,000
GRAND TOTAL ...	5,20,93,456	5,21,46,000

Expenditure.	Actuals, 1888-89.	Revised estimate, 1889-90.
	Rs.	Rs.
Direct demand on the Revenues—		
1. Refunds and drawbacks ...	1,40,156	1,38,000
2. Assignments and Compensations	1,39,300	1,54,000
3. Land Revenue	35,13,059	35,24,000
5. Salt	21,223	89,000
6. Stamps	3,70,334	3,71,000
7. Excise	1,08,001	1,31,000
8. Provincial Rates	3,17,410	3,25,000
9. Customs	5,24,029	5,35,000
10. Assessed Taxes	74,865	81,000
11. Forests	1,87,702	2,25,000
12. Registration	2,00,729	3,15,000
Total ...	56,94,890	58,88,000
13. Interest on ordinary debt ...	45,802	75,000
Post-office, Telegraph and Mint—		
16. Telegraphs	884	1,000
Salaries and expenses of Civil Department—		
18. General Administration ...	15,71,096	15,93,000
19. Law and Justice—		
Courts of Law	81,01,737	81,01,000
Jails	17,95,795	17,60,000
20. Police	48 34,099	53,12,000
21. Marine	10,71,199	11,48,000
22. Education	24,78,200	24,73,000
24. Medical	14,87,730	15,02,000
25. Political	24,482	24,000
26. Scientific and other minor Departments	3,10,050	3,05,000
Total ...	2,16,34,368	2,22,18,000
Miscellaneous—		
29. Superannuation, &c.	13,70,007	14,26,000
30. Stationery and Printing ...	10,21,438	10,13,000
32. Miscellaneous	2,40,632	2,19,000
Total ...	26,32,077	26,58,000
Famine Relief and Insurance—		
33. Famine relief	54,338	3,75,000
37. Construction of railways ...	—10,893	—2,000
Railways (Revenue account)—		
38. State Railways—		
Working expenses { Eastern Bengal State Railway .	31,01,804	33,50,000
Working expenses { Other Railways ...	27,84,203	27,81,000
Interest on debt ...	32,61,382	34,45,000
40. Subsidized Companies—Land, &c.	—306	1,000
41. Miscellaneous Railway expenditure	1,42,693	92,000
Total ...	93,52,716	96,69,000
Irrigation—		
42. Major Works—		
Working expenses	14,18,000	14,36,000
Interest on debt	23,39,849	25,03,000
43. Minor Works and Navigation—		
By Public Works Department	14,75,746	18,18,000
„ Civil Department ...	1,911	2,000
Total ...	52,35,506	56,24,000
Buildings and Roads—		
45. Civil Works—		
By Public Works Department	39,04,303	30,10,000
„ Civil Department ...	1,19,658	60,000
Total ..	40,23,961	30,70,000
Contributions	7,50,184	7,45,000
Total ...	4,94,35,522	5,03,21,000
Closing balance	26,57,934	18,25,000
GRAND TOTAL ...	5,20 93,456	5,21,46,000

Published for general information.

FINANCIAL DEPT.,
FINANCE;
The 30th January 1890.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 1st February, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	BENGAL.		
	Western Districts.		
1	Burdwan Feb. 1, '90	0·06	Weather—cold. Outturn of *amun* 10 annas. *Rubbi* not favourable. Sugarcane and potato fair. Prices of common rice :— Srs. Burdwan ... ... 16½ Culna ... ... 16 Cutwa ... ... 15¼ Raneegunge ... ... 20 per rupee.
2	Bankoora „ 1, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops continue good. Course rice 20 seers per rupee at Sudder and 18 seers at Bissenpore.
3	Birbhum „ 1, '90	Nil	Weather—very cold. Prospects of cold-weather crops, especially sugarcane very good. Prices of rice 16½ seers per rupee at Sudder and 16 seers at Rampore Haut.
4	Midnapur „ 1, '90	Nil	Weather—seasonable. General prospects fair. Harvesting of rice going on in Contai. Indigo and *rubbi* doing well. Prospects of silk cocoons improved. Prices of rice :— Srs. Sudder ... ... 16 Contai ... ... 26 (new) Tamluk ... ... 18 Ghatal ... ... 19 per rupee.
5	Hooghly „ 1, '90	Nil	Weather—cold. Harvesting of paddy over. Outturn of *rubbi* very hopeful. Prices of common rice :— Srs. Sudder and Serampore ... ... 12½ Jehanabad ... ... 17¼ per rupee.
	Serampore ...	0·36	
	Jehanabad ...	0·45	
	Howrah „ 1, '90	Nil	Weather—cold. Prospects of crops good. Common rice sold at Howrah at 12½ seers per rupee during the week.
	Central Districts.		
6	24-Perghs. Feb. 1, '90	Nil	Weather—cool. Prospects good. Yield of *amun* has averaged 16 annas. *Rubbi* crops doing well. Price of ordinary rice 16 seers per rupee.
7	Nuddea „ 1, '90	Nil	Weather—cold. *Moong*, *kalai*, mustard, and sugarcane harvested with fair out turn. Other winter crops doing well.
	Ranaghat ...	0·30	
8	Khoolna „ 1, '90	Nil	Weather—seasonable *Amun* harvest nearly completed; outturn good. Prospects of *boro* and *rubbi* crops satisfactory.
	Bagirhat ...	0·98	
	Satkhira ...	2·03	
9	Jessore „ 1, '90	Nil	Weather—very cold. The rainfall of the week will be beneficial to the spring crops. Mustard being gathered. Price of rice stationary.
	Magura ...	0·17	
	Narail ...	2·51	
	Bongong ...	1·63	
10	Moorshedabad „ 1, '90	Nil	Weather—bright and cold. Wind N.-W. All the *rubbi* crops on the ground are doing well. *Haimanti dhan* nearly all harvested.
	Rajshahye Divn.		
11	Dinagepur „ 1, '90	Nil	Weather—getting cooler. Outturn of *amun* is estimated at 16 annas. Prospect of mustard not favourable. Pressing of sugarcane continues.
	Thakurgaon ...	0·34	
12	Rajshahye „ 1, '90	Nil	Weather—cold with fresh breeze. Condition of spring crops good. Harvesting of *amun* nearly over with good outturn. Sugarcane being reaped all over the district. Ganja and tobacco at Nowgong in good condition. Common rice sells at 16 seers 9 chittacks per rupee.
13	Rungpur „ 1, '90	Nil	Weather—seasonable. *Amun* rice is estimated to have yielded a 15-anna crop.
	Kurigram ...	0·65	Tobacco is flourishing. Sugarcane is being cut and crushed, and mustard
	Nilphamari ...	0·80	gathered with a fair outturn.
14	Bogra „ 1, '90	Nil	Weather—very cold; days somewhat cloudy. Reaping of *amun* almost finished;
	Sherpur ...	0·01	probably not more than one anna remaining to be cut. Other crops
	Nowkhilla ...	0·34	also being gathered. Common rice is being sold at head-quarters at 21 seers per rupee.
15	Pubna „ 1, '90	Nil	Weather—fine and cool. *Amun* outturn estimated at 13 annas. Mustard and tobacco expected to yield 12 annas. Sugarcane will not be above 8 annas. Prices slightly lower.
16	Darjeeling „ 1, '90	Nil	Weather—very cold and bright. Crops doing well and prospects generally good.
17	Jilpigoree „ 1, '90	Nil	Weather—cold. Cutting of *haimanti* paddy completed; 14 annas outturn obtained. Winter crops doing well. Some damage to tobacco reported from Falacutta owing to recent hailstorm. Prices stationary.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded*.			
	Eastern Districts.		
Dacca Divn. 18	Dacca Feb. 1, '90	2·54	Weather—very cold. Heavy rain in the Sudder subdivision. Sowing of *boro* paddy nearly completed. Mustard and pulses being gathered. Rain has done good to the standing crops. Fodder is available. No special change in the prices of food-grains. Common rice sold at from 13 to 16 seers per rupee.
19	Furreedpur „ 1, '90	Nil	Weather—colder and clearer. Produce of date trees below average owing to floods of rainy season. *Boro* rice being sown on churs. Sugarcane being cut. Prospects of cold-weather crops on the ground fair. Tillage for early rice and jute progressing.
20	Backergunge „ 1, '90	Nil	Weater—cool with foggy mornings. Prospects of crops good. Harvesting of *amun* nearly completed; outturn estimated at 16 annas. Common new rice selling at 16 seers per rupee.
21	Mymensingh „ 1, '90	0·22	Weather—very cold. Prospects of crops good. Common rice sells at 14 seers per rupee. Transplantation of *boro dhan* continues.
Chittagong Divn. 22	Chittagong „ 1, '90	Nil	Weather seasonable. State of miscellaneous crops good.
23	Noakholly „ 1, '90	0·02	Weather—seasonable. State of *rubbi* crops good. Rain has done good to them. Price of rice stationary.
24	Tipperah „ 1, '90	0·35	Weather—seasonable. Winter crops doing well. Transplantation of *boro dhan* still going on.
25	Chittagong Hill Tracts. Jan. 31, '90	Nil	Weather—very cold and foggy up to 10 A.M. in the morning, Wind steady from N. Gathering of mustard commenced. Tobacco and chillies progressing.
	Hill Tipperah Feb. 1, '90	Nil	Weather—cold. Chillies and tobacco doing well. *Jum*-cutting commenced in the hills.
BEHAR.			
Patna Divn. 26	Patna „ 1, 90	Nil	Weather—cold. Prospects of *rubbi* continue good. A shower of rain would, however, much benefit the crops Peas and mustard are in pods. Wheat in ear in some places. Poppy is flowering and looks well. Prices of food-grains almost stationary.
27	Gya „ 1, '90	Nil	Weather—cold. Harvesting of paddy nearly finished. Prospects of *rubbi* and poppy favourable. Food-stocks sufficient.
28	Shahabad „ 1, '90	Nil	Weather—very cold and bright all the week, but milder and rather cloudy to-day (1st). Cutting of peas commenced. Other *rubbi* crops and poppy doing well. Sugarcane being pressed. Prices stationary.
29	Durbhunga „ 1, '90	Nil	Weather—very cold with west wind. The late rain has greatly benefited the *rubbi* crops. Mustard is being harvested in places Prospects of poppy continue good. Common rice selling at 19 seers per rupee.
30	Mozufferpur „ 1, '90	0·06	Weather—seasonable. All standing crops doing very well. Mustard being cut. Prospects of poppy good, except the late sowings in Hajipur.
	Hajipur ...	0·05	
	Sitamarhi ...	0·39	
31	Sarun „ 1, '90	Nil	Weather—clear and cold; very seasonable with west winds. *Rubbi* prospects excellent. Poppy rather backward, but fair. Sugarcane pressing going on.
32	Chumparun „ 1, '90	Nil	Weather—cold, with passing clouds. Rainfall of the past week has been decidedly beneficial to all crops, and has caused no damage to wheat according to latest reports. Early poppy plants coming into flower. Prices stationary.
33	Monghyr „ 1, '90	Nil	Weather—cool and cloudy at times. *Rubbi* crops doing well, but want rain, especially in the Begusarai subdivision, where the standing crops on high lands do not look very promising, and mustard has been damaged by *lahi* insects. Poppy flowering.
Bhagulpore Divn. 34	Bhagulpur „ 1, '90	Nil	Weather—cool with west winds. Prospects of crops promising, but rain wanted for wheat. Mustard harvested; yield about 12 annas. Linseed flowering and weather favourable.
35	Purneah „ 1, '90	Nil	Weather—cold. Mustard still being harvested with good outturn. Tobacco and other *rubbi* crops have benefited, especially in Kissengunge, from recent rain. Tobacco a good crop. Ploughing going on.
	Kissengunge (on 24th Jan.)	1·30	
	Arrarcah (ditto)	0·14	
36	Maldah Feb. 1, '90	Nil	Weather—somewhat colder. Gathering of *kalai* and mustard continues; in thana Kharba it is just over. Other *rubbi* crops (wheat, barley, gram, &c.) doing well, but require rain. Transplantation of *boro* paddy going on. Common rice selling at an average of 17 seers per rupee
37	Sonthal Pergha. „ 1, '90	Nil	Weather—very cold and dry; warm in the day time. *Rubbi* crops doing well. Mustard is a short crop in Pakour, estimated at 8 annas. Mungoes are in blossom.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.			
Orissa Divn. 38	Cuttack Feb. 1, '90	Nil	Weather—seasonable. Estimated outturn of *guru sarad* is as follows :— Jajpore ... ... 17 annas. Kendrapara ... ... 12 „ Sudder ... ... 13 „ On the whole a 14-anna crop has been reaped over the whole district.
Orissa Divn. 39	Pooree ...	...	Report not received.
Orissa Divn. 40	Balasore „ 1, '90	Nil	Weather—unusually cold. Outturn of *guru* rice estimated at 14 annas in the Bhuddruck subdivision and 11 annas in the Sudder subdivision. Outturn of *rubbi* crops averages generally about 12 annas.
CHOTA NAGPORE. *South-West Frontier Agency.*			
Chota Nagpore Divn. 41	Hazaribagh Feb. 1, '90	Nil	Weather—seasonable. Crops in good condition everywhere.
Chota Nagpore Divn. 42	Lohardugga „ 1, '90	Nil	Weather—seasonable; mornings very chilly. Prospects of *rubbi* crops good at head-quarters. In Palamow they are somewhat affected by want of rain.
Chota Nagpore Divn. 43	Singbhoom „ 1, '90	Nil	Weather—seasonable. Prospects of winter crops favourable. Prices stationary.
Chota Nagpore Divn. 44	Manbhoom „ 1,, '90	0·06	Weather—cold. Mustard fully harvested, with 16 annas outturn. Sugarcane being pressed; outturn about 10 to 12 annas. *Rubbi* crops doing well; probable outturn 14 annas. Price of rice falling.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 4th February, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from 26th January to 1st February 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature.				Hygrometry.				Wind.		Rain.	Weather.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1890.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Jan.	26th	129·5	9·6	29·931	63·9	71·6	16·4	55·2	57·2	0·384	51·6	66	NNW and NNE ..	75	Nil	Clear, D.
,,	27th	130·4	9·3	·932	60·5	71·3	20·9	50·4	52·9	·304	45·4	60	N by E, WNW and calm	47	,,	Clear, D.
,,	28th	131·7	9·6	·976	60·1	73·4	25·8	47·6	52·9	308	45·7	63	NNW and calm ...	42	,,	Chiefly clear D.
,,	29th	132·3	9·4	30·041	61·9	73·3	22·9	50·4	52·7	·277	42·9	53	NNE and NNW ...	119	,,	Clear, D.
,,	30th	131·0	9·5	·011	63·8	75·8	23·2	52·6	55·9	·346	48·8	60	N and NNE ...	81	,,	Clear.
,,	31st	130·2	9·6	·042	64·2	76·2	22·7	53·5	57·0	·370	50·6	69	NNE and N ..	61	,,	Clear, D.
Feb.	1st	132·6	9·4	·068	64·1	76·7	24·7	52·0	55·9	338	48·2	60	NNE and N by W .	53	,,	Clear, D.

		Inches.
The mean pressure of the seven days		30·000
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...		29·994
		Hours.
The total number of hours of bright sunshine		66·4
The maximum possible number of hours of sunshine		77·4
		°
The mean temperature of the seven days		62·6
The average temperature of the corresponding period for 24 years, S.-G.'s Office		68·8
The extreme variation of temperature		29·1
The maximum temperature		76·7
		Miles.
The highest velocity of the wind in one hour		10
		lbs.
The highest pressure of wind on one square foot		Not measurable.
		%
The mean relative humidity		62
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office		71
		Inches.
The total fall of rain from 26th January to 1st February 1890		Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		0·26
The total fall from 1st January to 1st February 1890		0·77
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		0·45

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

D. dew.

C. Little,

For Meteorological Reporter to the Govt. of India.

Meteorological Office, Govt. of India;

Calcutta, the 3rd February 1890.

Meteorological Report of the Province of Bengal

District.	Representative station.	STATION OBSERVATIONS.														
		Air pressure.			Wind.		Temperature.									
		Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean, 8 A.M., temperature.
Pooree	Pooree ...	30·002	30·015	—	N	204	84·7	25th Jan.	53·0	28th, 30th Jan.	80·8	66·0	68·9	—	61·9
	Gopalpore	29·992	30·019	+·010	NNW	305	84·2	26th ,,	55·0	31st ,,	79·8	66·7	70 3	−1·6	66·0
	False Point ...	30 006	30·028	−·043	NW	202	83·9	25th ,,	50 0	27th, 28th Jan.	76 6	54·1	65·4	−4·7	59·2
Cuttack	Cuttack ...	29·959	30 045	−·009	NW	31	88·4	25 h ,,	50·0	28th, 30th Jan.	82·2	55·5	68·8	−4·3	59 8
Balasore	Balasore ,,	29·987	30 049	−·016	NNW	124·7*	86·4	25th ,,	46·9	28th ,,	79·2	51·7	65·5	−3·0	57·3*
South-West Midnapore / South 24-Pergunnahs	Saugor Island	30 003	30 080	−·024	N & NNE	285	81 7	25th ,,	51·7	28th, 29th Jan.	75·1	56·7	65 9	−3·4	60 7
Midnapore	Midnapore ,,	29 883	30·043	−·035	N	33·3	87·3	25th ,,	46·1	28th ,,	79·4	51·3	65·4	−2·3	58·3
24-Pergunnahs ... ... / Howrah ... ... / Hooghly	Calcutta	30·008	30 031	−·015	Northerly	89 0	81 5	25th ,,	47·8	28th ,,	74·7	53·2	64·0	−3·3	58·1
Burdwan	Burdwan	29 931	30 038	− 032	North-westerly.	56·1	85·0	25th to 28th Jan.	46·7	28th ,,	81·3	51·8	66·6	−0·7	57·1
Bankoora ...	Bankoora ,,	2·°701	30·026	− ·034	Westerly	65	86·0	25th ,,	46·2	27th ,,	77·3	50·8	64 1	−2 7	55·2
Beerbhoom ... ... / West Burdwan	Ranneegunge	29·701	30·056	−·019	NW	84·9	85·5	25th ,,	46·7	29th ,,	78·1	50·5	64·4	−2·3	56·2
Moorshedabad	Berhampore..	29·955	30·027	− 038	NW	65·2	81·6	25th ,,	47·1	28th ,,	75·7	50·6	63·1	−2·5	53·9
Nuddea	Krishnaghur ..	29·984	30·054	−·037	WNW	92·5	84·5	25th ,,	45·8	27th, 29th Jan.	77·2	49·3	63·2	−2·0	56·5
Jessore ... ... / Khoolna	Jessore .	29·982	30 018	- ·038	NNW	48·8	81·2	25th ,,	43·4	29th ,,	76 0	54·0	65·0	−1·4	56·5
Chittagong	Chittagong ,,	29 905	30·0·0	- ·060	Calm	48·8	80·6	25th ,,	50 2	28th ,,	75 9	55·3	66 1	−0 8	60·3
Chittagong Hill Tracts	Demagiri	Observations not received.													
Backergunge	Barrisal .	29·932	30·005	−·036	North-westerly.	55·0	79·3	25th Jan.	48·1	28th ,,	74·4	53 9	64·2	−0 7	60·9
Noakholly	Noakholly ..	29·954	30·000	—	N	89·8	79·0	26th, 31st Jan.	46·0	28th ,,	77·3	51·3	64·3	—	59·9
Furreedpore	Furreedpore..	29 978	30 029	− 025	N	57·0	73 5	31st ,,	49·0	28th, 29th Jan.	72·2	53·4	62·8	−1·5	57·5
Dacca	Dacca ,,	29 970	29 994	−·057	NNW	86·8	80·6	25th ,,	48·2	28th ,,	76·0	53 1	64 6	−2·2	58·8
Tipperah	Commillah	29·°70	30 007	−·035	NE	51·0	78·9	25th ,,	48·1	28th, 30th Jan.	75·0†	52·7	64·2†	−1·0	58 7
Mymensingh	Mymensingh	29·947	30·0·9	−·037	Variable	42 8	77 4	31st ,,	48 8	30th ,,	73·5*	51·7	63·0*	−0 7	55·9
Bogra	Bogra	29·922	29·°60	−·035	North-westerly.	43·4	77·5	31st ,,	45·5	28th ,,	73·4	50·3	61·9	−3·5	54·6
Pubna	Serajgunge .	29·953	30·002	− 045	SW	51 2	79·0	25th ,,	45·0	28th ,,	75·0	50·0†	62·2†	−1·4	55·5
Rajshahye	Rampore Boaleah.	29 916	30 020	− 017	N	117·3	79·1	25th ,,	44·9	27th ,,	74·8	49 6	62·2	−0·6	55 0
Maldah	Maldah ...	29·943	30·030	—	NW	85·4	76·7	31st ,,	42·9	27th, 28th Jan.	74·4	47·1	60·7	—	56·4
Dinagepore	Dinagepore	29 897	30·027	−·035	SW	54·0	77·1	31st ,,	43·9	28th ,,	73 2	47·4	60 3	−2·6	53·4
Rungpore	Rungpore	29 896	30 031	−·007	ENE	21·0	77 6	31st ,,	41·2	27th ,,	72·7	47·3	60·0	−1·4	53·2
Julpigoree ... .. / Cooch Behar	Julpigoree ...	2 ·713	30 021	−·017	Northerly	89·5	?	?	41·0	28th ,,	?	46·0	?	?	53·0
Darjeeling Hill Tracts ...	Darjeeling	22·844	—	—	WSW	144·7	53·3	25th to 31st Jan.	29·1	28th ,,	53·3	32·7	43·0	+4·0	36 2
Purneah .. .. / North Bhagulpore ...	Purneah ..	29·900	30·037	−·026	Calm & westerly.	58·5	76·4	27th ,,	40·5	28th ,,	72 7	44·4	58·5	−2·7	49 8
Mozufferpore	Mozufferpore	Observations suspended.													
Durbhunga	Durbhunga ,,	29·867	30 047	−·029	W	82	75·4	25th, 31st Jan.	45·8	27th ,,	73·2	49·0	61·1	−1·2	54·0
Dhumparun .	Motihari ,,	29·790	30·042	−·014	Variable	126·0	75·7	25th ,,	41·0	28th ,,	72·1	45·3	58·7	−1·1	51·3
Sarun ...	Chupra ..														
Shahabad	Dehree ..	29·698	30·081	−·002	SSW	179·4	77·8	25th ,,	44·0	28th ,,	74·4	48·1	61·3	−0·4	52·6
	Buxar ..	29·808	30·071	−·001	W	118 6	78 9	25th ,,	41·0	28th ,,	74·1	45·5	59·8	−2·2	52·3
	Arrah ..	29 840	30·052	−·002	WSW	91·1	78·6	25th ,,	41·9	29th ,,	73 7	44·9	59·3	−1·6	50·6
Gya	Gya ..	29 904	30·069	−·025	W & S	140·3	76·1	25th ,,	47·9	29th ,,	73·9	51·0	62·5	−2·0	53 3
Patna .. .	Bankipore ..	29 858	30·050	−·028	W	67·4	76·7	25th ,,	45·3	29th ,,	72·9	47·0	59·9	−1·7	54·0
South Bhagulpore / Monghyr . ..	Bhagulpore ...	29·856	30·030	−·027	Calm	21	76·3	31st ,,	39·2	28th ,,	73·9	40·9	60·4	−1·9	52·7
Sonthal Pergunnah ...	Doomka ..	29·607	30·°43	—	NW	71·4	80·3	25th ,,	42·4	29th ,,	75·0	47·4	61·2	—	53·7
Hazaribagh	Hazaribagh	27 951	30 0·7	−·031	North-westerly.	238·4	76 4	25th ,,	42·9	27th ,,	70 9	46·4	58 6	−3·6	52·8
Lohardugga ... ... / Manbhoom	Ranchee ..	2·°825	30 0·6	−·029	Calm	122·7	77·3	25th ,,	37·9	27th ,,	70·8	44·6	57·7	−4·3	52·6
Singbhoom	Chyebassa ..	29·261	30·067	—	South-westerly.	29·1	85·0	25th ,,	44·0	28th ,,	75·3	48·1	63·2	—	58·0†

* Means of six days. † Means of five days.

...nation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the last ...6 *humidity* of the atmosphere is expressed as percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10., The number ...s numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the past ...s in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell,

the week ending Friday, the 31st of January 1890.

at 9 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	OF WEEK. Mean for district.	OF WEEK. Normal mean.	DISTRICT OBSERVATIONS. RAINFALL. Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since 15 h May 1889. Mean for district.	Since 15 h May 1889. Normal mean.	Since 15 h May 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Divisions.
73	1·3	0·10	0·06	0·17	0·16	0·31	−0·25	74·94	55·48	+19·46	0·5	0·4	Pooree ...	Pooree	Orissa.
62	0·1	Nil											Gopalpore ...		
79	1·7	0·15											False Point ...		
63	1·6	Nil	0·15	0·20	0·15	0·36	−0·21	66·39	51·91	+14·48	0·4	0·4	Cuttack ...	Cuttack	
67*	0	Nil	0·07	0·25	0·07	0·44	−0·37	49·96	53·04	−3·08	0·2	0·4	Balasore ...	Balasore	
81	1·3	Nil	0·14	0·20	0·14	0·43	−0·29	58·57	62·44	−3·87	0·7	0·4	Saugor Island ...	South-West Midnapore South 24-Pergunnahs	South-West Bengal.
59	0·3	Nil	0·10	0·18	0·10	0·49	−0·39	40·39	5·. 56	−5·17	0·7	0·5	Midnapore ..	Midnapore	
75	0·9	0·77	0·72	0·18	0·72	0 50	+0·22	54·10	51 68	+2·42	1·0	0·5	Calcutta ...	24-Pergunnahs ... ... Howrah ... ... Hooghly	
58	0·3	0·06	0·02	0·17	0·06	0·38	−0 32	43·89	46·69	−2·80	0·3	0·5	Burdwan ...	Burdwan	
63	0	0·06	0·02	0·20	0 05	0·40	−0·35	55·03	52·69	+3·24	0·2	0·4	Bankoora ...	Bankoora	
58	0	0·02	0·01	0·12	0·02	0·44	−0·42	52 46	51·02	+0·84	0·2	0·4	Ranegunge ...	Beerbhoom ... ... West Burdwan	
84	0	Nil	Nil	0·07	0·02	0·44	−0·42	51·17	50·46	+0·71	0·0	0·4	Berhampore ..	Moorshedabad ..	
76	1·4	Nil	0·06	0·14	0·12	0·34	−0·22	51 61	49 23	+2·38	0·2	0·4	Krishnaghur ...	Nuddea	
90	1·6	1·55	1·21	0 18	1·36	0·50	+0·86	54·75	53 17	+1·58	1·0	0·5	Jessore ...	Jessore ... ... Khoolna	
83	1·3	0·76	0 33	0·23	0·55	0·89	−0·33	109 35	113·71	−13·36	0·5	0·5	Chittagong ...	Chittagong	East Bengal.
			Nil	0 23	0·04	0 65	- 0 61	65·17	81·28	−16·11	0·0	0 5	Demagiri ...	Chittagong Hill Tracts	
84	1·1	3 01	0·35	0·22	0·49	0·67	· 0·18	78·31	76·99	+1·32	0·8	0·5	Barrisal ..	Backergunge	
85	0·4	0·15	0·17	0·16	0·53	0 72	−0·19	90·82	106 55	−15 73	1·5	0·6	Noakholly ..	Noakholly	
90	1·4	0·21	0·45	0·17	1·99	0 42	+1 80	62·22	55·83	6·39	0·7	0·5	Furreedpore ...	Furreedpore	
79	1·3	1·10	0·93	0·18	1·37	0·41	+0·96	75·96	59·64	+16·32	1·0	0 5	Dacca ...	Dacca	
86	1·0	0·39	0·58	0 22	1·17	0·67	+0·50	56·02	69 49	−12·87	1·0	0·6	Commillah .	Tipperah	
89	1·9	0·24	0·04	0·1.	1 15	0·38	+0·77	88·78	67·59	+21 19	1 0	0 4	Mymensingh .	Mymensingh	
81	0	0·63	0·39	0·09	0·81	0·36	+0 45	65 02	57·29	+8·31	1·0	0·3	Bogra ...	Bogra	North Bengal.
56	1·4	0 17	0·09	0·13	0 30	0·41	−0·11	55·37	53 33	+2·04	0·5	0 4	Serajgunge .	Pubna	
76	0·1	Nil	Nil	0·18	0 05	0·60	−0·55	54·35	53·92	+0 43	0·0	0 4	Rampore Beauleah	Rajshahye	
73	0	Nil	Nil	0·12	Nil	0·48	−0 48	39·76	54 23	−14 47	0·0	0·5	Maldah ...	Maldah	
82	0·3	0·30	0·12	0·27	0·12	0·56	−0·44	57·49	57 16	+0·33	0·4	0·4	Dinagepore ...	Dinagepore	
86	0	0·10	0·21	0·19	0·71	0·50	+0 21	85 87	74 22	+11·65	0·5	0·5	Rungpore ...	Rungpore	
90†	0	Nil	0·04	0·30	0·00	0·54	+0·06	117·73	111·74	+5 99	0·4	0·5	Julpigoree ..	Julpigoree ... ... Cooch Behar	
78	5·3	0·70	0 19	0·46	0·71	0·99	−0·28	133·46	121·27	+12 19	1·0	1·0	Darjeeling ..	Darjeeling Hill Tracts	
85	0	0·02	Nil	0·15	0·29	0·49	−0·20	75·00	58·63	+16·37	0·0	0·4	Purneah ..	Purneah ... ... North Bhagulpore	North Behar.
			0·06	0·25	0·17	0·67	−0·50	48·83	43 28	+5 55	1·0	0·4	Mozufferpore ...	Mozufferpore	
73	1·4	0·23	0·13	0·22	0·27	0·64	−0·37	52·11	44 68	+7 43	1·0	0·4	Durbhunga ...	Durbhunga	
81	0	0 45	0·03	0·28	0·41	0·68	−0·27	63·96	46·81	+17 15	0 5	0·5	Motihari ..	Chumparun	
			Nil	0·36	Nil	0·76	−0·76	40·13	42·97	−2 84	0 0	0 5	Chupra ...	Sarun	
36	0	Nil											Dehree ...		
59	0·7	Nil	Nil	0·13	Nil	0·07	−0·67	40·07	40·27	−0·20	0·0	0·5	Buxar ...	Shahabad	
54	0·9	Nil											Arrah ..		
83	0	Nil	Nil	0 22	Nil	0·09	−0·69	37·07	41 58	−4·51	0·0	0·5	Gya ...	Gya	South Behar.
59	0·9	Nil	Nil	0·18	Nil	0·58	−0·58	43·49	41 36	+2·13	0·0	0·5	Bankipore ...	Patna	
69	0	Nil	Nil	0·19	Nil	0·56	- 0 56	42·43	43·64	−1·21	0·0	0·5	Bhagulpore ...	South Bhagulpore ... Monghyr	
63	0	Nil	Nil	0 07	Nil	0·37	−0·37	54·15	50·71	+3·44	0·0	0·4	Doomka ...	Sonthal Pergunnahs...	
46	0	Nil	Nil	0·18	Nil	0·03	−0·03	47·03	50·74	−7·71	0·0	0·4	Hazaribagh ...	Hazaribagh	Chutia Nagpur.
48	0	0·01	Nil	0 20	Nil	0·80	−0·80	44·84	49·44	−5·10	0·0	0·4	Ranchi ...	Lohardugga	
			0·03	0·17	0·03	0·49	−0·46	58·36	46·94	−8·58	0·5	0·4		Manbhoom	
50	0·6	Nil	Nil	0·29	Nil	0·72	- 0·72	48·76	51·50	−2·74	0·0	0·6	Chyebassa ...	Singbhoom	

n years. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
noting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
years. The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at the subdivisional

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 31st of January 1890.

Meteorological division.	District.	Station.	Rainfall.							Total		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Aver rain from May dat
			Saturday, 25th January.	Sunday, 26th January.	Monday, 27th January.	Tuesday, 28th January.	Wednesday, 29th January.	Thursday, 30th January.	Friday, 31st January.	Number of rainy days.	Rainfall of week.				
Orissa ...	Pooree ...	Pooree ...	0·08	.....	.....	.....	.....	.....	.....	1	0·08	0·08	0·24	80·71	51
		Khurdah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	76·57	50
		Banpur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	65·30	40
		False Point ...	0·15	.....	.....	.....	.....	.....	.....	1	0·15	0·20	0·63	77·09	63
		Gop ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?		
		Pipli ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?		
	Cuttack ...	Jagatsingpore	0·52	.....	.....	.....	.....	.....	.....	1	0·52	0·52	0·35	74·49	47
		Banki ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	52·43	40
		Cuttack ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	76·18	50
		Kendrapara ...	0·21	.....	.....	.....	.....	.....	.....	1	0·21	0·21	0·44	72·24	53
		Jajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	57·04	53
		Dharmsala ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50·25	
		Salipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	
	Balasore ...	Chandbali ...	0·40	.....	.....	.....	.....	.....	.....	1	0·40	0·40	0·51	55·04	52
		Bhuddruck ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	57·06	51
		Sorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	46·05	51
		Balasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	49·61	57
		Jellasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·73	39·59	53
		Baripodah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	54·79	53
South-West Bengal.	Midnapore ...	Contai ...	0·05	.....	.....	.....	.....	.....	.....	1	0·05	0·05	0·29	53·18	61
		Sangor Island ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	56·74	67
		Tumlook ...	0·20	.....	.....	.....	.....	.....	.....	1	0·20	0·20	0·39	49·60	51
		Midnapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·59	46·26	48
		Ghattal ...	0·11	.....	.....	.....	.....	.....	.....	1	0·11	0·11	0·50	43·30	54
		Kulrahaty ...	0·19	.....	.....	.....	.....	.....	.....	1	0·19	0·19	?	59·84	
		Bhagwanpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·72	
		Garbetta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	
	24-Pergunnahs	Diamond Harbour ...	0·38	.....	.....	.....	.....	.....	.....	1	0·38	0·38	0·65	63·79	58
		Canning Town	0·05	.....	.....	.....	.....	.....	.....	1	0·05	0·05	?	57·85	
		Alipore Jail ...	1·07	.....	.....	.....	.....	.....	.....	1	1·07	1·07	0·68	52·87	55
		Barrackpore ...	0·33	.....	.....	.....	.....	.....	.....	1	0·33	0·53	0·46	52·12	49
		Dum-Dum ...	0·85	.....	.....	.....	.....	.....	.....	1	0·85	0·85	0·58	65·43	51
		Baraset ...	1·10	.....	.....	.....	.....	.....	.....	1	1·10	1·10	0·61	58·71	49
		Basseerhat ...	1·49	.....	.....	.....	.....	.....	.....	1	1·49	1·49	0·43	62·41	54
	Howrah ...	Howrah ...	0·52	.....	.....	.....	.....	.....	.....	1	0·52	0·52	0·58	59·64	51
		Mohosreka ... (*Ooloberiah.*)	0·40	.....	.....	.....	.....	.....	.....	1	0·40	0·40	0·50	55·04	52
	Hooghly ...	Serampore ...	0·36	.....	.....	.....	.....	.....	.....	1	0·36	0·36	0·43	55·03	50
		Hooghly ...	0·61	.....	.....	.....	.....	.....	.....	1	0·61	0·61	0·38	57·53	48
		Jehanabad ...	0·45	.....	.....	.....	.....	.....	.....	1	0·45	0·45	0·39	41·61	55
	Burdwan ...	Culna ...	.....	.....	.....	.....	.....	.....	.....	Nil.	Nil	Nil	0·39	41·32	44
		Burdwan ...	0·06	.....	.....	.....	.....	.....	.....	1	0·06	0·18	0·30	47·25	47
		Cutwa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	43·11	47
		Ranegunge ...	0·02	.....	.....	.....	.....	.....	.....	1	0·02	0·07	0·38	55·90	49
		Mankur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·00	?	53·80	
	Bankoora ...	Bankoora ...	0·07	.....	.....	.....	.....	.....	.....	1	0·07	0·07	0·34	50·36	51
		Bishenpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	57·49	51
		Mahara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·11	0·35		51
		Khatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	65·91	54
		Indas ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	
		Kotalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	
		Auda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·44	
		Gangajalghati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50·17	
		Raipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	
		Sonamukhi ...	0·11	.....	.....	.....	.....	.....	.....	1	0·11	0·11	?	54·44	
	Beerbhoom ...	Bh. Soory ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	59·06	51
		Hetampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·50	47·07	54
		Rampore Haut ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·53	47·78	51
		Bolpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·07	?	55·04	
		Murarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	
	Nuddea ...	Ranaghat ...	0·30	.....	.....	.....	.....	.....	.....	1	0·30	0·30	0·45	56·10	47
		Kishnaghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	42·95	46
		Chooadanga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·05	0·30	40·86	50
		Meherpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·10	0·29	53·15	47
		Koositea ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·15	0·36	56·06	54
	Khoolna ...	Satkhira ...	2·03	.....	.....	.....	.....	.....	.....	1	2·03	2·03	0·40	54·54	55
		Bagerhat ...	0·98	.....	.....	.....	.....	.....	.....	1	0·98	1·48	0·69	55·48	61
		Khoolna ...	0·79	.....	.....	.....	.....	.....	.....	1	0·79	1·04	0·63	56·88	54
		Nakipur ...											?		
		Rampal ...	0·37	.....	.....	.....	.....	.....	.....	1	0·37	0·37	?	?	
	Jessore ...	Narail ...	2·51	.....	.....	.....	.....	.....	.....	1	2·51	2·54	0·63	52·01	45
		Jessore ...	1·55	.....	.....	.....	.....	.....	.....	1	1·55	1·55	0·60	63·90	54
		Jhenidah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·18	0·36	50·74	53
		Mugoorah ...	0·17	.....	.....	.....	.....	.....	.....	1	0·17	0·42	0·29	56·90	49
		Bongong ...	1·63	.....	.....	.....	.....	.....	.....	1	1·63	1·63	0·34	47·64	51
	Moorshedabad ...	Kandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	55·38	51
		Berhampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·12	0·69	46·28	51
		Lalbagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	47·13	50
		Azimgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·55	?	51
		Jungipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·45	55·01	49
		Lalgola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·55	59·02	50
		Jiagunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·04	?	43·20	?
		Akhriguni ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·25	?	43·06	?
		Patkabari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·10	?	?	?
East Bengal	Chittagong ...	Cox's Bazar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·77	123·89	135
		Chittagong ...	.....	0·66	.....	.....	.....	.....	.....	1	0·66	0·66	0·62	77·08	94
		Kutubdia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113·09	?
		Sarkanya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	63·06	?
	Chittagong Hill Tracts.	Rangamati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·08	0·60	63·12	63
		Rama ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	67·20	80
	Backergunge ...	Patuakhally ...	0·46	.....	.....	.....	.....	.....	.....	1	0·46	0·46	0·67	67·66	67
		Perozepore ...	0·43	.....	.....	.....	.....	.....	.....	1	0·43	0·48	0·69	72·64	70
		Burrisal ...	0·50	.....	.....	.....	.....	.....	.....	1	0·50	0·59	0·78	73·21	67
		Bhola ...	0·41	.....	.....	.....	.....	.....	.....	1	0·41	0·42	0·56	79·03	82

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 31st of January 1890—contd.

Meteorological Division.	District.	Station.	Rainfall: Saturday, 25th January 1890.	Sunday, 26th January.	Monday, 27th January.	Tuesday, 28th January.	Wednesday, 29th January.	Thursday, 30th January.	Friday, 31st January.	Total: Number of rainy days.	Total: Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
ST BENGAL—*concld.*		*Gournadi*	.....	.....	.. .	.....	.....	.....	.....	Nil	Nil	Nil	?	61 31	?
		Bauphal	0·23	.....	.....	.....	.. ...	. ...	.....	1	0·23	0·23	?	93·12	?
	Noakholly ...	Noakholly	0·12	0·02	. ....	.....	...	.....	.....	2	0·14	0·41	0·61	102·58	107·80
		Feuny	0·20	.. ...	.....	.....	. ....	.....	.....	1	0·20	0·65	0·81	79·03	106 72
		Harishpore ...	0·36	. ...	...	. .	.	.. ..	...	1	0·36	0·36	?	83·32	?
		Ramganj	....	.....	.....	.. ...	.....	...	.. ..	Nil	Nil	Nil	?	86·75	?
	Furreedpore	Madaripore	1·13	.....	.. .	.....	.. ...	.....	.. ...	1	1·13	2·12	0·61	62·98	55·35
		Furreedpore..	.....	.....	...	.....	.....	.....	.....	Nil	Nil	1·80	0·34	65·60	56·26
		Goalundo	0·21	.....	.....	.....	.....	.....	.....	1	0·21	1·76	0·98	58·05	52·94
	Dacca ...	Munchirunge	0·58	.....	.....	.....	... ..	.....	.. ..	1	0·58	1·18	0·52	77·51	70·08
		Dacca	2·54	.....	.. ...	.....	.....	.....	.....	1	2·54	2·76	0 34	76·45	58·38
		Narainunge	0·34	. ...	.. ...	... ..	.....	.....	... .	1	0·34	0·78	0·33	81·14	59·78
		Manickgunge	1·17	.....	. ...	...	.....	... ..	... ..	1	1·17	1·68	0·43	69·67	59·00
		Joydebpore	0 78	.....	... ..	.....	.....	.....	.....	1	0·78	1·94	?	68·55	?
	Hill Tipperah	Agartola ..	0·12	.....	.....	.....	... ..	.....	... ..	1	0·12	0·30	0·64	44·38	61·51
	Tipperah ...	Comilla ..	0·35	....	. ...	...	... ..	.....	. ...	1	0·35	0·80	0·68	62·97	76·11
		Chandpore .	0·60	.....	. ...	... .	. .	.....	.. ..	1	0·60	1·15	0·54	65·97	75·79
		Brahmunberia	1·25	.. ..	. ...	.. .	. .	.....	.....	1	1·25	2·44	0·79	53·12	61·71
		Ramchandra-pore.	0 39	.. ..	.....	..	...	.....	.....	1	0·39	0·08	?	60·84	?
		Nasirnagar ...	1·50	.. ..	.. ..	.. .	.....	... ..	.. ..	1	1·50	1·80	?	32·30	?
		Daudkandi	0 72	.. .	.. ..	... ..	.....	... ..	... .	1	0·72	1·44	?	53·74	?
		Kasba ..	.....	.. .	.....	... ..	. .	..	.. ..	Nil	Nil	Nil	?	62·44	?
		Laksham ..	0 09	.....	.. ..	.....	. .	.....	.....	1	0·09	0·39	?	60·18	?
	Mymensingh.	Kishoregunge	1·24	.. .	. ...	.. .	..	...	.	1	1·24	1·21	0·59	70·80	70·12
		Atia (*Tangail*	0·85		.. ..	.. ..	. .	. ...	...	1	0 85	1·19	0 45	62·09	55·1
		Mymensingh	0·22		. ..	.. ..	. .			1	0·22	1·38	0·35	97·03	73·98
		Jamalpore	0·53		. .	. .	. .			1	0·53	0·87	0·43	86·01	68·16
		Netrokona	0 35	. .	.. ..	. .	. ...			1	0 35	0·5	0·13	126·47	78·74
		Subornakhali	....	.....	.. ..	.. .	.....	.. ..	.. ..	Nil	Nil	Nil	?	57·43	?
		Durgapore ...	. . .	....	..	.	.	...	.. ..	Nil	Nil	0·30	?	150·28	?
		ShereporeTown	0·44		....	.	.. ..	.. .	.. ..	1	0·44	1·08	?	88·17	?
		Dewanganj	.. ..	.	.. .		.	.. ..	.. .	Nil	Nil	0·77	?	57·08	?
NORTH BENGAL	Pubna ..	Pubna ..	.....	. .	. .	. .	.	...	.....	Nil	Nil	0·35	0·35	50·20	53·64
		Serajgunge ..	0 17	...	.. .	...	.	.....	.....	1	0·17	0·25	0 46	60·51	52·83
	Bogra ...	Sherepore .	0·01	. .	.. ..	. ...	... .	... .	.. ..	1	0·01	0·01	0·14	62·67	57·12
		Nowkhilla ..	0 34	... .	. .	. .	. .	. .	.....	1	0·34	1·48	0 35	62·44	54·20
		Bogra	0·50	.....	.. .	.	.	.	.. ..	1	0·50	0·70	0·43	71·33	60·50
		Panchbibi	0·70	..	....	... ..	.....	.....	.....	1	0·70	1·02	0·32	65·98	55·72
	Rajshahye ...	Beauleah	..	. .	. ....	. .	...	.....	.....	Nil	Nil	0·14	0·39	40·34	52·91
		Nattore	.....	.	.	. .	. ....	.....	.....	Nil	Nil	Nil	0·61	58·84	54·92
		Naogaon	.....			.	.....	.. .	.. .	Nil	Nil	Nil	0·78	57·87	51 42
		Lalpore ...	..	.....	.. .	. .	. .	.. .	.....	Nil	Nil	Nil	?	36·72	?
		Manda	.....	....	.. .		... ..	.....	.....	Nil	Nil	Nil	?	45·27	?
	Maldah ..	Maldah	.....	...	... ...	...	....	. .	... ..	Nil	Nil	Nil	0·43	50·53	51·72
		Chanchal ..	...	... .	....	. .	....	.....	....	Nil	Nil	Nil	0·51	28·96	56·71
		Gajol ...	.....	..	.. ..	. .	....	.....	.....	Nil	Nil	Nil	?	30·79	?
		Sibganj ..	.....	... ..	.. .	.. .	.	....	.....	Nil	Nil	Nil	?	51·77	?
	Dinagepore .	Mohadelpore	.....	. ..	. ...	...	.....	. ..	.....	Nil	Nil	Nil	0·57	53·63	56 39
		Churamon ..	.....	.....	... ..	.. ...	..	.. ..	.. .	Nil	Nil	Nil	0·66	51·82	53 58
		Raigunge .	0·12	.	....	..	.....	....	....	1	0 12	0·12	0·77	52·37	57·83
		Dinagepore ..	0·49	....	. ...	..	..	....	.....	1	0 49	0 49	0 40	68·33	63 82
		Balcorehat	.....	.....	.. ...	.. ...	...	.....	.....	Nil	Nil	0·01	0·62	61·29	51 52
		Thakoorgaon	.....	.. ..	.. ..	.. .	. .	.....	.. ..	Nil	Nil	0·34	?	87·81	?
	Rungpore ..	Bhawaniguuge (*Gyabanda*)	0·64	.. .	.. ..	.. ..	.. ..	.....	.....	1	0·64	0·84	0·37	88·39	61·96
		Rungpore ..	0·20	. ..	..	.....	.. ..	...	.....	1	0·20	0·57	0 59	74·98	74·55
		Kurigram ..	.....	.....	.....	....	....	....	. ..	Nil	Nil	0·65	0 51	91 03	73·34
		Bagdogra (*Nilphamari*).	.....	.....	.....	. ....	.. .	.. .	.. ..	Nil	Nil	0·80	0·50	88·40	85 14
		Ulipore ...	.....	.....	. .	.. .	.....	.....	.....	Nil	Nil	0·10	?	79·10	?
	Julpigoree ..	Julpigoree ...	...	. ..	....	.. .	.. ..	.. ..	.....	Nil	Nil	0·18	0 55	123·45	117 00
		Alipore Door	.....	. ..	.. .	.. .	.....	.....	.....	Nil	Nil	Nil	?	119·58	?
		Fallacotta ...	.....	.....	.....	.. .	.....	.. .	.....	Nil	Nil	0·80	?	128·23	?
		Debiganj	.....	.....	....	.....	.....	. ..	.. ..	Nil	Nil	1·02	?	90·04	?
		Bhagalpore (Nagrakatta).	.....	....	...	.....	...	.. ..	.....	Nil	Nil	0·71	?	139·22	?
	Cooch Behar	Dinhatta	0·16	.....	.. .	.. ..	.....	.....	.. ..	1	0·16	0·63	0·07	98·83	96 39
		Cooch Behar..	.....	....	. ....	.....	.....	.....	.....	Nil	Nil	0·85	0·44	125·89	118·30
		Mekiligunge..	0·03	...	.....	.....	.....	.....	.....	1	0·03	1·03	0·53	122·40	105·74
		Mashkhanga...	.. ..	.. .	.. ..	....	.....	.....	.....	Nil	Nil	0·40	0·48	118·03	111·44
	Darjeeling Hill.	Buxa .	0 03	0·04	. ..	.. ..	.. ..	.. ..	.....	2	0·07	1·28	1·14	102·37	192·85
		Silliguri .	0·24	.....	.....	.....	.. ..	.. ..	.....	1	0·24	0·31	0 90	121·02	103 40
		Darjeeling ..	.....	.....	.....	.....	.. ..	...	.....	Nil	Nil	0·40	0·03	128·27	108 75
		Kalimpong	0·43	.....	.. ..	.....	.....	.....	.....	1	0·43	0·79	1·31	92·15	83 97
		Kurseong ...	.. ..	.....	.....	.....	.....	.....	.....	Nil	Nil	1·98	?	170·23	?
NORTH BEHAR	Purneah ...	Kissengunge..	. ..	.. ..	. ..	.....	.....	.....	. ....	Nil	Nil	1·30	0·62	103·67	70·43
		Arrareah ..	.....	.....	.....	.....	. .	. .	. ....	Nil	Nil	0·14	0·42	79·75	63 45
		Purneah .	.....	.....	.....	.....	.. .	. .	. ....	Nil	Nil	0·02	0·45	63·47	61 00
		Gondwara ...	.....	....	...	....	. .	.. .	.....	Nil	Nil		?		?
		Balarampore	.....	.....	.....	.....	. ..	. .	.. ..	Nil	Nil		?		?
		Maniari ..	.....	....	.....	.....	.. .	..	. ....	Nil	Nil		?		?
		Kalsagunj ...	.....	.....	.....	.....	. .	.....	. .	Nil	Nil	0·20	?		?
	North Bhagulpore.	Maddapore ..	.....	.....	.....	.	.....	.. ..	.....	Nil	Nil	Nil	0·47	60·85	49·5
		Scopool ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	67·26	48·18
		Protabganj ...	.....	.....	.....	.. ..	.....	.....	.....	Nil	Nil	0·31		88·16	
	Durbhunga ...	Lajpore ...	0·13	. ....	.. ..	.....	.....	.....	.. ..	1	0·13	0·13	0·65	42·57	43 23
		Durbhunga ...	0·23	.....	.....	..	.	.....	.....	1	0·23	0·23	0·52	50·24	45 86
		Madhubani ...	0·4	.....	...	.....	...	.....	.....	1	0·04	0·45	0·76	63·56	45·08
		Bahera ...	.....	.....	.. ..	.....	...	.. ..	.....	Nil	Nil	Nil		69·90	
		Rashera ...	.....	.....	.....	.. .	.. ..	.....	.. ..	Nil	Nil	Nil		65·84	
	Mozufferpore	Sitamarhi .	0·16	.....	.. ..	.....	.....	.....	.....	1	0·06	0·30	0·55	55·43	45·12
		Mozufferpore	0·06	.. .	.. ..	.. ..	.. ..	.....	.....	1	0·06	0·06	0·81	48·47	45 58
		Hajipore ...	0·05	.....	.....	.. ..	.....	.. ..	.....	1	0·05	0·05	0·65	42·57	42·05
		Pare ...	.....	.. ..	. ..	.....	.	.. ..	.....	Nil	Nil	Nil	?	37·69	?
		Mahua ...	.....	.....	.. ..	.. .	.....	.....	.....	Nil	Nil	Nil	?	41·02	?
		Sirhar ...	0·10	.....	.....	.....	.....	.....	.....	1	0·10	0·40	?	?	?
		Pupri ...	.....	.....	.....	.....	.....	.....	.. ..	Nil	Nil	0·54	?	48·14	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 31st of January 1890 —co

Meteorological Division.	District.	Station.	Rainfall.							Total.		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	A r (fr
			Saturday, 25th January.	Sunday, 26th January.	Monday, 27th January.	Tuesday, 28th January.	Wednesday, 29th January.	Thursday, 30th January.	Friday, 31st January.	Number of rainy days.	Rainfall of week.				
North Behar —concluded.	Chumparun	Motihari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·54	0·66	75·33	
		Bettiah	0·06	.....	.....	.....	.....	.....	.....	1	0·06	0·28	0·69	52·67	
		Bagaha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	0·87	?	70·24	
		Harhurwa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·70	
	Saran	Gopalgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·86	36·48	
		Sewan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·78	44·20	
		Chuprah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·66	40·74	
South Behar	Shahabad	Buxar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·79	47·41	
		Dehree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·72	42·05	
		Bhaboosh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·69	38·16	
		Sasseram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	29·41	
		Arrah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·66	42·60	
		Mohaniah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Gya	Aurungabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·62	36·42	
		Gya	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·60	39·85	
		Nowadah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·70	39·59	
		Jehanabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·74	37·40	
		Arwal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34·34	
		Daudnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	26·60	
		Sherrghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	29·29	
		Rajauli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17·92	
		PakriBarawan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·90	
	Patna	Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·00	31·49	
		Dinapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·56	45·33	
		Behar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·67	41·08	
		Barrh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	35·84	
		Bickram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		41·24	
		Hilsa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		35·21	
	Monghyr	Begoosserai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·59	47·02	
		Monghyr	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·49	41·67	
		Jamui	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	39·48	
		Gogri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·19	
		Sheikpura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·32	
	South Bhagulpore	Bhagulpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·49	45·06	
		Banka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·57	38·34	
		Kolgong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·97	
		Bangaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Sonthal Pergunnahs.	Rajmehal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	59·90	
		Godda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	49·04	
		Pakour	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	73·50	
		Nya Doomka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	56·77	
		Deoghur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	40·10	
		Jamtara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	45·21	
		Mohagama	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	56·41	
		Nawhat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·87	
Chutia Nagpur.	Hazaribagh	Pachamba (*Giridi*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	38·90	
		Hazaribagh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·58	49·10	
		Semtagurah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	36·24	
		Mahudi Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33		
		Jhoomra Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·81	43·00	
		Barhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·46	
		Chatra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·04	
		Karagdeha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		39·35	
		Ramghur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		
	Lohardugga	Lohardugga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·99	45·24	
		Ranchi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·66	53·61	
		Palamow	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·76	54·16	
		Silli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33·80	
		Balumat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Hosseinabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·40	
		Garwah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28·77	
	Singbhoom	Chyebassa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·73	48·76	
		Chakradharpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·80	
		Ghatsilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·70	
		Baharagora	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·80	
	Manbhoom	Purulia	0·06	.....	.....	.....	.....	.....	.....	1	0·06	0·06	0·46	43·52	
		Gobindpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·60	33·19	
		Raghunathpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·91	
		Barrabhoom	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·32	
		Jhalda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·42	
		Chas	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·56	

Explanation.—Indicates that no rain has fallen If the return for any day has not been received, the corresponding space is left blank. are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 4th February* 1890.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 31ST JANUARY 1890.

It was noticed in the report for the previous week that on Friday, the 24th January, a disturbance which had originated in Northern India had commenced to pass over the province, moving in a south easterly direction. The disturbance consisted of an area of low pressure, or perhaps of two distinct areas accompanied by a feeble form of cyclonic circulation of winds. On the Friday there thus appeared to be a tendency to two distinct whirls, one of which had a centre in South Behar, while there was a second in Chutia Nagpur. On the first day of the present week, or on Saturday morning, the 25th instant, the disturbance had again moved in a south-easterly direction, and there was a distinct barometric depression lying over South-East Bengal which was accompanied by a well-marked circulation of winds the centre of which was a little to the south of Dacca. A second feeble depression also appeared to exist off the Ganjam coast, and there also was a tendency to cyclonic circulation along the coast. With the passage of these disturbed conditions through the province, numerous rain showers, in many instances accompanying local storms and in some instances with hail, occurred over the province, and on the 25th rain was generally reported in East Bengal, while very numerous stations in South-West Bengal, North Bengal, and Orissa and a few stations in North Behar also, received rain. On the 26th the disturbance had advanced over Burmah, and rather heavy rain was reported at such stations as Bassein Rangoon, etc., but in Bengal with the disappearance of the depression, weather conditions rapidly improved, and a rather strong northerly wind current set in, bringing with it a great reduction of temperature, the rapid fall of temperature being due to the fact that a moderately heavy fall of snow had been brought to the line of hills to the north and north-west of the province, which caused a cold wave of northerly winds to establish itself completely over the province. So rapid was the fall that the mean temperature of the 24 hours ending at 8 a m of the 26th was at many stations 5°, and at some stations as much as 9° and nearly 10° below the temperature of the previous 24 hours. At this time, therefore, the cold weather conditions set in over the province in a very pronounced form, and they have continued to exist till quite the end of the week. From the 26th, therefore, temperature has been decidedly low, while humidity was also only moderate in amount; pressure became steadily higher, and was by the middle of the week very high, though it fell somewhat towards its close. Skies were almost cloudless, and after the disappearance of the disturbed conditions absolutely no rain fell

Pressure.—Notwithstanding the very high pressure which occurred in the middle of the week after the disappearance of the depression, the mean pressure for the period has been somewhat below the normal at almost all stations. The usual defect has not been larger than about two or three-hundredths of an inch, but at some of the stations in North Bengal it equals four-hundredths, and at Chittagong it even equals six-hundredths of an inch. These larger defects are probably connected with the depression above referred to

Temperature—As stated previously, fell very rapidly on the 26th, and for the remainder of the week it has been decidedly low The mean temperature of the whole province for the week has been 2·4° below the normal, and in such districts as Chutia Nagpur and Orissa the defects have almost equalled four degrees.

The actual temperatures during the week, the range from day to night, and their variation from the normal values are best seen in the following table, where the average maximum, minimum and mean temperatures at nine typical stations in different districts of the province are given, together with the normal values From the figures given it will be seen that the night temperatures have generally been in larger defect than those of the day, and that the mean minimum temperatures of the week have been decidedly low.

The lowest temperature recorded during the week was 37·9° at Ranchi :—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 31st January 1890.

	Normal mean maximum temperature for the week ending 31st January.	Actual mean maximum temperature for the week ending 31st January 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 31st January.	Actual mean minimum temperature for the week ending 31st January 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 31st January.	Actual mean daily temperature for the week ending 31st January 1890.	Variation of actual mean from the normal.
Cuttack	80·2	82·2	−4·0	60·3	55·5	−4·8	73·5	68·8	−4·7
Calcutta	78·1	74·7	−3·4	57·9	53·5	−3·5	67·0	64·0	−3·0
Dacca	79·0	76·0	−3·0	55·5	53·1	−2·4	67·3	64·6	−2·7
Burdwan	78·7	81·3	+1·6	55·4	51·8	−3·6	67·4	66·8	−1·0
Patna	73·3	72·9	−0·4	50·5	47·0	−3·5	61·8	59·9	−1·9
Gya	76·3	73·9	−2·4	52·7	51·0	−1·7	64·5	62·5	−2·0
Purneah	75·1	72·7	−2·4	49·0	44·4	−4·6	62·0	58·5	−3·5
Hazaribagh	73·4	70·9	−2·5	51·4	46·4	−5·0	62·5	58·6	−3·9
Darjeeling	42·8	53·3	+10·5	33·5	32·7	−0·8	38·4	43·0	+4·6

The rainfall of the week has been rather important, and the falls in South-West and East Bengal have averaged about half an inch. In other districts the falls are much smaller, and Orissa and North Bengal only average about a tenth of an inch, while in North Behar it is only about half this. Chûtia Nagpur and South Behar report no rain at all.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 31st of January 1890 :—

Meteorological Divisions.	Temperature						Rainfall									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal Average.	Average	Normal average.
Orissa	88·4	46 9	79·7	55·8	67·8	3·4	0·09	0·21	−0 12	0 3	0 4	−0·1	0·09	0·37	62·10	53·90
South-West Bengal ...	87 3	43 8	77 2	52·1	64 6	−2·3	0·40	0·16	+0·24	0 6	0·5	+0·1	0·44	0·45	52 81	52·01
East Bengal	80·6	46·0	75·1	53·1	64·2	−1·2	0·56	0·18	+0·38	0 9	0·4	+0·5	1·07	0·55	76 69	74 26
North Bengal	79 1	41·2	73·9	48·6	61 2	−1·9	0·13	0·20	−0 07	0·4	0 4	0	0·42	0·50	73 54	70 37
North Behar*	76·4	40·5	72·7	46·2	59·4	−1·7	0·04	0·24	−0·20	0 4	0 5	−0·1	0·23	0 63	57·89	48·82
South Behar	80·3	41·9	74·0	47·3	61·6	−1·6	Nil	0·15	−0·15	0·0	0·4	−0·4	Nil	0 55	44·16	43·89
Chutia Nagpur	77·3*	37 9*	70·9*	45 5*	58·2*	−4·0*	Nil	0·19	−0 19	0·0	0·3	−0·3	Nil	0·65	43 08	49·53

* Chyebassa and Chupra not included.

Meteorological Office, Bengal; *The 4th February* 1890.

A Pedler,
Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 26th January to 1st February 1890.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature						Hygrometry.			Rainfall past 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Jan. 1890 ...	26th ...	30·021	64·7	73·4	17·5	55·9	67 6	57·2	·331	47·6	48	Nil
,, ,, ...	27th ...	·015	61·9	72·9	22·1	50·8	65·1	56·7	·350	49·1	56	.....
,, ,, ...	28th ...	·070	61·4	74·4	26·0	48·4	64·6	54·7	·298	44·8	49	.....
,, ,, ...	29th ...	·131	63·3	74·9	23·2	51·7	66·6	54·7	·272	42·4	41	.....
,, ,, ...	30th ...	·085	64·3	77·1	25·6	51·5	66·6	57·5	·357	49·7	55	.....
,, ,, ...	31st ...	·188	65·9	77·3	22·9	54·4	69·6	59·7	·382	51·5	53	.....
Feb. ,, ...	1st ...	·152	65·5	77·9	24·8	53 1	70 0	61·2	·426	54 5	57	.....

		Inches.
The mean 10 A.M. pressure of the seven days		30·085
		°
The mean temperature of the seven days		63·9
The extreme variation of temperature		29·5
The maximum temperature		77·9
		%
The mean 10 A.M. relative humidity of the seven days		51
		Inches.
The total fall of rain from 26th January to 1st February 1890 ...		Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. Little,
For Meteorological Reporter to the Govt. of India.

Meteorological Office, India;
The 3rd February 1890.

MEMORANDUM.

THE returns from the principal Municipalities in Bengal presented, during the week ending 18th January 1890, the following results :—

1. Births were registered in them at the rates of 23·1 per 1,000 of population, as opposed to very nearly the same proportion, viz., 22·8 per 1,000 in the preceding week ending 11th January, and deaths at 21·8 against 25·9 per 1,000, indicating a falling off in the registration of these events.

2. The following Municipalities returned the highest proportions of births and deaths :—

Births.

	Ratio per *mille.*
Arrah	49·1
Naraingunj	41·4
Monghyr	38·0
Utterpara	37·7
Serampore	37·3
Bali	31 6
Comillah	30·8
Chittagong	30·5

Deaths.

	Ratio per *mille.*
Poori	65·0
Naraingunj	58·0
Jessore	49·0
Ranaghat	47·9
Utterpara	47·2
Serampore...	41·2
Chittagong	37 6
Darjiling	37 0
Burdwan	36·6
Comillah	34·7
Hughli and Chinsurah ...	32·8
Rampore Beauleah	31·5

3. The only noticeable point, in connection with the incidence of the specific death-causes in comparison with the outcome of the preceding week, is a diminution of mortality from fever and the maladies classed under the head of "Other causes"—*vide* subjoined table :—

	Ratio per *mille* during the weeks ending—	
	18th January 1890.	11th January 1890.
Cholera	2·3	2·4
Small-pox	·6	·4
Fever	8 9	11·5
Bowel-complaints	3·1	3 1
Injury	·3	·4
Other causes	6·6	8·1

4. Of the death-causes above indicated, while small-pox continued to prevail with added severity in the Poori Municipality (mortality 18·9 per 1,000 of population, against 14 7 per 1,000 during the preceding week ending 11th January), cholera, fever and "other causes" proved conspicuously fatal in the following Municipalities :—

Cholera.

	Ratio per *mille.*
Jessore	30 6
Naraingunj	20·7
Hughli and Chinsurah ...	9·8
Chittagong	9·4
Dacca	5·2
Howrah	4·6

Fever.

	Ratio per *mille.*
Ranaghat	29·9
Darjiling	29·6

Other causes.

	Ratio per *mille.*
Poori	25·2
Naraingunj	20·7
Comillah	19·3
Serampore	17·7
Burdwan	16 8
Chittagong	11·7

5. The death-rates in relation to *Sex*, *Class* and *Age* stood as noted below :—

According to Sex.

	Ratio per *mille.*
Males	23·3
Females	20·3
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population ...	115

According to Class

	Ratio per *mille.*
Christians	14 9
Hindus	21·5
Mahomedans ...	22·8
Buddhists	51·4

According to Age.

	Ratio per *mille.*
Under 1 year ...	159 8
1 and under 5 years ...	23·5
5 „ 10 „ ...	8 9
10 „ 15 „ ...	8·6
15 „ 20 „ ...	9 6
20 „ 30 „ ...	14 8
30 „ 40 „ ...	13·9
40 „ 50 „ ...	20 3
50 „ 60 „ ...	22 8
60 years and upwards ...	68·0

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

The 3rd February 1890.

1	2	3			4			5			6	7							8						9	10		11		12
												MORTALITY ACCORDING TO—																		
												Disease.																		
												Deaths from—							Ratio per 1,000 of population per annum.											
DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.																						Sex.				
					Number of—			Ratio per 1,000 of Population per annum.																			Deaths.		Ratio per 1,000 of Population per annum.		
		Males.	Females	Total.	Males.	Females	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week	Males.	Females.	Males.	Females.	Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population.
Burdwan ...	Burdwan	18,063	16,017	34,080	7	6	13	10·7	9·1	19·8	116	3	...	7	3	...	11	24	4·5	...	10·7	4·5	..	16·8	36·6	39·7	16	8	46·1	26·0	177
Midnapore ...	Midnapore ...	16,927	16,633	33,560	4	3	7	6·2	4·6	10·8	133	...	...	1	3	...	6	10	...	...	1·5	4·6	...	9·3	15·5	27·9	6	4	18·4	12·5	150
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	5	8	13	8·2	13·1	21·3	62	6	...	9	3	...	2	20	9·8	...	14·7	4·9	...	3·3	32·8	36·1	4	16	13·1	52·6	25
Serampore ...	Serampore ...	13,559	12,937	26,496	8	11	19	15·7	21·6	37·3	72	...	..	7	5	...	9	21	...	...	13·7	9·8	...	17·7	41·2	13·2	10	11	38·4	44·2	86
	Utterpara	3,046	2,464	5,510	2	2	4	15·8	18·8	37·7	100	...	...	1	2	...	2	5	...	...	9·4	16·8	...	16·8	47·2	10·5	4	1	68·3	21·1	324
Howrah ...	Howrah	53,153	37,660	90,813	23	22	45	13·2	12·6	25·8	104	8	...	16	13	...	10	47	4·6	...	9·2	7·4	...	5·7	26·9	25·8	27	20	26·4	27·6	96
	Bali	7,836	6,979	14,815	3	6	9	1·5	21·1	31·6	50	...	...	2	3	...	1	6	...	...	7·0	10·5	...	3·5	21·1	21·0	5	1	33·2	7·5	471
Nuddea ...	Kishnaghur ...	13,263	14,214	27,477	5	2	7	9·4	3·8	13·2	251	...	...	1	...	...	...	1	...	...	1·9	...	...	...	1·9	13·2	...	1	...	3·7	No male death.
	Ranaghat	4,025	4,655	8,683	3	2	5	17·9	12·0	29·9	150	...	...	5	1	...	2	8	...	...	29·9	6·0	...	12·0	47·9	41·9	6	2	77·5	22·3	350
	Santipore	13,709	15,979	29,687	5	3	8	8·8	5·2	14·0	164	3	...	3	..	...	1	7	5·2	...	5·2	...	...	1·8	12·3	10·5	2	5	7·6	16·3	44
Jessore ...	Jessore	4,830	3,665	8,495	2	1	3	12·2	6·1	18·4	200	5	...	2	...	...	1	8	30·6	...	12·2	...	..	6·1	49·0	55·1	4	4	43·1	56·8	77
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	4	7	11	10·5	18·4	28·9	57	...	...	7	4	...	1	12	...	..	18·4	10·5	...	2·6	31·5	26·3	9	3	43·5	17·3	253
Darjiling ...	Darjiling	4,579	2,439	7,018	1	1	2	7·4	7·4	14·8	100	..	...	4	1	...	...	5	...	...	29·6	7·4	...	...	37·0	44·5	4	1	45·4	21·3	214
Dacca ...	Dacca	42,782	37,379	80,161	13	11	24	8·4	7·1	15·6	118	8	..	10	2	1	12	33	5·2	...	6·5	1·3	·6	7·8	21·4	35·7	19	14	23·1	19·5	121
	Naraingunj ...	7,605	4,956	12,561	10	...	10	41·4	...	41·4	No female birth.	5	..	3	1	...	5	14	20·7	...	12·4	4·1	...	20·7	58·0	29·0	10	4	65·4	42·0	162
Chittagong ...	Chittagong ...	13,340	8,790	22,130	5	8	13	11·7	18·8	30·5	62	4	.	6	1	...	5	16	9·4	...	14·1	2·3	...	11·7	37·6	42·3	13	3	50·7	17·7	234
Tipperah ...	Comillah	8,153	5,353	13,506	5	3	8	19·3	11·5	30·8	166	2	...	2	...	...	5	9	7·7	...	7·7	...	...	19·3	34·7	38·5	4	5	25·5	48·6	53
Patna	Patna City ...	78,762	81,475	160,237	16	13	29	5·2	4·2	9·4	123	2	1	10	5	1	6	25	·6	·3	3·2	1·6	·3	1·9	8·1	9·4	16	9	10·6	5·7	200
Gya	Gya	38,290	37,831	76,121	17	19	36	11·6	13·0	24·6	89	...	...	24	...	1	9	34	...	...	16·4	...	·7	6·1	23·2	26·0	15	19	20·4	26·1	79
Shahabad ...	Arrah	20,960	22,505	43,465	22	19	41	20·3	22·7	49·1	115	...	...	12	4	1	..	17	...	...	14·3	4·8	1·2	...	20·3	58·6	10	7	24·8	16·2	150
Mozufferpore .	Mozufferpore ...	23,084	19,658	42,742	13	7	20	15·8	8·5	24·3	185	..	...	2	4	1	4	11	..	...	2·4	4·9	1·2	4·9	13·4	10·9	7	4	15·8	10·8	150
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	18	20	38	14·2	15·7	29·9	90	...	.	20	..	...	9	29	...	...	15·7	...	...	7·1	22·8	26·0	15	14	23·1	22·5	104
Sarun	Chupra	25,116	26,554	51,670	12	16	28	12·1	16·1	28·2	75	...	2	2	1	...	5	10	...	2·0	2·0	1·0	...	5·0	10·1	15·1	4	6	8·3	11·7	72
Bhagulpore ...	Bhagulpore ...	29,640	27,813	57,453	20	13	33	13·1	11·8	29·9	153	1	...	9	2	...	10	22	·9	...	8·1	1·8	...	9·1	19·9	19·9	14	8	24·6	15·0	160
Monghyr ..	Monghyr	28,154	29,366	57,520	17	25	42	15·4	22·6	33·0	68	...	...	10	4	1	6	21	...	...	9·0	3·6	·9	5·4	19·0	22·6	6	15	11·1	26·6	42
Purneah ...	Purneah	8,463	6,553	15,016	1	...	1	3·5	...	3·5	No female birth.	...	...	...	...	...	...	...	...	...	...	...	...	..	...	24·2	...	...	...	...	.....
Poori	Poori	13,247	11,537	24,784	1	1	2	2·1	2·1	4·2	100	...	9	8	2	...	12	31	...	18·9	16·3	4·2	...	25·2	65·0	58·7	17	14	66·7	63·1	105
	Total	650,996	510,588	1,061,574	242	229	471	11·9	11·2	23·1	105	47	12	183	64	6	134	446	2·3	·6	8·9	3·1	·3	6·6	21·8	25·9	247	199	23·3	20·3	115

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Class. Deaths among— Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Ratio per 1,000 of Population per annum. Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan ...	Burdwan	...	19	5	...	...	..	41·7	25·3	...	.
Midnapore ...	Midnapore ..	...	7	3	...	..	...	14·0	21·6	...	...
Hughli ...	Hughli and Chinsurah	...	15	5	...	..	..	30·3	42·3	...	...
Serampore ...	Serampore ...	...	19	2	...	.	.	39·2	119·9	..	...
	Utterpara	...	5	...	...	...	...	49·8	...	.	.
Howrah ...	Howrah	1	35	11	...	...	27·5	20·7	27·9	..	...
	Bali	...	6	...	...	.	...	23·3	..	...	.
Nuddea ...	Kishnaghur ...	...	1	...	...	...	...	2·8	...	..	...
	Ranaghat	...	4	4	...	..	.	29·4	152·1		..
	Santipore	...	6	1	...	...	..	15·1	5·8	...	...
Jessore ..	Jessore	...	6	2	...	...	..	69·2	27·2	...	..
Rajshahye ...	Rampore Beauleah	...	2	10	...	...	...	10·5	53·0	...	...
Darjiling ...	Darjiling	...	3	2	...	...	...	34·0	169·9	...	...
Dacca	Dacca	...	16	17	.	...	...	20·6	22·5	...	...
	Narainganj ...	...	9	5	...	...	...	74·0	42·2	...	...
Chittagong ..	Chittagong ..	1	5	8	2	...	65·3	44·8	27·2	433·3	..
Tipperah ...	Comillah	...	4	5	...	...	...	35·0	35·2	...	...
Patna	Patna City ..	...	18	7	...	...	...	7·9	8·9	...	...
Gya ...	Gya	...	24	10	...	...	...	20·8	32·3	..	.
Shahabad ...	Arrah	...	13	4	...	...	...	21·8	16·8	...	...
Mozufferpore ..	Mozufferpore ...	...	5	6	...	...	...	8·7	25·0	..	...
Durbhanga ...	Durbhanga ...	...	19	10	...	...	...	27·4	29·6	...	...
Sarun	Chupra	...	10	...	...	...	...	13·1	...	...	...
Bhagulpore ...	Bhagulpore ...	...	15	7	...	...	...	19·6	21·1	...	...
Monghyr ...	Monghyr	...	16	5	...	...	...	18·6	20·7	...	...
Purneah ...	Purneah	...	...	...	...	...	...	...	...	...	...
Poori ..	Poori	...	31	...	...	...	...	65·7	...	...	...
	TOTAL ...	2	313	129	2	...	14·9	21·5	22·8	51·4	..

MORTALITY ACCORDING TO— Age. Deaths.

DISTRICTS.	NAMES OF MUNICIPALITIES.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	6	1	..	1	2	5	1	3	1	4
Midnapore ...	Midnapore ..	1	.	..	..	.	1	1	3	2	2
Hughli ...	Hughli and Chinsurah	1	3	4	...	1	2	...	2	...	7
Serampore ...	Serampore ...	3	3	.	2	...	4	2	3	...	4
	Utterpara	1	.	..	...	...	1	2	1	...	...
Howrah ...	Howrah	8	6	2	...	1	9	5	5	4	7
	Bali	2	1	.	...	.	3	..	...	...	...
Nuddea ...	Kishnaghur ...	...	...	..	...		...	1	...	..	...
	Ranaghat	...	2	...	1	...	1	1	..	2	1
	Santipore	3	1	..	...	.	2	.	.	1	..
Jessore ..	Jessore	1	...	.	..	1	2	..	3	1	...
Rajshahye ...	Rampore Beauleah	2	...	2	1	1	1	2	1	1	1
Darjiling ...	Darjiling	2	1	...	...	...	...	1	...	...	1
Dacca	Dacca	7	2	1	...	...	9	2	6	4	2
	Narainganj ...	3	...	..	...	...	2	3	1	..	5
Chittagong ..	Chittagong ..	3	1	.	3	1	2	2	2	...	2
Tipperah ...	Comillah	1	1	...	..	...	5	..	...	...	2
Patna	Patna City ..	4	1	...	2	1	...	3	1	4	9
Gya ...	Gya	5	3	2	1	3	...	2	8	2	8
Shahabad ...	Arrah	2	1	1	...	...	2	2	1	3	5
Mozufferpore ..	Mozufferpore ...	2	2	1	...	1	1	..	...	2	2
Durbhanga ...	Durbhanga ...	2	2	2	3	1	2	5	3	2	7
Sarun	Chupra	5	1	...	...	...	1	...	...	.	3
Bhagulpore ...	Bhagulpore ...	6	1	1	1	..	4	3	...	2	4
Monghyr ...	Monghyr	6	3	...	1	1	...	4	1	...	5
Purneah ...	Purneah	...	...	...	...	...	...	...	...	...	...
Poori ..	Poori	2	6	3	...	1	1	5	5	3	5
	TOTAL ...	78	42	19	16	15	60	47	49	34	86

MORTALITY ACCORDING TO— Age. Ratio per 1,000 of Population per annum.

DISTRICTS.	NAMES OF MUNICIPALITIES.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	472·7	23·0		20·7	33·3	32·8	7·5	35·3	21·2	140·4
Midnapore ...	Midnapore ..	70·0	...	...	...	...	7·1	9·4	41·9	50·4	56·8
Hughli ...	Hughli and Chinsurah	69·8	70·3	72·1	...	20·7	16·8	.	24·9	...	175·6
Serampore ...	Serampore ...	219·7	86·4	...	46·8	..	38·6	20·9	46·2	...	149·5
	Utterpara	323·0	...	..	..	.	45·2	98·0	74·2	.	...
Howrah ...	Howrah	201·6	56·3	8·3	...	7·1	20·6	13·5	22·1	37·9	97·0
	Bali	287·3	52·1	...	...	...	46·6	...	...	...	...
Nuddea ...	Kishnaghur ...	...	...	...	...	...	...	12·1	...	...	...
	Ranaghat	...	130·8	.	59·9	...	34·5	41·7	...	143·6	91·4
	Santipore	184·6	17·9	...	...	...	21·2	...	...	22·6	...
Jessore ..	Jessore	186·0	...	...	...	71·0	51·6	...	148·6	92·4	...
Rajshahye ...	Rampore Beauleah	256·2	...	50·0	28·9	31·3	12·5	28·9	21·2	41·9	54·0
Darjiling ...	Darjiling	859·5	80·9	...	...	...	...	36·3	...	...	307·7
Dacca	Dacca	191·8	14·1	5·2	..	...	30·5	8·9	37·2	43·9	18·7
	Narainganj ...	559·1	...	...	..	..	39·0	72·9	37·3	...	298·8
Chittagong ..	Chittagong ..	277·1	26·4	..	60·5	21·5	22·5	31·2	46·1	...	130·7
Tipperah ...	Comillah	175·1	39·5	...	...	...	94·2	...	...	...	153·4
Patna	Patna City ..	48·3	3·6	...	7·2	4·7	...	6·7	2·8	14·7	33·9
Gya ...	Gya	145·3	24·6	14·9	7·7	29·8	...	8·2	42·6	15·8	80·8
Shahabad ...	Arrah	80·7	11·7	10·1	...	...	13·2	16·2	11·1	50·4	90·2
Mozufferpore ..	Mozufferpore ...	108·9	25·7	11·6	...	17·2	6·1	...	...	32·6	42·7
Durbhanga ...	Durbhanga ...	66·8	13·7	13·4	28·1	12·9	7·8	23·3	21·0	23·7	114·0
Sarun	Chupra	184·3	10·1	...	...	...	5·6	...	...	...	45·9
Bhagulpore ...	Bhagulpore ...	261·3	9·6	8·9	8·3	...	19·0	16·8	...	24·4	57·7
Monghyr ...	Monghyr	210·1	25·1	...	9·1	13·8	..	23·3	8·2	...	72·5
Purneah ...	Purneah	...	...	...	...	...	...	...	...	...	...
Poori ..	Poori	343·2	173·6	69·6	...	28·0	9·8	64·2	78·2	69·9	144·0
	TOTAL ...	159·8	23·5	8·9	5·6	9·6	14·8	13·9	20·3	23·8	68·0

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

W. H. GREGG, *Dip. Publ. Health, Camb.*,

PUBLIC WORKS DEPARTMENT,—BENGAL.

IRRIGATION BRANCH.

Statement showing heights over mean sea-level and low-water in the Rivers Ganges, Bhagiruthee, Jellinghee, and Brahmapootra for the month of November 1889.

Date.	River Ganges.																River Bhagiruthee.		River Jellinghee.		River Brahmapootra.	
	Mirzapur.		Benares.		Buxar.		Dinapur.		Monghyr.		Sahebgunge.		Rampore Beauleah		Gealundo.		Berhampore.		Sarupgunge.		Gowhatty.	
	Miles.	86		134	48	90		177	87	297	110	381	94	471	90	591	120						
	Distance.	From Allahabad		From Allahabad	From Mirzapur	From Benares		From Benares	From Buxar	From Benares	From Dinapur	From Benares	From Monghyr	From Benares	From Sahebgunge	From Benares	From Rampore Beauleah						
	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.	Height over zero.	Height over mean sea-level.
1st	6·25	215·47	7·25	204·05	7·[illegible]	176·[illegible]3	12·80	147·13	6·83	1·[illegible]	7·76	75·50	7·79	49·79	10·17	19·11	10·75	41·49	11·00	15·30	13·60	162·36
2nd	5·67	214·89	7·08	204·88	7·[illegible]	177·[illegible]7	12·[illegible]0	146·[illegible]3	6·75	1·[illegible]·[illegible]	7·17	75·17	7·42	49·42	10·17	19·11	10·50	44·24	10·75	15·05	13·30	162·06
3rd	5·25	214·47	6·92	204·72	7·[illegible]3	177·[illegible]5	12·44	145·[illegible]7	6·50	1·[illegible]·35	6·[illegible]	74·[illegible]2	7·04	49·04	10·17	19·11	10·33	44·07	10·50	14·80	11·90	160·66
4th	8·00	214·22	6·75	204·55	7·17	176·[illegible]	12·20	1·[illegible]·[illegible]	6·33	1·[illegible]·18	6·75	74·75	6·75	48·75	10·17	19·11	10·08	43·82	10·42	14·72	10·50	159·26
5th	7·84	214·06	6·42	204·12	7·[illegible]	175·[illegible]2	11·[illegible]0	143·[illegible]5	6·08	1·[illegible]·93	6·25	74·25	6·54	48·54	10·25	19·19	9·92	43·66	10·25	14·55	9·30	155·06
6th	7·67	213·89	6·42	204·22	6·[illegible]2	175·[illegible]7	12·[illegible]0	144·[illegible]5	5·75	1·[illegible]·68	6·00	74·00	6·[illegible]5	4·[illegible]5	10·17	19·11	9·[illegible]8	43·32	10·13	14·43	8·50	157·26
7th	7·[illegible]7	213·89	6·[illegible]1	204·12	6·75	175·[illegible]0	11·[illegible]1	1·[illegible]·[illegible]4	5·[illegible]7	1·[illegible]·[illegible]2	5·[illegible]5	73·83	6·[illegible]9	48·19	1·[illegible]0	18·[illegible]4	9·42	43·16	10·04	14·34	7·90	156·66
8th	7·[illegible]7	213·[illegible]9	6·33	203·13	6·67	175·72	11·09	143·83	5·54	1·[illegible]·[illegible]1	5·75	73·75	6·15	48·15	9·67	18·61	9·17	42·91	9·92	14·22	7·40	156·16
9th	7·58	213·80	6·25	203·05	6·58	175·63	11·[illegible]9	4·[illegible]3	5·[illegible]5	1·[illegible]·[illegible]0	5·[illegible]3	73·[illegible]3	6·11	48·11	9·25	18·19	9·00	4·[illegible]4	9·71	14·01	6·90	155·66
10th	7·[illegible]0	213·72	6·17	203·97	6·50	175·[illegible]5	1·[illegible]9	1·[illegible]·[illegible]4	5·[illegible]5	1·[illegible]·[illegible]3	5·[illegible]7	73·[illegible]7	6·04	48·04	8·92	17·86	8·[illegible]3	42·57	9·50	13·80	6·50	155·26
11th	7·[illegible]1	213·53	6·08	202·88	6·42	175·47	11·30	143·43	4·[illegible]8	1·[illegible]·73	5·[illegible]1	73·[illegible]0	6·03	48·[illegible]0	8·[illegible]8	17·52	8·67	42·41	9·17	13·47	6·20	154·96
12th	7·[illegible]5	213·47	6·00	202·80	6·33	175·38	11·[illegible]1	1·[illegible]·[illegible]3	4·[illegible]3	1·[illegible]·[illegible]3	4·[illegible]3	72·[illegible]4	5·[illegible]6	47·[illegible]6	8·33	17·27	8·42	42·16	9·00	13·30	5·70	154·46
13th	7·17	1·[illegible]·39	6·00	2·2·80	6·17	175·22	11·08	143·[illegible]8	4·[illegible]7	1·[illegible]·[illegible]2	[illegible]	[illegible]	5·[illegible]2	47·[illegible]2	8·[illegible]8	17·02	8·25	41·99	8·67	12·97	5·50	154·26
14th	7·01	213·22	5·92	202·72	6·08	1·[illegible]·[illegible]8	1·[illegible]·[illegible]	1·[illegible]·[illegible]5	4·58	1·[illegible]·43	[illegible]	[illegible]	5·[illegible]5	47·88	7·92	16·86	8·17	41·91	8·42	12·72	5·30	154·06
15th	7·00	213·22	5·75	202·55	6·00	1·[illegible]·65	10·[illegible]	1·[illegible]·[illegible]3	4·[illegible]0	1·[illegible]·[illegible]5	[illegible]	[illegible]	5·70	47·70	7·[illegible]3	16·77	8·08	41·82	8·17	12·47	5·00	153·76
16th	6·92	213·14	5·[illegible]8	2·2·[illegible]5	5·92	1·[illegible]·[illegible]7	1·[illegible]·[illegible]6	1·[illegible]·[illegible]5	4·38	1·[illegible]·23	[illegible]	[illegible]	5·75	47·75	7·[illegible]3	16·77	8·[illegible]0	41·74	9·17	13·47	5·00	153·76
17th	6·75	212·97	5·42	202·22	5·92	1·[illegible]·87	10·[illegible]	1·[illegible]·[illegible]8	4·[illegible]	1·[illegible]·[illegible]0	[illegible]	[illegible]	5·[illegible]3	47·73	7·[illegible]3	16·77	7·92	41·66	9·83	14·13	4·60	153·36
18th	6·67	212·89	5·25	202·05	5·[illegible]3	1·[illegible]·[illegible]8	1·[illegible]·[illegible]0	1·[illegible]·[illegible]3	4·21	1·[illegible]·[illegible]5	[illegible]	[illegible]	5·71	47·71	7·[illegible]3	16·77	7·83	41·57	10·92	15·22	4·20	153·26
19th	6·58	212·80	5·08	201·88	5·[illegible]3	1·[illegible]·[illegible]4	1·[illegible]·[illegible]	1·[illegible]·[illegible]3	4·[illegible]3	1·[illegible]·[illegible]8	[illegible]	71·75	5·67	47·67	7·[illegible]0	16·44	7·92	41·41	11·29	15·59	4·40	153·14
20th	6·50	212·72	5·08	201·88	5·75	1·[illegible]·50	10·[illegible]3	1·[illegible]·[illegible]3	4·[illegible]4	1·[illegible]·[illegible]2	3·[illegible]7	71·67	5·67	47·67	7·17	16·11	7·50	41·24	11·00	15·30	4·30	153·06
21st	6·42	212·64	5·00	201·80	5·67	1·[illegible]·[illegible]2	1·[illegible]·45	1·[illegible]·[illegible]3	4·01	1·[illegible]·[illegible]5	3·[illegible]7	71·67	5·63	47·63	7·17	16·11	7·42	41·16	10·83	15·13	4·10	152·86
22nd	6·33	212·55	4·[illegible]8	201·76	5·[illegible]4	1·[illegible]·[illegible]3	1·[illegible]·[illegible]5	1·[illegible]·[illegible]8	3·94	1·[illegible]·[illegible]9	[illegible]·67	71·67	5·[illegible]8	47·[illegible]8	7·17	16·11	7·33	41·07	10·67	14·97	4·00	152·76
23rd	6·25	212·47	4·[illegible]2	201·72	5·[illegible]0	1·[illegible]·[illegible]5	10·29	1·[illegible]·[illegible]3	3·83	1·[illegible]·[illegible]5	[illegible]·[illegible]5	71·[illegible]	5·[illegible]6	47·[illegible]6	7·[illegible]5	16·02	7·25	40·99	10·58	14·88	3·70	152·46
24th	6·08	21··[illegible]1	4·[illegible]7	201·63	5·50	1·[illegible]·55	10·20	1·[illegible]·[illegible]3	3·[illegible]5	1·[illegible]·[illegible]1	[illegible]·58	71·[illegible]8	5·52	47·52	6·83	15·77	7·08	40·82	10·54	14·80	3·50	152·26
25th	6·00	212·22	4·75	201·55	5·42	1·[illegible]·47	10·10	1·[illegible]·[illegible]3	3·67	1·[illegible]·52	3·42	71·42	5·46	47·46	6·67	15·61	7·00	40·74	10·08	14·38	3·10	151·86
26th	5·92	212·14	4·[illegible]9	201·38	5·[illegible]5	1·[illegible]·30	10·[illegible]	1·[illegible]·[illegible]3	3·[illegible]8	1·[illegible]·[illegible]1	3·42	71·42	5·44	47·44	6·[illegible]5	15·[illegible]4	6·92	40·66	9·58	13·88	2·90	151·66
27th	5·75	21··07	4·50	20··80	5·[illegible]5	1·[illegible]·[illegible]0	9·[illegible]	1·[illegible]·[illegible]3	3·[illegible]0	1·[illegible]·[illegible]5	3·33	71·33	5·42	47·42	6·25	15·19	6·75	40·49	9·00	13·30	2·70	151·46
28th	5·58	211·[illegible]4	4·42	201·22	5·17	1·[illegible]·[illegible]2	9·[illegible]	1·[illegible]·[illegible]3	3·48	1·[illegible]·[illegible]3	3·[illegible]5	71·[illegible]5	5·[illegible]8	47·[illegible]8	[illegible]·[illegible]8	15·02	6·67	40·41	8·17	12·47	2·60	151·36
29th	5·50	211·72	4·[illegible]5	201·18	5·02	1·[illegible]·[illegible]4	9·[illegible]5	1·[illegible]·[illegible]8	3·20	1·[illegible]·[illegible]4	[illegible]·[illegible]1	71·[illegible]	5·[illegible]3	47·[illegible]3	5·92	1·[illegible]6	6·58	40·32	7·92	12·22	2·60	151·36
30th	5·42	211·64	4·25	201·03	5·00	1·[illegible]·05	9·70	1·[illegible]·[illegible]3	3·17	1·[illegible]·[illegible]2	2·92	70·92	5·31	47·31	5·[illegible]6	14·[illegible]	6·42	40·16	7·50	11·80	2·40	151·16

CALCUTTA;
The 4th February 1890.

G. A. G. SHAWE,
Under-Secretary to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

CALCUTTA AND EASTERN CANALS.

Statement showing quantities of Goods carried during the month of November 1889.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
125	1. Grain ...	2,200	3	2,203	2,44,575	2,203	2,44,575	
.....	2. Cotton ...	.....	.....	.....	.....	.....	.....	
20	3. Oilseeds .	272	.....	272	26,900	272	26,900	
431	4. Salt ...	507	6,975	7,482	7,85,636	7,482	7,85,636	
.....	5. Piece-goods ..	.....	.....	.....	.....	.....	.....	
8	6. Metal ...	42	39	81	29,250	81	29,250	
95	7. Building materials	2,221	104	2,325	26,719	2,325	26,719	
3,225	8. Miscellaneous* ...	28,864	2,134	30,998	38,76,935	30,998	38,76,935	
550	9. Fuel ...	9,168	3,498	12,666	1,03,268	12,666	1,03,268	
... ..	10. Timber ...	.....	.....	.. ...	.....	... .	.....	
.....	11. Bamboos ...	.....	..	.....	... .	.....	.....	
4,454	12. Total ..	43,274	12,753	56,027	50,93,283	56,027	50,93,283	
5,914 & 1 raft.	13. Total of same month last year.	56,608 & 75 c. ft	15,625	72,233 & 75 c. ft.	58,29,503	72,233 & 75 c. ft.	58,29,503	

* For details, see next page.

	Up.	Down.	Total.
4. Total number of boats plying cargo No.	3,775	679	4,454
4a. Ditto empty boats „	1,648	779	2,427
5. Total number of boats plying passenger No.	413	13	426
6. Total registered tonnage, cargo Tons	119,547	32,502	152,049
7. Total registered tonnage, passenger Tons	898	42	940
8. Ton-mileage ...	1,059,905	325,020	1,384,925
9. Estimated value of cargo Rs.	39,67,044	11,26,239	50,93,283
10. Number of passengers No.	1,612	104	1,716
11. Rafts, bamboos C. ft.	.....	.....	.....
12. Do., bullahs „	.....	.....	.....
13. Estimated value of rafts Rs.	.....	.....	.....
14. Tollage on boats „	26,618-0-6	7,973-11-0	34,591-11-6
15. Compounded tollage on boats Rs.	.....	.....	.....
16. Tollage on rafts „	.....	.....	.....
17. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-4·79
18. Ditto on rafts per 100 cubic feet Rs.	.....	.....	.....

	Rs. A. P.
Total tollage of month—24+25+26 ...	34,591 11 6
Total tollage of same month last year ..	43,658 14 0

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	839 12 9
2. Tollage per month ...	34,591 11 6
3. Total	35,431 8 3
4. Amount paid into Treasury during the month	34,135 12 6
5. Balance due at the end of the month ...	1,295 11 9

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

CALCUTTA AND EASTERN CANALS.

Number of tons or rafts.	Description.	Total Government and Private.				Private.		Remarks.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
1,284	(*a*) Jute ...	23,814	.....	23,814	30,00,510	23,814	30,00,510	
65	(*b*) Jaggery ...	542	7	549	61,500	549	61,500	
3	(*c*) Sugar ...	24	.....	24	6,075	24	6,075	
5	(*d*) Tobacco ...	8	19	27	5,250	27	5,250	
889	(*e*) Fish ...	133	3	136	38,106	136	38,106	
32	(*f*) Hides ...	19	.....	19	4,170	19	4,170	
54	(*g*) Poultry ...	7	.....	7	5,247	7	5,247	
93	(*h*) Hay and straw ...	483	.....	483	12,012	483	12,012	
116	(*j*) Oil ...	.....	1,793	1,793	2,51,000	1,793	2,51,000	
30	(*k*) Earthenware ...	2	.....	2	595	2	595	
654	(*m*) Other miscellaneous ...	3,832	312	4,144	4,92,470	4,144	4,92,470	
3,225	Total Miscellaneous...	28,864	2,134	30,998	38,76,935	30,998	38,76,935	

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

TOLLY'S NULLAH.

Statement showing quantities of Goods carried during the month of November 1889.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
871	1. Grain ...	2,809	.....	2,809	2,20,600	2,809	2,20,600	
10	2. Cotton ...	66	.....	66	33,300	66	33,300	
2	3. Oilseeds ...	34	.....	34	3,325	34	3,325	
62	4. Salt ...	535	295	830	87,187	830	87,187	
.....	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
.....	6. Metal ...	.....	.....	.....	.....	.....	.....	
387	7. Building materials	3,797	7	3,804	15,912	3,804	15,912	
1,068	8. Miscellaneous* ...	3,546	70	3,616	4,62,827	3,616	4,62,827	
250	9. Fuel ...	2,735	43	2,778	22,772	2,778	22,772	
3 rafts	10. Timber ...	2,175 c. ft.	190 c. ft.	2,365 c. ft.	5,912	2,365 c. ft.	5,912	
7 „	11. Bamboos ...	225 „	.....	225 „	37	225 „	37	
2,649 & 0 rafts.	12. Total ...	13,522 & 2,400 c. ft	415 & 190 c. ft.	13,937 & 2,590 c. ft.	8,51,872	13,937 & 2,590 c. ft.	8,51,872	
4,739 & 8 rafts.	13. Total of same month last year ...	19,745 & 6,880 c. ft.	752 & 2,735 c. ft.	20,497 & 9,615 c. ft.	14,05,133	20,497 & 9,615 c. ft.	14,05,133	

* For details, see next page.

	Up.	Down.	Total.
4. Total number of boats plying cargo ... No.	2,565	84	2,649
4*a*. Ditto empty boats „	1,174	226	1,400
5. Total number of boats plying passenger ... No.	684	21	705
6. Total registered tonnage, cargo ... Tons	38,012	2,685	40,697
7. Total registered tonnage, passenger ... Tons	1,926	81	2,007
8. Ton-mileage	353,608	42,960	396,568
9. Estimated value of cargo Rs.	8,04,145	41,778	8,45,923
10. Number of passengers No.	8,371	210	8,581
11. Rafts, bamboos C. ft.	225	.....	225
12. Do., bullahs „	2,175	190	2,365
13. Estimated value of rafts Rs.	5,474	475	5,949
14. Tollage on boats „	6,436-9-6	678-1-6	7,114-11-0
15. Compounded tollage on boats ... Rs	.....	.....	.....
16. Tollage on rafts „	18-2-6	13-8-0	31-10-6
17. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3·44
18. Ditto on rafts per 100 cubic feet ... Rs.	.....	.....	1-3-6

	Rs.	A.	P.
Total tollage of month—24+25+26 ...	7,146	5	6
Total tollage of same month last year ...	11,898	4	0

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month ...	270	11	3
2. Tollage per month ...	7,146	5	6
3. Total	7,417	0	9
4. Amount paid into Treasury during the month ...	7,183	5	9
5. Balance due at the end of the month ...	233	11	0

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).
TOLLY'S NULLAH.

Number of boats or rafts.	Description.	Total Government and Private.				Private.		Remarks.
		Quantity—Tons.			Value.	Quantity.	Value	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
105	(*a*) Jute ...	465	.....	465	58,590	465	58,590	
54	(*b*) Jaggery ...	389	.....	389	43,600	389	43,600	
.....	(*c*) Sugar ...	.....	.....	.....	.....	.....	.....	
16	(*d*) Tobacco. ...	86	29	115	22,575	115	22,575	
135	(*e*) Fish ...	9	7	16	4,614	16	4,614	
.....	(*f*) Hides ...	.....	.....	.....	.....	.....	.....	
10	(*g*) Poultry ...	5	.....	5	1,122	5	1,122	
399	(*h*) Hay and straw...	603	.....	603	14,787	603	14,787	
53	(*j*) Oil ...	593	.....	593	83,000	593	83,000	
70	(*k*) Earthenware ...	94	12	106	1,484	106	1,484	
226	(*m*) Other miscellaneous.	1,302	22	1,324	2,33,055	1,324	2,33,055	
1,068	Total Miscellaneous...	3,546	70	3,616	4,62,827	3,616	4,62,827	

ABSTRACT FOR THE MONTH OF NOVEMBER 1889, AS COMPARED WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR.

	Traffic, 1889-90.		Traffic, 1888-89.	
	During the month.	To end of the month.	During the month.	To end of the month.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Calcutta and Eastern Canals ...	34,591 11 6	1,91,202 4 3	43,658 14 0	2,35,377 13 6
Tolly's Nullah	7,146 5 6	56,073 4 6	11,898 4 0	81,362 10 0
Total ...	41,738 1 0	2,47,275 8 9	55,557 2 0	3,16,740 7 6

Calcutta,
The 4th February 1890.

G. A. G. Shawe,
Under-Secretary to the Govt. of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 1st February 1890, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 1st February 1890.			Week ending Saturday, the 2nd February 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,780	3,82,110	6,271	1,797	3,64,825	6,342
Jute	177	1,15,075	2,110	109	85,125	1,536
Firewood	87	53,400	806	146	83,725	1,222
Other articles	856	1,73,495	2,605	1,205	3,27,255	3,710
Total ...	2,900	7,24,080	11,792	3,257	8,60,930	12,810

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 25th January 1890, on 1,525½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	*315,167	*3,48,082 6 0	25,13,601 10	5,56,499 3 0	20,612 10 0	9,25,194 3 0	69,719½	90,031½	159,751
Or per mile of railway ...	.....	228 2 10	.....	364 12 9	13 8 2	606 7 9	.....	.....	.....
For previous 3 weeks of half-year	636,976	7,33,240 3 0	66,47,006 20	15,33,598 15 0	50,474 0 0	23,17,313 2 0	166,315½	236,857	403,172½
Total for 4 weeks ...	952,143	10,81,322 9 0	91,60,659 30	20,90,098 2 0	71,086 10 0	32,42,507 5 0	236,034½	326,888½	562,923½
Comparison.									
Total for corresponding week of previous year	238,113½	2,68,219 2 11	20,21,806 30	6,31,838 6 9	14,677 12 4	9,34,735 6 0	65,189	98,610	163,799
Per mile of railway corresponding week of previous year	.....	188 14 11	.....	414 3 0	9 9 11	612 11 10	.....	.....	.....
Total to corresponding date of previous year	870,308	10,42,996 13 9	1,05,53,089 20	23,24,417 4 0	56,080 0 10	34,22,594 2 7	242,702	372,146	614,848

* The increase in coaching traffic is due to the "Magh Mela" held at Allahabad.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 11 January 1889.			Receipts for week ending 25th January 1890.			Total receipts from 1st April 1888 to 26th January 1889.		Total receipts from 1st April 1889 to 25th January 1890.			Total increase in 1889.	Total decrease in 1889
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,525½	9,34,735	613	1,525½	9,25,194	606	1,525½	3,59,02,819	548	1,525½	3,58,03,574	546	.....	1,58,745

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 25th January 1890, on 57½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	13,533	6,936 3 0	34,816 20	2,854 10 0	55 2 0	9,545 15 0	1,790	604	2,394
Or per mile of railway	247	121 4 2	609 0	44 10 7	0 15 5	164 14 2	.....	.....	.....
For previous 3 weeks of half-year	33,749	17,535 3 0	86,392 30	5,969 2 0	124 13 0	23,529 2 0	4,464	2,258	6,722
Total for 4 weeks ...	47,282	24,471 6 0	1,21,219 10	8,823 12 0	179 15 0	33,075 1 0	6,254	2,863	9,116
Comparison									
Total for corresponding week of previous year	11,244	5,917 10 7	62,035 20	2,067 12 0	29 9 0	8,014 15 7	1,947	1,135	3,082
Per mile of railway corresponding week of previous year ...	197	103 7 3	1,084 30	36 2 5	0 8 3	140 1 11	.....	.....	.....
Total to corresponding date of previous year	46,044	24,231 12 5	1,32,237 20	6,887 4 0	131 11 9	31,250 12 2	7,109	3,471	9,580

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 26th January 1889.			Receipts for week ending 25th January 1890.			Total receipts from 1st April 1888 to 26th January 1889.			Total receipts from 1st April 1889 to 25th January 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	8,015	140	57½	9,546	167	57½	4,00,009	163	57½	4,15,506	169	15,497	.....

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 25th January 1890, on 22½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	20,713	5,266 1 0	12,418 30	435 4 0	7 3 0	5,708 8 0	900	84	984
Or per mile of railway	.....	236 10 10	.....	19 9 0	0 5 2	256 9 0	.....	.....	.....
For previous 3 weeks of half-year	48,410	12,163 7 0	27,685 10	1,097 4 0	18 12 0	13,279 7 0	2,321	165	2,486
Total for 4 weeks ...	69,123	17,429 8 0	40,104 0	1,532 8 0	25 15 0	18,987 15 0	3,221	249	3,470
Comparison.									
Total for corresponding week of previous year	20,073½	5,152 2 10	7,783 30	296 9 0	9 8 0	5,458 3 10	895	73	968
Per mile of railway corresponding week of previous year ...	.....	231 8 11	.....	13 5 3	0 6 10	245 5 0	.....	.....	.....
Total to corresponding date of previous year	71,067½	17,745 7 10	34,068 10	1,199 1 0	23 11 9	18,968 4 7	3,339	297	3,636

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 26th January 1889.			Receipts for week ending 25th January 1890.			Total receipts from 1st April 1888 to 26th January 1889.			Total receipts from 1st April 1889 to 25th January 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
73½	5,458	245	22½	5,709	257	22½	2,25,351	236	22½	2 23,964	233	.....	2,387

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 18 h January 1890, on 747 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated), including steam-boat.	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	146,080	*76,880 0 0	6,88,880 0	1,60,500 0 0	15,030 0 0	2,52,410 0 0	22,958	36,949	59,907
Or per mile of railway	196	103 0 0	923 0	215 0 0	*2 0 0	320 0 0	... ..	.....	.....
For previous 2 weeks of half-year	270,740	1,18,280 0 0	9,71,200 0	2,36,940 0 0	26,810 0 0	3,81,980 0 0	36,369	58,769	95,138
Total for 3 weeks	416,820	1,95,110 0 0	16,60,080 0	3,97,440 0 0	41,840 0 0	6,34,390 0 0	59,327	95,718	155,045
COMPARISON									
Total for corresponding week of previous year	137,037	67,527 0 0	5,35,573 0	1,20,468 0 0	13,981 0 0	2,01,076 0 0	21,553	27,430	48,983
Per mile of railway corresponding period of previous year	205	100 0 0	796 0	179 0 0	*2 0 0	281 0 0	.....	.....	.....
Total to corresponding date of previous year ..	395,830	1,77,804 0 0	13,57 976 0	3,18,863 0 0	40,034 0 0	5,36,201 0 0	53,079	82,560	141,239

* Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1888 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
673	2,01,076	300	747	2,52,410	338	673	87,78,590	311	724	*92,72,553	305	4,93,963	...

* Audited up to week ending 23rd November 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 18th January 1890, on 125 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	24,200	9,740 0 0	40,210 0	2,610 0 0	80 0 0	12,430 0 0	3,736	1,936	5,672
Or per mile of railway	194	78 0 0	322 0	21 0 0	.....	99 0 0	....	.....	.....
For previous 2 weeks of half-year	48,450	16,840 0 0	67,350 0	4,330 0 0	130 0 0	21,300 0 0	5,870	3,044	8,914
Total for 3 weeks ...	72,650	26,580 0 0	1,07,560 0	6,940 0 0	210 0 0	33,730 0 0	9,606	4,980	14,586
COMPARISON.									
Total for corresponding week of previous year	25,785	9,777 0 0	46,875 0	2,339 0 0	56 0 0	12,162 0 0	3,736	1,940	5,676
Per mile of railway corresponding period of previous year ...	206	78 0 0	375 0	19 0 0	.....	97 0 0	.....	.....	.....
Total to corresponding date of previous year	73,003	25,210 0 0	1,73,645 0	6,029 0 0	2,566 0 0	33,745 0 0	10,161	5,260	15,421

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1889 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	12,162	97	125	12,430	99	125	5,79,900	110	125	*6,06,207	115	26,307	.....

* Audited up to week ending 23rd November 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 18th January 1890, on 86 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	16,250	5,630 0 0	30,210 0	4,300 0 0	120 0 0	10,050 0 0	2,404	1,280	3,684
Or per mile of railway	189	66 0 0	456 0	50 0 0	1 0 0	117 0 0	.....	.....	.....
For previous 2 weeks of half-year	20,270	11,290 0 0	57,040 0	5,740 0 0	500 0 0	17,530 0 0	4,036	1,088	5,124
Total for 3 weeks ...	45,520	16,920 0 0	96,850 0	10,040 0 0	620 0 0	27,580 0 0	6,440	2,368	8,808
Comparison.									
Total for corresponding period of previous year	14,457	4,322 0 0	21,278 0	2,256 0 0	63 0 0	6,641 0 0	2,479	625	3,104
Per mile of railway corresponding period of previous year	168	50 0 0	247 0	26 0 0	1 0 0	77 0 0	.....	.....	.....
Total to corresponding date of previous year	41,770	12,478 0 0	33,191 0	3,571 0 0	339 0 0	16,388 0 0	6,763	1,695	8,458

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for week ending 19th January 1889.			Receipts for week ending 18th January 1890.			Total receipts from 1st April 1888 to 19th January 1889.			Total receipts from 1st April 1889 to 18th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	6,611	77	86	10,050	117	86	2,39,862	66	86	*3,10,814	87	70,952	.....

* Audited up to week ending 23rd November 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 25th January 1890 on 27¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	3,062	1,060 0 0	7,377 0	525 0 0	7 0 0	1,592 0 0	509	254	763
Or per mile of railway ...	112	39 0 0	271 0	19 0 0	.....	58 0 0	.....	.....	.....
For previous 2 week of half-year	7,719	2,692 0 0	47,505 0	2,789 0 0	44 0 0	5,525 0 0	1,309	653	1,962
Total for 3 weeks ...	10,781	3,752 0 0	54,882 0	3,314 0 0	51 0 0	7,117 0 0	1,818	907	2,725
Comparison.									
Total for corresponding week of previous year	3,178	1,117 0 0	17,241 0	832 0 0	32 0 0	1,981 0 0	509	636	1,145
Per mile of railway corresponding week of previous year ...	117	41 0 0	633 0	31 0 0	1 0 0	73 0 0	.....	.....	.....
Total to corresponding date of previous year	11,781	4,303 0 0	58,029 0	2,937 0 0	71 0 0	7,311 0 0	1,890	2,003	3,893

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

Receipts for week ending 26th January 1889.			Receipts for week ending 25th January 1890.			Total receipts from 1st April 1888 to 20th January 1889.			Total receipts from 1st April 1889 to 25th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27¼	1,081	73	27¼	1,592	58	27¼	82,552	74	27¼	81,905	73	.....	647

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 25th January 1890, *on* 273 *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
al traffic for the week	47,791	19,003 0 0	2,73,789 0	31,303 0 0	5,441 0 0	55,807 0 0	6,234	8,892	15,126
ber mile of railway ...	175	70 0 0	1,003 0	114 0 0	3 0 0	187 0 0*	.....	.....	.....
previous 2 weeks of half-year	114,179	52,899 0 0	5,66,480 0	62,819 0 0	12,559 0 0	1,28,277 0 0	15,106	20,741	35,907
Total for 3 weeks ...	162,270	71,902 0 0	8,40,269 0	94,122 0 0	18,000 0 0	1,84,084 0 0	21,400	29,633	51,033
COMPARISON.									
al for corresponding week previous year	37,973	13,580 0 0	1,42,091 0	13,247 0 0	2,795 0 0	29,623 0 0	5,477	5,887	11,364
mile of railway correspond-g week of previous year .	139	50 0 0	523 0	48 0 0	1 0 0	99 0 0*	.....	.....	.....
al to corresponding date of evious year	141,627	50,845 0 0	5,09,451 0	46,177 0 0	11,486 0 0	1,08,508 0 0	19,929	20,598	40,527

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

...ipts for week ending 26th January 1889			Receipts for week ending 25th January 1890			Total receipts from 1st April 1888 to 26th January 1889.			Total receipts from 1st April 1889 to 25th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
...an ...ge. ...d.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
3	29,623	109	273	55,807	204	264·49	13,58,011	125	273	16,67,289	149	3,09,278	.....

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.
Approximate earnings for first 11 days of January 1890	9,482
Corresponding period of last year	8,017
Increase	1,465
	Miles.
Miles open first 11 days of January 1890	51
Corresponding period of last year	51
	Rs. A. P.
Receipts per mile open first 11 days of January 1890	185 14 9
Corresponding period of last year	157 3 1
Increase	28 11 8

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APPENDIX TO

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 5, 1890.

PUBLIC WORKS DEPARTMENT,—MARINE.

NOTIFICATION.

No. 23 Marine, dated Calcutta, the 30th January 1890.

NOTIFICATION—By the Govt. of Bengal, P. W. Dept.

UNDER the powers conferred upon him by section 36 of the Indian Steam-ships Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to Engineers of sea-going steam-ships :—

Certificates of competency granted to persons who pass requisite examinations.

1. Certificates of competency will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose Examiners have been appointed, and arrangements have been made for holding the examinations periodically at the Port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint

Examinations continued till all the candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the candidates who have then presented themselves and whose names appear upon the Port Officer's list on the day of examination are examined.

Application how to be made.

3. The application for examination is to be made on Form Exn. 3, which must be filled up at the Port Office. The Form Exn. 3 properly filled in, together with the Candidate's Indentures of Apprenticeship, testimonials, and discharges, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials required.

4. Applicants will be required to produce, in addition to the usual Forms of Discharge, satisfactory testimonials as to sobriety, experience, ability, and general good conduct for at least the 12 months immediately preceding the date of application to be examined, and without producing them no person will be examined. If the service has been on shore, the testimonial must be signed by an Employer; if at sea, by the Master and Chief Engineer.

5. In cases where a testimonial from the Chief Engineer, or from the Master, is for any sufficient reason not obtainable, one may be submitted from the Superintending Engineer in place of that of the Chief Engineer, and one from the Managing Owner or Secretary or Chairman of a large Company in place of that of the Master, but in every such instance the testimonial must declare that the facts stated are in accordance with the reports made by the Chief Engineer or the Master, as the case may be, or else that the facts are within the writer's personal knowledge.

6. As such testimonials may have to be verified before the Candidate can be examined, it is desirable that they should be handed in, together with the Form Exn. 3, as early as possible.

Testimonials of Foreigners.

7. The testimonials of servitude of Foreigners and of British Seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificate as to age.

8. Should any doubt exist as to the age of a Candidate, he will be required to produce a Certificate of Birth or Baptism.

Foreigners to know English.

9. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel.

Verification of services, &c., by Articles.

10. Services which cannot be verified by proper entries in the Articles of the Ships in which the Candidates have served cannot be counted.

Service on a lake or river.

11. In addition to the required workshop time, service on a lake or river, in a steamer in which the aggregate piston area of the propelling engines proper amounts to at least 2,000 (two thousand) circular inches will be accepted towards qualifying a candidate to be examined for a certificate of competency as follows:—

Two months of river or lake service, in a capacity not lower than that of Third Engineer, may be deemed equivalent to one month of sea service, provided that,

For a Second Class Certificate, not less than three months of the qualifying service must be actual sea service, and that,

For a First Class Certificate, at least six months of the qualifying service must have been at sea in a grade not below that of Third Engineer, where an engineer of a lower grade is carried. During the last 18 months of this service the candidate must have been in possession of a Second Class Engineer's Certificate of competency.

Assistant Engineer.

12. Service entered upon a ship's Articles as having been performed in the capacity of Assistant Engineer must be supported by proof of the Candidate having acted as Second, Third, or Fourth Engineer, as the case may be.

Service in home or coasting trade.

13. The service required by the Regulations to qualify a candidate for examination is to be regarded as referring to service in the Foreign Trade only. Service in the Home or Coasting Trade must amount to at least half as much again as that required by the Regulations to make up for the time spent in Port, *e.g.*, for every twelve months' service under the Regulations, eighteen months' service in the Home or Coasting Trade will be required. In all cases the length of service is deemed to commence on the date of signing of the articles of agreement, and to end on the date of discharge.

Service as Engineer only accepted as qualifying service.

14. Service in the engine-room (afterwards referred to) for qualifying a candidate to be examined for a Second-class Engineer's Certificate must be only in those capacities which afford opportunities of obtaining practical experience as an engineer; and service in the capacity of fireman, stoker, donkeyman, greaser, winchman, labourer, engineer's steward, or any other capacity than that of engineer taking watch on engines and boilers for propelling will not be accepted

Service as Third and Fourth Engineer.

15. Service as Third and Fourth Engineer in Foreign-going steamers, where more than three or four engineers, as the case may be, are carried, their names being all entered on the Articles in their respective ratings, may be accepted equally with service as Second Engineer to qualify a Candidate for examination for a First-class Engineer's Certificate, provided he has, during the whole of such service, been in possession of a Second-class Engineer's Certificate (Imperial, or under Order in Council), and provided also that he was regularly in charge of a watch. In the case of Fourth Engineers, however, eighteen months of such service must be proved for every twelve months required by the Regulations.

16. Service in a capacity below that of Fourth Engineer cannot be accepted as qualifying for any class of certificate unless the testimonials of the candidate explicitly certify that during such service he has been taking regular watch in the engine-room, and that the Chief Engineer or Superintending Engineer considers him properly qualified by that experience to act as Chief Engineer of a Foreign-going steamer of 99 horse-power nominal. *In any case the applicant must prove that he has had the responsible charge of the engines or boilers on regular watch for at least twelve months of sea service, of which for not less than six months he must have been in charge of the propelling engines and rated on the articles not lower than Fourth Engineer.* Service below the grade of Fourth Engineer.

17. Having "responsible charge" will be understood to imply, in regard to the engines, that the applicant, for the time specified, was, on regular watch, the person responsible for carrying out the orders of the engine-room telegraph, and, in regard to the boilers, that he was, similarly for the period specified, the person responsible for regulating the feeds.

18. When the workshop service has been performed in a place *where steam-engines are not made*, and the class of work done is similar to that required in engine-making, the service may be accepted with an additional year in the engine-room; that is, three years' workshop service and two years in the engine-room, of which one year must have been at sea. The approval of the Government must be obtained in every such case before the authority to receive a certificate is issued by the Examiners. Workshop service.

19. When the workshop service has been performed in a place *where engines are made*, and the department in which the applicant has been principally engaged is not "*fitting*" or "*erecting*," if the nature of the service be such as is useful training for an Engineer, the Government may, on proper representation of the circumstances, see fit to accept the service as qualifying along with subsequent experience, but in every such case the applicant must prove additional engine-room service as required above. The approval of the Government must likewise be obtained.

20. If a candidate has served in the Engine Room with a Second-class Certificate in the capacity of a Second Engineer in Foreign-going Steam-Ships under 100 horse-power, or in Home Trade Passenger Steam-Ships, which are not required by law to carry a certificated Second Engineer, his service may be accepted without reference to the vessel's horse-power, provided he has been on the ship's articles as Second Engineer, and produces certificates of discharge as Second Engineer, for the required period. Service as Second Engineer where certificate not required

21. The Government may see fit to allow an applicant who, in consequence of service abroad, has been unable to obtain a Second-class Certificate, to be examined for a First-class Certificate, although he has not obtained a Certificate of the lower grade, provided he is able to satisfy them as to the satisfactory character of his services. First-class certificates without second.

22. In such cases (para. 21) or in cases where the candidate is already in possession of a Certificate of Service, should he fail to pass the examination for the higher grade, but passes the examination for the lower grade, he may receive a Certificate accordingly, but no part of the fee will be returned. Unsuccessful candidates may in certain cases receive certificates for inferior grade.

23. A candidate who under the above regulation (para. 21) has been permitted to be examined for a First-class Certificate without first obtaining a Second-class Certificate of Competency, and who fails in his examination in practical knowledge, may not be re-examined for a Certificate of the higher grade until he has served 12 months as Second Engineer with a Second-class Engineer's certificate of competency as required by the Regulations. Consequence of failure in such cases.

24. If the candidate fails altogether, *i.e.*, both in the examination for the lower as well as for the higher grade of Certificate (para. 21), he may be re-examined for a *Second-class Certificate only*, subject to the usual regulations relating to failure.

If after passing examination services are found to have been insufficient.

25. If after a Candidate has passed his Examination it is discovered on further investigation, *e.g.*, by verification on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for which he has passed, it will not be granted to him; but if the Government are satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, the Certificate may be issued to him, or he may be allowed to go up for re-examination without payment of further fee, when he has performed the amount of service in which he was deficient as the Government may direct.

Certificate of lower grade may be granted on certain conditions.

26. If, in such a case, the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate may be placed to his credit.

May have to be re-examined for certificate of higher grade.

27. In such a case when the applicant has by further service made up the time in which he was found to be short, he may be required, before he can receive the higher certificate, to be re-examined in all the subjects.

Qualifications for Certificates of Competency.

Qualification of candidate for Second-class Engineer's Certificate.

28. SECOND-CLASS ENGINEER.—A candidate for a Second-class Engineer's certificate must be not less than 21 years of age;

(*a*) He must have served an apprenticeship to an Engineer for three years in England or five in India at least, and prove that during the period of his apprenticeship he has been employed on the making and repairing of engines:—Or if he has not served an apprenticeship, he must prove that for not less than three years in England or five in India he has been employed as a journeyman mechanic in some factory or workshop* on the making or repairing of engines.† In either case he must also have served one year at sea in the Engine Room as an Engineer on regular Watch in the Foreign, Home or Coasting Trade‡; or

(*b*) He must have served at least four years at sea in the Engine Room as an Engineer on regular Watch in the Foreign, Home or Coasting Trade.

(*c*) He must be able to give a description of boilers, and the methods of staying them, together with the use and management of the different valves, cocks, pipes, and connections.

(*d*) He must understand how to correct defects from accident, decay, &c., and the means of repairing such defects.

(*e*) He must understand the use of the barometer, thermometer, and salinometer, and the principles on which they are constructed.

(*f*) He must state the causes, effects, and usual remedies for incrustation and corrosion.

(*g*) He must be able to state how a temporary or permanent repair could be effected in case of derangement of a part of the machinery, or total break-down.

(*h*) He must write a legible hand, and understand the first five rules of arithmetic, and decimals, and their application to questions about consumption of stores, and full capacities of tanks and bunkers, the duty of pumps, and the direct strains in engines and boilers.

(*i*) He must be able to pass a creditable examination as to the various constructions of paddle and screw engines in general use; as to the details of the different working parts, external and internal, and the use of each part.

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* No period of service in a drawing office can be allowed to count for more than six months workshop time.

† These may be either land or marine engines.

‡ *See* paragraph 13 as to service in Home or Coasting Trade.

29. FIRST-CLASS ENGINEER.—A candidate for a First-class Engineer's Certificate must be not less than 22 years of age. Qualification candidate for First-class Engineer's certificate.

30. In addition to the qualification required for a Second-class Engineer—

(*a*) He must either possess, or be entitled to, a First-class Engineer's certificate of service; or, in the event of his not being so possessed or entitled, he must have served for one year at sea as Second Engineer with a Second-class Engineer's Certificate of Competency, or for two years at sea as Second Engineer with a Second-class Engineer's Certificate of Service: or having served one year at sea as Second Engineer with a Second-class Engineer's certificate of Service, he must show, in addition, at least six months' service as Chief Engineer in a vessel required by law to carry at least one Engineer holding a certificate. (*See also paragraph* 15 *as regards service as Third and Fourth Engineer.*)

The Examiner should therefore be satisfied that an applicant for a First-class Engineer's Certificate has not only been *in possession* of a Second-class Certificate for the periods above stated, but that he has actually *served* for such periods in the Engine Room at sea with a Second-class Certificate in the capacities referred to, and that his name has been entered in the articles of agreement accordingly. (*See also para.* 21.)

(*b*) He will be required to make an intelligible hand sketch, or a working drawing of some one or more of the principal parts of a steam-engine; and to mark in, without a copy, all the necessary dimensions in figures, so that the sketch or drawing could be worked from.*

(*c*) He must also be able to take off and calculate indicator diagrams.

(*d*) He must be able to calculate safety-valve pressures and the strength of the boiler shell, stays, and riveting.

(*e*) He must be able to state the general proportions borne by the principal parts of the machinery to each other, and to calculate the direct stress, the torsional stress, and the bending stress in round bars, and the direct stress and the bending stress in rectangular bars with given loads.

(*f*) He must be able to explain the method of testing and altering the setting of the slide valves, and to sketch about what difference any alteration in the slide valve will make in the indicator diagram, and also the method of testing the fairness of shafts and of adjusting them.

(*g*) He must be conversant with surface condensation, superheating, and the working of steam expansively.

(*h*) His knowledge of arithmetic must include the mensuration of superficies and solids and the extraction of the square root, and the application of these rules to questions relating to the power, duty, and economy of engines and boilers, and to the stresses in rods, shafts, and levers of the engine.

Service in the Royal Navy.

31. Engineers and Assistant Engineers of the Royal Navy are at liberty to apply for Certificates of Service, and to be examined for Certificates of Competency in the Mercantile Marine; but they must submit their applications in the manner directed by the Lords Commissioners of the Admiralty. Engineers.

32. As regards the grades of Certificates of Competency for which Officers of the Royal Navy can be examined, the rule is—"First-class Assistant," or "Assistant Engineers" of the Royal Navy may be examined for Second-class Engineers' Certificates of "Competency"; "Engineers" of the Royal Navy for First-class Certificates of Competency. Grades.

* *See* Appendix B.

Temporary service in the Royal Navy.

33. Temporary active service as Engineer in the Royal Navy counts in applications for Certificates of Competency in the same way and to the same extent only as in the case of the service of Mercantile Marine Engineers, that is to say, so much of the applicant's time as is spent in active service at sea, or in a ship commissioned for sea service, counts as "sea service;" and so much of the applicant's time as is spent in active service on boardship in harbour, and not commissioned for sea, counts as workshop time—*See* paragraph 28, sub-section (*a*).

Engineer Artificer.

34. Service performed in the capacity of Engineer Artificer may count to qualify a Candidate for examination for a Second-class Engineer's Certificate of Competency in the Mercantile Marine. If the service has been on shore, it will count only as workshop time. If in the Engine Room at sea, the Candidate must prove that during such service he had charge of an Engine Room watch.

Fees.

Fees to be paid by applicants for examination. (Exn. 17.)

35. Candidates for examination, in making their Application on Form Exn. 3, will be required to pay the Examination fees before any step is taken, whether by inquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them, but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be.

36. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

37. If a candidate fails in his examination, *no part of the fee he has paid will be returned to him.*

38. The fees are as follow:—

Second-class Engineer's Certificate ...	Rs.	12
First-class Engineer's Certificate ...	„	24
First-class Engineer's Certificate if candidate is already in possession of a Second-class Certificate of competency granted by the Board of Trade, or by the Government of a British possession under Section 8 of the Merchant Shipping (Colonial) Act, 1869 ...	Rs.	12
Renewal of any certificate	„	5

General Rules as to Examinations.

Candidates not to take books, &c., into examination room.

39. All books necessary for the use of candidates under examination will be provided by the Government, and applicants are not permitted to take into the examination room any book, paper, document, or memoranda of any description whatever.

40. Candidates will be allowed in the time allotted to cancel any part of their work, and when required additional papers will be supplied by the Examiners, but they will not be allowed to work out the problems on a slate or on waste paper. The additional sheets must be attached to, and form part of, the examination papers.

41. Candidates for First-class Certificates have to pass an examination in Rough Working Drawing, which may, at the candidates' option, be either hand sketches clearly dimensioned and complete in the necessary *views* and *sections*, or drawings to a scale. Drawing boards and T squares will be provided by the Government, but the applicants will have to bring with them any drawing instruments they may require.*

* *See* Appendix B.

42. In the event of any candidate being discovered copying from another, or affording any assistance or giving any information to another, or communicating in any way with another during the time of examination, he will be regarded as having failed in his examination, and will be turned back for three months, in the same manner as if he had failed in the practical part of the examination ; and no part of the fees he may have paid for examination will be returned to him. This penalty also applies to any breach of paragraph 34. Punishment for breaking rules.

43. If a candidate leaves the room before answering any question which has been given to him, he cannot afterwards be permitted to answer it, but the Examiners may substitute other data or another question. Leaving examination room.

44. All applicants presenting themselves for examination will be required to give written answers to ten questions selected from Form Exn. 15*a*.,* "Elementary Questions for the first examinations of Engineers for certificates of competency, and of Masters and Mates for certificates in steam." These questions are intended to furnish a record to some extent of the candidate's knowledge at the time of his examination, and also to induce the candidates to pay more attention to their handwriting and spelling. Questions from Form Exn. 51*a*.

45. The Form Exn. 15*b*., on which these answers will be written, contains also some questions as to the experience of the applicant, to be answered by him in writing.

46. Examiners may add to their *viva voce* questions on the practical management of steam-engines and boilers any of those contained in Exn. 15*a*.

47. If at the expiration of the time allowed the candidate has worked out and answered correctly the whole of the questions set to him, and given satisfactory answers in the *viva voce* examination, he will be declared to have passed.

48. If at the expiration of the time allowed he has not worked out the whole of the questions set to him, but if the result of the *viva voce* examination taken in connection with the answers to such of the questions as he has worked out is sufficient to satisfy the Examiners that the applicant is competent to take charge of engines of 100 nominal horse power or upwards, he will be declared to have passed.

49 In other cases he will be declared to have failed.

50. A report of the examination, and the examination papers, will be forwarded to the Port Officer on the Form (Exn. 15). Exn. 15.)

51. If the candidate passes, he will receive the Form Exn. 16, upon which the Government will issue the certificate to the candidate, whose testimonials, &c., will be returned at the same time. Notification of having passed will be given to successful candidates. (Exn. 16.)

Failure.

52. If the applicant fails in practical knowledge, he may not present himself for re-examination until he can produce proofs of THREE MONTHS' further service at sea as Engineer from the date of failure. If he fails in arithmetic or drawing only, he may come up again at any time.

General.

53. Certificates of Competency shall be made and issued by the Government in the forms hereunto annexed.

54. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

55. No application from the holder of a certificate granted by the Government of any other British Possession or by the Board of Trade to be examined for a certificate of the same legal value shall be entertained.

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* *See* Appendix A.

APPENDIX A.

Form Exn. 15a.

Elementary Questions for the First Examinations of Engineers for Certificates of Competency and of Master and Mates for certificates in steam.

TO ENGINEER EXAMINERS.

EXAMINERS will require all candidates to fill up a form, Exn. 15*b*., of which a copy is enclosed, and they will forward the same to the Port Officer for transmission to the Government along with the report of the examination.

It is intended to issue questions of a more advanced character for first-class candidates, but in the meantime the questions for both classes of Engineers and also for Masters and Mates passing a Voluntary Examination in steam will be taken from the same book of "Elementary Questions," and candidates for first-class certificates are expected to show their superiority by giving answers more complete than those of the other candidates.

The arithmetical questions for Engineers and the *viva voce* examinations for all candidates will be continued as heretofore, and failure in the elementary questions will be treated as failure in arithmetic.

The numbers of the questions for each examination will be selected by the examiners, and they are not to be communicated to the candidate until his examination commences.

Masters and Mates may cancel questions A, B, and C, but they should fill up the form for questions D, E, F, and G, as evidence of their practical knowledge.

Exn. 15b.

Port | Class for which examined

Date | Candidate's name

A. Where and how long did you serve in works at the making or at the repairing of Engines, and in what capacities?

B. How long have you served as fireman or trimmer?

C. How long have you served in the engine-room at sea, and in what capacities?

D. With what descriptions of Engines have you served at sea—Paddle or Screw or both, Jet Condensing, Surface Condensing, or Non-condensing Engines, Compounds, Trunks, Inverted Cylinders, or Horizontal Engines? What size were the engines?

E. With what descriptions of Boilers have you served at sea—Rectangular or Cylindrical, Wet-bottomed or Dry-bottomed, Multitubular, Sectional or Flue Boilers?

F. What Engine defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

G. What Boiler defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

For the questions to be answered on the following pages, *see* the book of Elementary Questions. The questions need not be written; only the answers to them.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

ELEMENTARY QUESTIONS.

1.

What parts of an engine are generally made of wrought-iron?

2.

What parts of an engine are generally made of cast-iron?

3.

For what parts of an engine is steel sometimes used?

4.

What parts of an engine are generally made of brass or gun-metal?

5.

Where is "white metal" sometimes used? On account of what property possessed by it is it adopted? What objection is there to its more general use?

6.

For what parts is Muntz metal sometimes used? Is it malleable? For what properties is it valued?

7.

What difference is there in the composition of cast-iron, of wrought-iron, and of steel?

8.

How can cast-iron, wrought-iron, and steel be distinguished from each other?

9.

What are the different properties of cast-iron, of wrought-iron and of steel?

10.

What is meant by the terms "breaking stress," "proof stress," "safe working stress"?

11.

What is the cohesive strength or breaking stress of good ordinary wrought-iron?

12.

Tempering steel: how is it done, and in what order do the colours come?

13.

What is case-hardening?

14.

Which of the common metals or alloys can be forged, and which of them are brittle or "short"?

15.

What is meant by "welding"? Which of the common metals can be welded?

16.

The expansion of metals by heat: give examples of this in the engine and in the boiler.

17.

In the construction of cylindrical marine boilers, for what parts have the plates to be worked hot? When the material is steel, what precautionary treatment of these plates is afterwards necessary?

18.

What is double riveting? In what parts of cylindrical marine boilers is double riveting employed? In which of the shell seams is it most necessary?

19.

What is "caulking," and how are seams prepared for caulking?

20.

Describe the different ways of fastening the ends of the main stays of a boiler. What are the merits of, or objections to, the different plans?

21.

What strain per square inch is allowed on boiler stays?

22.

Describe a riveted stay, and state where such stays are commonly used.

23.

Where are thin plates to be looked for in a boiler as it wears, and how is the thinness to be detected?

24.

How are boiler tubes fixed? What are "stay tubes," and how are they secured?

25.

Where is it generally that boiler tubes leak? How is this defect raired? What are the causes of this leaking?

26.

What are the causes of cracked tube plates? Where are the cracks situated? How are they repaired?

27.

What is the difference between a "dry uptake" and a "wet uptake"? Which requires most repair? Why? Where have you seen a wet uptake?

28.

What is a superheater? What is its construction? What valves are on it? There is sometimes a gauge glass on it; what is that for?

29.

What parts of a marine tubular boiler are first injured by shortness of water?

30.

Where are angle irons sometimes used in the construction of a boiler, and where are flanged plates used?

31.

Priming: to what causes is it attributed? What means are applied to prevent it? What evils may be produced by it?

32.

Funnel draught: what makes it? What checks it?

33.

Flame is sometimes seen at the top of the funnel: what causes this appearance? Is it beneficial or is it detrimental? Why so?

34.

A blast pipe: what is its construction? Where is it placed? For what is it used?

35.

How many bottom blow-off cocks are generally fitted to each boiler, and why are they so fitted?

36.

Blow-off cocks are sometimes fitted with a spanner guard: for what purpose is this? Describe how the guard is formed?

37.

Test cocks or water-gauge cocks: where are they placed? At what heights? Must the cocks themselves be at those heights? What provision is made for cleaning these cocks should they ever become choked? When there are no test cocks how is the height of the water ascertained?

38.

What is a dead-weight safety valve? Of what are the rubbing surfaces formed? How is a lock-up valve arranged to admit of lifting it or of turning it round, and to prevent adding to the weight?

39.

About what area of safety valve is now required by the Board of Trade? What area was formerly required, and on what ground has that been altered? What is the effect of suddenly opening a safety valve when steam is up? To about what extent do safety valves rise when blowing off without being eased by hand?

40.

Spring-loaded safety valves: what advantages have they that are not possessed by dead-weight valves? What are the disadvantages as compared with dead-weight valves?

41.

Of what pieces does a glass water gauge mounting consist? How does it act? Where is it placed? At what height? Is it liable to derangement? How is its working tested?

42.

Glass water gauges have sometimes pipe connections top and bottom: what is the object of this arrangement? Should there be cocks at the extremities of these pipes?

43.

Describe a Bourdon's steam gauge. Some gauges have an inverted syphon pipe below them: what is its use?

44.

Why is a small cock sometimes put on the pipe leading to a steam gauge? Where should it be placed, and what error might be made by omitting to use it?

45.

Do steam gauges indicate the total pressure of the steam, or only a portion of that pressure? What is the pressure measured from?

46.

What is meant by the salting of the boiler? How is this prevented? What is the density of ordinary sea water? How is the density ascertained? What is the difference between the formation of scale and the salting of the boiler? What is the maximum density at which boilers should be worked at sea?

47.

Scum cocks and pipes: how are they arranged? Where are they placed? At what height in the boiler? When are they used? When must they be shut? Neglect of these cocks lead to what dangers?

48.

Scale: of what does it consist? Where is it most objectionable? How is it removed? How is its formation prevented? What evil effects are produced by it?

49.

What is a salinometer? Of what does it consist? How does it act? How is it graduated? Can it be used at any temperature indiscriminately?

50.

What harm may be done through the check valve of one of a set of boilers being defective while under way? How would you work to avoid this harm?

51.

How is the leak from a split tube stopped in a boiler at sea? Describe the operation?

52.

What is the use of dampers? Where are they fitted? When should they be used?

53.

When there are no dampers fitted, what is used instead? What evil to the boiler is sometimes attributed to this? When the heating surfaces are clean does this occur?

54.

Describe the piston of a steam cylinder, with its different rings and their uses? There are generally round pieces let in flush on one side of a piston: what are they? How are these pieces fixed?

55.

Cylinder drain cocks: what is their use? There is sometimes a valve upon each cock: what purpose does it serve?

56.

Cylinder escape valves: of what do they consist? How protected? How regulated? When are they most needed? To what danger do they expose the Engineer? What precaution is sometimes used to obviate this danger?

57.

What is a compound engine? What different kinds are there for screw steamers, in respect to the number and arrangement of their cranks and cylinders? What is a triple expansion engine?

58.

What is link motion? What are some of its advantages? In modern engines for the screw propeller when there is no link motion, what takes its place?

59.

What is a separate expansion valve? Why is it not fitted to all engines? What effect has an expansion valve upon the starting and upon the reversing of the engine?

60.

What arrangement is applied to reduce the friction of a slide valve? To what is the friction due?

61.

Describe a loose eccentric; how does it act? In what engines is the loose eccentric still employed?

62.

What is the travel of the eccentric rod? How is it measured on the eccentric? What is the travel of the slide valve when the link motion is in mid gear, and the engine still moving?

63.

What are "double beat valves"? Why are they not generally used for safety valves? Are they ever used instead of the slide valve? What objections are there to their use?

64

What is a circulating pump? Is it always worked by the main engine? Give an example from your last steamer of the three water temperatures generally noted by careful engineers?

65.

An air valve is sometimes fitted to a circulating reciprocating pump: what purpose does it serve?

66.

What is the difference between a bucket air-pump, a piston air-pump, and a plunger air-pump?

67.

Whether are double-acting air-pumps made with plungers, with pistons, or with buckets?

68.

What is an air-pump trunk? When is it necessary? How is it attached to the bucket?

69.

What class of air-pump requires both foot and delivery valves, and in what other class can either of these valves be in some cases dispensed with?

70.

When under way, when the air-pump bucket is at the top of its stroke, at what height is the water in the condenser?

71.

With a surface condenser and a single acting air-pump, what is the effect of a leaky foot valve, and what is the effect of a leaky bucket when there is also a foot valve?

72.

Air-pump pet cock or valve: where is it placed? How does it act? What is its object? Does it in every case reduce the effective capacity of the pump? Is it equally applicable to double-acting pumps?

73.

At what temperature is the hot well worked? What is the effect of higher temperatures? What is the effect of lower temperatures? What limits the lowness of temperature? Has a very low temperature any disadvantages?

74.

Bilge injection with common condensers: what are the fittings required? When is it used? What precautions are necessary in using it?

75.

When surface condensers are used, what takes the place of the bilge injection? To what is the connection made? How is its valve formed? Why is this necessary?

76.

What are the practical guides to the proper amount of opening of the inlet valve for the circulating pump?

77.

Feed-pump pet cock or valve: where is it placed? What is its use? How does it act? Is it always a necessary fitting?

78.

What are some of the ways of fastening the ends of surface condenser tubes? About what size and about what thickness are condenser tubes? What parts of a surface condenser are made of brass?

79.

What is a blow-through valve or cock? To what is it attached? There is sometimes a valve that, when opened, admits steam from the slide valve casing to the exhaust port; what is its use? To which cylinder is it fitted?

80.

What is a snifting valve? What is its use? Where is it placed? Can it be placed too high? Can it be placed too low? At what height should it be placed? Was there one in your last steamer; if so, where was it? Why are snifting valves generally omitted now?

81.

What connections are generally fitted to the donkey-pump, and to what services can it be applied?

82.

When the engines are stopped with steam up, what are to be shut and what are to be opened?

83.

How is an engine heated up before starting? What precautionary examinations are made before starting?

84.

What is an interceptor or catch-water? Where is it fixed; what is its construction; how does it act; and what attention does it require?

85.

Describe an air-pump bucket, with its valve or valves and its packing? Of what are the valves generally made?

86.

Of what materials are air-pump rods made? Why so?

87.

What is the racing of the engine? When does it occur? What danger attaches to it? What is done to prevent it?

88.

What are marine governors? What is their general construction? How do they act?

89.

What is meant by the "pitch" of a screw propeller? How is it measured?

90.

Explain the difference between a "right hand" and a "left hand" propeller, and state how each of them revolves.

91.

What is the slip of a screw propeller? How is its amount expressed in figures?

92.

Which of the valves about engines and boilers have to be worked by hand, which of them work self-actingly, and which are worked by the motion of the engine?

93.

Why is soda sometimes put into a boiler, and how is it put in when under way? What is the kind of soda used?

94.

Tallow cups for cylinders were sometimes made with two small cocks, or with only one small cock, or with one large hollow plug cock, or with one small cock and a valve; which of these is suitable for a high-pressure cylinder, and which for the cylinder of a condensing engine? Describe how the cup with only one small cock is used? What is now generally used instead of these? How has this change come about?

95.

Does a cylinder-escape valve, self-acting, allow all the water to escape; if not, how much is left in the cylinder?

96.

What is a "Steam Lubricator" (sometimes called an Impermeator)? Explain its action? To what part of the engine is it connected? Whether will throwing cold water over it make it work faster or slower? Describe the one used in your last steamer?

97.

A common paddle wheel: of what is the centre made? Of what are the arms formed? What is the form of the bolts which attach the floats to the arms? How are the arms attached to the centres?

98.

Why have some paddle wheels one or more cast-iron floats in each wheel? With what engines are these most required? At what part of the circumference are they placed?

99.

Why are paddle wheel floats sometimes made of different breadths in the same wheel? With what description of engine is this most needed? Where are the broad floats placed, and where are the narrow floats placed in the circumference of the wheel?

100.

What difference is there between a radial paddle wheel and one with feathering floats? What is the object of feathering floats? Are all the eccentric rods attached in the same way, and are they all of the same form?

101.

Whereabout is the centre of the eccentric of a paddle wheel with feathering floats placed? In that case are the feathering levers on the striking face or on the back of the float? When the paddle shaft has an outer bearing, how is the eccentric made?

102.

Of what materials are the working surfaces of a paddle wheel with feathering floats? Are they all lubricated? With what?

103.

What is a "Disconnecting Paddle Engine"? At what place is the disconnecting effected? How is it accomplished? In which of the cranks of a disconnecting engine are the crank pins fixed?

104.

Whether is link motion valve gear or the loose eccentric generally used for disconnecting paddle engines? For what steamers are disconnecting paddle engines frequently employed?

105.

What are expansion joints? Where are they necessary? What attention do they require? Of what should the working surfaces be made?

106.

What omission in the construction of expansion joints may lead to a serious accident when steam is first applied? How is this prevented in the construction of a steam trunion pipe for an oscillating engine?

107.

Describe an oil cup, with a syphon worsted? How is the worsted arranged? How is it cleaned? How far down the tube does it extend?

108.

Describe a thrust bearing; which of the surfaces wears? Why are there sometimes a number of oil tubes for one thrust bearing?

109.

What parts of a screw shaft are generally covered with brass? Why is this necessary? About what thickness is the brass?

110.

What is the stern tube or screw shaft pipe? Why is a pipe of such a length required? Of what is it made? How is it fixed at each end?

111.

What is a lignum vitæ bearing? How is the wood fitted? Where is such a bearing generally used?

112.

How is a screw propeller fixed on the shaft? What means are used to prevent its getting loose at sea?

113.

Where are sluice valves placed? What large sluice valve is there in almost all screw steamers? From what position should this valve be worked? Why so? What attention should it receive?

114.

With a condensing engine, what valves or cocks are on the skin of the ship in the engine-room and in the stokehole?

115.

What are the necessary fittings of a marine boiler?

116.

With a surface condensing engine, what cocks or valves are open some time before the engine is started so as to be ready for starting whenever the order is given?

117.

What is a steam jacket? What cocks are on it? In what engines are jackets most generally used? Do they require to be felted?

118.

What parts of an engine or its fittings should be felted or otherwise protected from radiation?

119.

What are the small cylinders sometimes fitted on the slide valve casing cover of vertical engines? Explain their action? To what are they connected by a pipe? Why so?

120.

Name the principal pipes in connection with the engines and boilers of a steamer, and state to what the ends of these pipes are connected?

121.

Through what cocks or valves, pipes and chambers does the water pass on its way from the sea inlet rose plate to the water space of the boiler, with a jet condenser?

122.

Through what cocks or valves, pipes and chambers does the circulating water of a surface condenser pass?

123.

Through what cocks or valves, pipes and chambers does the steam pass from the boiler until it is in the form of water in the hot well?

124.

Name the pieces of the engine through which the pressure of the steam is transmitted from the piston to the screw propeller. Name them in the order in which they act.

125.

What is an air vessel? How does it act? At what parts of an engine or of its fittings are air vessels generally applied?

126.

What is the construction of a mud box? Where should mud boxes be placed? Why are they necessary? How should the space be divided by the rose plate, and why?

127.

What is a trunk engine? When used in a horizontal engine for a right-hand screw propeller, at which side of the vessel should the cylinders be placed? Why so?

128.

What is an oscillating engine? For what steamers are oscillating engines generally adopted? Why? How is the steam conveyed to and from the slide valve casing?

129.

Of what parts does the valve motion gear of an oscillating engine consist?

130.

For what have geared engines sometimes been used? Of what were the cogs of the large wheel made?

131.

At what part of a screw steamer is the pressure that propels it applied to the hull?

132.

At what part of a paddle steamer is the pressure that propels it applied to the hull?

133.

About how much fuel per indicated horse power per hour is required by modern steam engines, common, compound and triple expansion ?

134.

What is the explanation of the economy of the surface condenser ?

135.

What is the construction of a surface condenser ? Of what are its tubes made ? How are they fixed ? How are they kept tight ? What is done with a split tube ?

136.

Where do surface condensers foul ? How are they cleaned ?

137.

What non-conducting substances are employed to prevent radiation, and how are they applied ?

138.

In the construction of smoke-box doors and of dry uptakes, what provision is made to lessen the amount of radiation ?

139.

How can the formation of black smoke be prevented ? Describe smoke preventing apparatus ?

140.

What is meant by "circulation" in a boiler, and what are the results of defective circulation ?

141.

What means are sometimes adopted to improve the circulation in a boiler ?

142.

By what arrangement is the circulation promoted in a "hay-stack" boiler ?

143.

Describe a ship's side air-pump discharge valve ? In what respects does it sometimes differ from a common stop valve, and what attention does it require ?

144.

What is the construction of a feed escape valve, to what is its discharge connected, and how is its loading regulated ?

145.

When there is no feed escape valve, what is the arrangement of the feed valves or cocks ?

146.

What is the measure of a horse power ? How is indicated horse power ascertained ?

147.

Has "nominal horse power" a fixed meaning ? What is the use of this expression ? What is generally taken as the measure of one horse-power nominal ?

148.

What is "back pressure" in a cylinder ? About how much is it in each of the cylinders in your last steamer ? Is excessive cushioning ever a trouble under certain conditions in modern engines ? Say when and why and in which cylinder this occurs ?

149.

What is meant by "speed of piston" ? About how much is the speed of piston in modern marine engines ?

150.

What is "atmospheric pressure" ? What is its average amount ? What instrument tells this amount ?

151.

What is "gross pressure" or "absolute pressure"? What pressure is it that is shown by the steam gauge?

152.

What is meant by "cutting off" steam? How is it done? What part of the valve regulates the cut off?

153.

What is a piston slide valve? Describe its construction? Why are such frequently employed in place of the common slide valve? What is a great drawback to the use of these valves?

154.

What fixes the time of closing the exhaust? After the exhaust is closed and before the port opens for steam, what becomes of the steam that is in the cylinder?

155.

What is the "lead" of the valve? What is its object? About what amount is it?

156.

What is the "cover" or "lap" of the valve? What is its object? About what proportion of the stroke of the valve is it made?

157.

What is the "exhaust cover" of a slide valve? What is its effect upon cushioning and upon exhaust?

158.

What is "minus cover" or "minus lap" on the exhaust? What is its effect upon the exhaust and upon cushioning?

159.

What is "cushioning" or "compression" in a steam cylinder? How is it affected by the amount of cover or of minus cover there may be upon the exhaust? How is it affected by the exhaust pressure?

160.

What is "mean effective pressure"? How is its amount ascertained?

161.

What is a dial vacuum gauge? What is its construction? For what is it used? About what amount should it show when the engine is working all right? What effect has the variations it indicates on the performance of the engine?

162.

Does the vacuum gauge enable you to tell what pressure there is in the condenser, or must you have recourse also to the barometer to arrive at that? How would you ascertain the actual amount of back pressure there is in the condenser?

163.

What is a barometer? What is its construction? Is a barometer sometimes used instead of a vacuum gauge? In what respect does the weather barometer differ from the vacuum gauge barometer?

164.

The common vacuum gauge and the common steam gauge: in which of them are the graduations marked from atmospheric pressure? Does either of them tell what is the true actual pressure in the boiler or in the condenser?

165.

Do steam and vacuum gauges vary with the variations of the weather barometer? When the weather barometer varies from 29 to 31, how much will the vacuum gauge vary, and how will that affect the working of the engine? Why so?

Vacuum is generally stated in so many inches. What is meant by, say, 20 inches vacuum? What does that tell us about the absolute pressure of the vapour then in the condenser?

167.

From what depth will a pump draw water? Is there any limit? Why?

168.

What is vacuum? Can vacuum move a piston? When the temperature of the water in the condenser is 212°, what is the greatest degree of vacuum there can then be in the condenser?

169.

What is a thermometer; its construction? What is the property of matter that is the principle of its construction? What temperatures are regularly noted by careful engineers?

170.

What is the temperature of (1) melting ice, (2) of boiling water, (3) of steam about 60 lbs. pressure by the steam gauge, (4) of steam about 100 lbs., and (5) of strain about 150 lbs.; also (6) of smoke in the funnel, and (7) of water in the hot well?

171.

What is meant by the "conduction" of heat? Give examples of it in the boiler and in the engine.

172.

What is meant by the "convection" of heat? Give examples of it in the boiler and in the engine.

173.

What is meant by "radiation" of heat? Give examples of it in the boiler and in the engine.

174.

Which is convection, which is radiation, and which is conduction in the following cases: (1) Heat from the glowing fuel to the furnace crown. (2) Heat passing from one side of the furnace crown plate to the other. (3) Heat passing from the steam pipes in the engine-room. (4) The heat of evaporation?

175.

What are the effective heating surfaces of a marine boiler? What is an objection to vertical heating surfaces?

176.

What parts of a marine engine are exposed to danger when the temperature is below freezing point?

177.

What precautions are necessary in cold climates when the temperature is below freezing point?

178.

State as many ways as you can by which a boiler might not get its full feed; that is, a boiler, or one of a set of boilers, gets short of water although the feed valve is open its proper amount to what causes might this be due?

179.

Of what are furnace bars generally made? About what thickness are they at top? About what space is between them? Whether are the bars put further apart for Newcastle coal or for Welsh coal?

180.

Which burns faster, Newcastle coal or Welsh coal? Which is the flaming coal? Which makes most smoke?

181.

About how many tons of steam coal will be burnt per day in four furnaces each 3′ 0″ wide, and of about the usual length? On what grounds do you say so?

182.

About how many tons of steam coal will be burnt per day with good compound engines to drive an ordinary steamer of 40 ft. beam 10 knots an hour by steam alone? On what grounds do you say so? What percentage more coal would be required to propel the same steamer one knot faster?

183.

About how many tons of steam coal will be burnt per day with a good compound engine, surface condensers, the low pressure cylinder 70 inches diameter, doing average work? On what grounds do you say so?

184.

A pair of inverted cylinder direct acting engines, there is a liner half an inch thick between the ahead eccentric rod and the eccentric strap, in overhauling the engine this piece is lost and forgotten; what difference will its omission make in the working of the engine, on the admission, on the cut off, and on the exhaust of the steam? Which will take place earlier, and which later distinguishing between the up stroke and the down stroke?

185.

A pair of inverted cylinder direct acting engines driving a right-hand screw; on which of the crosshead guide bars is the pressure greatest in the up stroke, and on which in the down stroke?

186.

A screw propeller is getting loose; it has a little play on the shaft, sideways on the key or feather; how will this show in the engine-room?

187.

How would you prove whether the centre line of the trunions of an oscillating cylinder be fair with the centre line of the main shaft?

188.

How can the fairness of a line of screw shafting be tested without lifting the shafts?

APPENDIX B.

Form Exn. 17.

Examination in Rough Working Drawing for a First-Class Engineer's Certificate of Competency.

1. The regulations in regard to the qualifications of a candidate for a first-class Engineer's Certificate of Competency specify that—

> "He must be able to make rough working drawings of the different parts of the engines and boilers."
>
> "He must be able to state the general proportions borne by the principal parts of the machinery to each other."

2. In accordance with these clauses, a candidate for a first-class certificate is required to make a rough working drawing of the parts specified on the other side of this leaf. A mechanic who has been some years in charge of marine engines and boilers ought by this time to have familiarly in his mind the general construction of at least one set of engines and boilers, say that set he was

last with. Fine drawing is not expected, and in the proportions of the parts a wide margin will be allowed ; absurd dimensions will be failure in practical knowledge.

3. The drawing must, however, be practically a working drawing, giving a sufficient number of views to show the parts fully—sections, plans, or elevations, just as the candidate would require to be supplied to him if he had to make the parts to the design of another person.

4. A clear hand sketch showing the construction, completely and fully dimensioned, will be accepted if the candidate prefers this alternative.

5. A portion only of the parts specified may be accepted in place of the whole, if that portion is sufficient to show that the candidate has a good practical idea of the construction of the parts, and a fair notion of their general proportions or dimensions.

6. Candidates are hereby cautioned not to put on paper what they have not fully considered, and deliberately intend to be understood, as their statement of what they know about the construction of any part required.

7. The statements given in by a candidate may be in themselves, apparently, of little importance, but as sample material from which the state of the candidate's knowledge of engines and boilers is to be inferred, every detail which is glaringly inconsistent with a sound knowledge of the use of the part, or in which an essential consideration has evidently been overlooked, is an important element in the description which the candidate is giving of his own qualifications.

8. The candidate is advised not to begin more than he can clearly finish in the time allowed. An important object in this part of the examination is to ascertain whether the candidate can be trusted to mark all necessary dimensions upon a sketch or a drawing. The test of this is, practically, the making of the part from the sketch without having to supply additional dimensions, and without measuring the drawing. To prove this ability the candidate must fully dimension the parts shown in his sketch or drawing, notwithstanding that the parts may be correctly drawn to scale. A drawing is fully dimensioned when no part of it is left to the option of the party who is to work to the drawing.

9. To prevent misunderstanding, however, when the candidate has been led into showing more of the details than he has time fully to finish, he should name, in the statement on the other side, the particular parts which he has fully dimensioned.

10. All dimensions should have lines and darts, to indicate distinctly the points between which the dimensions are given.

11. Beware of writing cross dimensions upon centre lines, or upon longitudinal dimension lines. This is not an order but a recommendation.

12. The candidate is not expected to design anything; he has merely to sketch or draw a something with which he is expected to be already familiar.

13. Pencil in nothing after half-past 3 ; all the dimensions, the figures, and the darts must be inked in; employ the remaining time in examining the drawing and in inking in any figures which may have been before overlooked, and in checking the dimensions.

14. Make sure that you will have sufficient room on the drawing sheet to show all the necessary views. You can have another sheet or drawing paper if necessary. All the paper used must be forwarded with the drawing.

15. Fill in and sign the following statement.

(Specimen.)

Form **Exn. 17a.**

SUBJECT FOR EXAMINATION IN ROUGH WORKING DRAWING.

(Read the foregoing general instructions.)

A common slide valve with its spindle. Show also an outline section of the ports at the cylinder face. Show the provision for connecting the slide valve to the spindle.

The candidate is requested to fill up the following, and to attach this paper to his drawing.

STATEMENT BY THE CANDIDATE.

The accompanying drawing, made by me this day, without referring to any document, and without the assistance of any person, is intended by me to be sufficient for the new construction of the parts above described to fit the places of similar parts which are to be removed. The construction is similar to what I have been with in the_____steamer_____, but the dimensions may be different.

The diameter of the cylinder is_____

The stroke of the piston is_____

The stroke of the valve is_____

The cover at top end on steam side is_____

The cover at bottom end on steam side is_____

The lead at top is intended to be_____

The lead at bottom is intended to be_____

The inside cover is +_____or-

The thickness of the face of valve is_____

The thickness of the body of valve is_____

The greatest opening for steam will be_____

That gives an area equal to one_____

The opening for exhaust when the crank is on the top centre is_____

That gives an area equal to_____th of piston.

The length of the connecting rod is_____

The valve will cut off steam on the down stroke at_____

The valve will cut off steam on the up stroke at_____

The Candidate may omit this part if he chooses.

The parts fully dimensioned, in ink, are_____

Dated at _____.

this_____ day of_____18

_____ Applicant.

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

FIRST CLASS ENGINEER.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of FIRST CLASS ENGINEER in the Merchant Service, I do hereby, in pursuance of Act VII of* 1884, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18——.

Under-Secy. to the Govt. of Bengal.

BENGAL.

No. of Certificate [redacted]

Address of Owner .....

Date and Place of Birth .....

Signature .....

This Certificate is given upon an ORDINARY EXAMINATION passed at _____ *on the* _____ *day of* _____ 18 .

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the _____ *day of* _____ 18 .

Registered,
Port Officer of Calcutta.

Government of Bengal.

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

SECOND CLASS ENGINEER.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of SECOND CLASS ENGINEER in the Merchant Service, I do hereby, in pursuance of Act VII of* 1884, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

*this*_____*day of*_____18___.

[redacted]

Under-Secy. to the Govt. of Bengal.

BENGAL.

No. of Certificate [redacted]

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

*This Certificate is given upon an ORDINARY EXAMINATION passed at*_____*on the*_____

*day of*_____18—.

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

*Issued at the Port of Calcutta on the*_____*day of*_____18—.

Registered,
Port Officer of Calcutta.

No. 24 Marine, dated Calcutta, the 30th January 1890.

NOTIFICATION—By the Govt. of Bengal, P. W. Dept

UNDER the powers conferred upon him by section 36 of Act VII of 1884 (the Indian Steam-ships Act), and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to engine-drivers of sea-going steam-ships having engines of under 50 nominal horse-power :—

1. Certificates of competency will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed and arrangements have been made for holding the examinations periodically at the port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint.

2. The application for examination is to be made in Form Exn. 3*a*, which must be filled up at the Port Office. The Exn. 3*a* properly filled in, together with the candidate's testimonials, must be lodged with the Port Officer not later than the day before the day of examination.

3. A candidate for a certificate of competency under these rules must be not less than 22 years of age.

4. He must have served three years as principal serang or tindal in the engine-room of a sea-going steamer under a certificated Engineer.

5. He must have the testimonial shown in Appendix A filled up by the Engineer with whom he has last served, or his other testimonials must contain all the particulars therein required.

6. He must pass a *viva voce* examination before the Board of Examiners as to the working of an engine and the use of its different parts.

7. He must, if required, be able to show his practical qualifications by one week's trial in a steamer, after fulfilling the other tests to which he will be subjected.

8. He must show a knowledge of the use of brine cocks and blowing off, of the salinometer, and of the care of the boiler in salt-water.

9. Candidates for examination, in making the application on Form Exn. 3*a*, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them; but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service or are able to produce satisfactory testimonials, as the case may be.

10. The fee for examination under these rules is ten rupees, and the amount must be remitted with the application to the Port Officer. In any case in which a candidate offers money to any other officer than the Port Officer, and in any place but the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

11. If a candidate fails in his examination, *no part of the fee he has paid will be returned to him.*

12. In case of failure, candidates may be re-examined *de novo* after a lapse of six months, if the past examination showed that they might reasonably be expected to qualify.

13. Certificates of competency shall be made and issued by the Government in the form hereunto annexed.

14. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

TESTIMONIAL.

hereby certify that *has*

served with me in the engine-room of *as principal serang*

or tindal for a period of , *during which time he*

has discharged his duties to my entire satisfaction.

I consider that he fully understands the working of an

engine, and has sufficient tact, presence of mind, and energy to

look after and manage the working of the engines of a sea-going

steamer having engines of under 50 *nominal horse-power.*

Signed

No. and description of Certificate.

Note.—Any Engineer giving a testimonial in this form should be very careful in doing so, as the document may materially influence the applicant's eligibility as a candidate.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

ENGINE-DRIVER OF A SEA-GOING STEAM VESSEL UNDER ACT VII OF 1884.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of Engine-driver on a sea-going Steam-ship having engines of under* 50 *nominal horse-power, I do hereby, in pursuance of Act VII of* 1884, *grant you this CERTIFICATE OF COMPETENCY as Engine-driver.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

*The*_____*day of*_____18____.

Under-Secretary to the Govt. of Bengal.

(80)

No. of Certificate

*Bearer*_____ *son of*_____ *by caste*_____

Date and Place of Birth, showing Village, Thana and District*_____

*Residence, showing Village, Thana and District*_____

*Height*_____

*Personal description, stating particularly any permanent marks or scars*_____

*No. of Register Ticket*_____

*Signature*_____

Any Engine-driver who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer of Calcutta.

*Issued at Calcutta on the*_____ *day of*_____ 18____.

Registered.

Port Officer of Calcutta.

* If not known exactly, must be stated on the best information or evidence.

No. 25 Marine, dated Calcutta, the 30th January 1890.

NOTIFICATION—By the Govt of Bengal, P. W. Dept.

UNDER section 10 of the Indian Merchant Shipping Act, 1859, the Lieutenant-Governor is pleased, with the sanction of the Governor-General in Council, to make the following rules for the conduct of examinations for Masters and Mates of foreign-going ships and as to the qualifications to be required. These rules are in supersession of the rules issued under the notification dated the 28th of August 1877.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose examiners have been appointed, and arrangements have been made for holding the examinations periodically at the port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint.

Examinations continued till all the Candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the Candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Notice of application for examination to be given to the Port Officer.

3. Candidates for examination must make their application upon the appropriate Form (Exn. 2), which must be filled up at the Port Office. The Exn. 2, properly filled in, together with the Candidate's testimonials and discharges, must be lodged with the Port Officer of Calcutta not later than the day before the day of examination, and the Candidate must conform to any regulations in this respect which may be laid down by the Government, as, if this be not done, delay may be occasioned.

Testimonials of character, conduct, and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges may have to be verified before the Candidate can be examined, it is desirable that they should be handed in together with the Form, Exn. 2, as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners, and of British Seamen serving in foreign vessels, which cannot be verified by the Port Officer, must be confirmed either by the Consul of the country to which the ship in which the Candidate served belonged, or by some other recognized official authority of that country, or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case will be decided on its own merits, and if the sufficiency of the proofs given appears to be at all doubtful, it must be referred to the Government.

Certificates as to age.

6. Should any doubt exist as to the age of a Candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British Vessel. In the case of natives of India, who may not be able to speak English, their Certificates will be endorsed to the effect that they are only valid for vessels manned and officered entirely by Asiatics.

8. The time for which length of service as Seaman or Officer in the Mercantile Marine is to be reckoned in all cases referred to in the following paragraphs is to commence at the date when the Articles of Agreement were signed by the Applicant, and to end at the date when he was discharged as shown on the Articles of Agreement. The Certificates of Discharge will generally be sufficient evidence of this, but great care must be exercised by the Port Officer and Examiners to detect any tampering in any way with the information contained in them, and to report to the Government at once any suspicious cases.

Verification of services, &c., by Articles

9. Services, which cannot be verified by proper Entries in the Articles of the Ships in which the Candidates have served, cannot be counted. For instance, a man will state his

service to have been as Second or Only Mate, and to support his assertion will produce a Certificate of Discharge or of employment by the Master, to the effect that he served as Mate, when, on reference to the Articles, it appears that he has actually been rated as Boatswain; the service in such a case will not be regarded as having been in the capacity of Mate.

Promotion during Voyage

10. Whenever a man has, from any cause, been regularly promoted on a vacancy in the course of the Voyage from the rank in which he first shipped, and such promotion, with the ground on which it has been made, is properly entered in the Articles and in the Official Log Book, he will of course receive credit for his service in the higher grade for the period subsequent to his promotion.

Service in the coasting trade

11. Service in the coasting trade may be allowed to count as service, in order to qualify a Candidate for examination for a Certificate of Competency for Foreign-going Ships, it being understood, however, that service in the coasting trade must amount to half as much again as service in the foreign trade, and that service in a lower grade than that of First or Only Mate in the coasting trade will not be recognised as officer's service.

12. Three years' service as Mate in the coasting trade, together with at least nine months' service as Master, may be allowed to count as service for a Master's Certificate, provided the Candidates' entire service at sea calculated as above is sufficient, and that his services as Mate and Master in the coasting trade can be proved by the Articles, and provided he has already passed an examination *for the Foreign Trade*, unless, *under special circumstances*, the Government see fit to dispense with this latter provision.

13. Service in Pleasure Yachts under 80 tons, if performed within Home Trade limits, will not be accepted towards qualifying a Candidate for examination.

14. Service in Pleasure Yachts will not be accepted at all unless verified by satisfactory proofs, and it must be distinctly understood that accepted service is confined to *actual sea service*, service in harbour or port being inadmissible. *See also para.* 21.

Service as an Apprentice.

15. Time for which Indentures of Apprenticeship are in force will be accepted as sea service, provided that the Apprentice has remained by the ship for at least four-fifths of the time covered by the Indentures, and the Indentures of the applicant are endorsed by the Owner or Master to whom he has been bound, to the effect that he has performed his service faithfully for the whole time agreed upon.

Service as 3rd or 4th Mate to qualify for 1st Mate.

16. Service as Third or Fourth Mate may be accepted as equivalent to service as Second Mate to qualify a Candidate for examination for a Certificate of Competency as First Mate, provided he is able to produce a satisfactory testimonial from the Master or owner of the vessel in which the service was performed, showing that he has had charge of a watch while serving as such Third or Fourth Mate, and that during the whole of the time claimed he was in possession of a Second Mate's Certificate of Competency, valid in the United Kingdom.

Service as 3rd or 4th Mate to qualify for Master.

17. Service as Third or Fourth Mate may also be accepted on the same conditions to qualify a Candidate for examination for a Master's Certificate of Competency, provided he can produce satisfactory evidence of his having served at sea 12 months as Second Mate of a Foreign-going Ship while in possession of a First Mate's Certificate of Competency, valid in the United Kingdom. If a Candidate has had no service as First Mate he must have been six and-a-half years at sea, of which two and-a-half years must have been as Mate of a lower grade under the above-named conditions. It will also be noted that occasional service in charge of a watch in the daytime will not be accepted as Mate's service under the Regulations.

Service on board a Training Ship.

18. Part of the time served on board a training ship will be allowed to count as service at sea, provided that the Candidate can produce amongst his testimonials a Certificate from the Committee that he has conducted himself creditably, and passed a good examination in seamanship so

far as practised in the training ship as well as in other matters down to the time of his leaving the ship.

19. No period of service on board a training ship will be allowed to count for more than one year's sea service, nor can it be accepted as equivalent to service in square-rigged vessels.

Service in Auxiliary Screw Whaling ships.

20. Service in Auxiliary Screw Whaling Ships and other Vessels with auxiliary steam power, which use their screws only in calms or during light winds, is considered as service performed in Sailing Vessels. Such service is not to be accepted in cases where service on board Foreign-going Steam-ships is required.

Service in Trawlers, Yachts, &c.

21. Service performed in Trawlers, Yachts, &c., *alone* will not qualify a Candidate for examination for a Foreign-going Certificate. He must show that he has served, in addition thereto, 18 months in an ordinary trading vessel.

Service in capacities other than as Apprentice or Seaman.

22. Candidates whose services have been in capacities other than Apprentice, Ordinary Seaman, or Able Seaman, *e.g.*, Cook, Steward, Carpenter, &c., will be required to satisfy the Port Officer that they have a good knowledge of Seamanship. This may possibly be proved by the production of satisfactory Certificates from Masters with whom the Applicants have served. Failing satisfactory evidence, the Applicant may be required to perform additional service, which must be in the capacity of Ordinary Seaman or Able Seaman.

Service on rivers and in smooth-waters.

23. Service performed on rivers, no matter of what size, or in smooth-water or partially smooth-water cannot be accepted.

Loss of sight.

24. A person who has lost the sight of one eye cannot be allowed to be examined for a Certificate of Competency. If he already holds a Certificate, he will not be allowed to be examined for a Certificate of a higher grade.

Service in Light Ships and Engine-room.

25. Service in Light Ships or in an Engine-room will not be accepted as sea service for a Master's or Mate's Certificate of Competency.

26. In the case of service on board Excursion Steamers only such service as has been performed actually at sea can be accepted.

27. A First Class Pilot, with one year's Sea Service since he obtained his Pilot's Certificate, may be examined for a First Mate's Certificate for Foreign-going Ships. A Hooghly Master Pilot is for the purpose of this rule to be considerd a First Class Pilot.

Services as Pilot's Apprentice.

28. Half the amount of service performed as an Apprentice in a Pilot Vessel propelled by sails may count as actual Sea Service to qualify for examination for a Certificate of Competency.

Desertion and gross misconduct.

29. Candidates who have neglected to join their vessels after having signed Articles, or who have deserted their vessels after having joined, or who have been found guilty of gross misconduct on board, will be required to produce satisfactory proofs of two years' subsequent service and good conduct at sea, unless the Local Government after having investigated the matter should see fit to reduce the time.

If after passing examination services are found to have been insufficient.

30. If after a Candidate has passed his Examination it is discovered on further investigation, *e.g.*, by verification on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for which he has passed, it will not be granted to him; but if the Government is satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, he will be allowed to go up for re-examination without payment of further fee when he has performed the amount of service in which he was deficient.

Certificate of a lower grade may be granted in certain conditions.

31. If, in such a case, the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference, if any, between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate, may be placed to his credit.

Must be re-examined for certificate of higher grade.

32. In such a case when the applicant has by further service made up the amount in which he was found to be short, he must, before he can receive the higher Certificate, be re-examined in all the subjects.

Colour Tests.

33. The Government have made the following arrangements for the Examination of persons as to their ability to distinguish Colours:—*

34. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

35. Any person, including the holders of Certificate of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in colours only*, must make application to the Port Officer on Form Exn. 2ª, and pay a fee of one rupee.

36. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a Certificate to that effect.

37. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

38. The application of a *Candidate who is presenting himself for Examination for a Master's or Mate's Certificate* must be made on Form Exn. 2.—Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any one of the colours used in the test, he will not be allowed to proceed with the examination in Navigation and Seamanship.

39. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will, in such event, be returned to him.

40. A Candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If he fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

41. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form 2ª.

42. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination in Navigation and Seamanship for the Certificate of the higher grade.

43. Should he pass this Examination the following statement will be written on the face of the higher Certificate which may be granted to him, viz.: "This officer has failed to pass the 'Examination in Colours.'"

44. Should he ultimately fail to pass the Examination in Navigation and Seamanship a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

45. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency for a "Foreign-going Ship."

Foreign-going Sailing Ships.

46. EXAMINATION IN COLOURS.—All Candidates for Certificates of Competency must first be examined in colours.*

47. A SECOND MATE must be not less than seventeen years of age, and must have been four years at sea. He must also prove that he has served at least one year in a square-rigged sailing vessel within the last five years. *See also para.* 11. Second Mate.

On and after the 1st April 1890, no Candidate will be allowed to be examined unless he has served at sea two years

* *See* Appendix L.

within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

48. IN NAVIGATION, &c.—He must write a legible hand, and will be required to give in writing, *vide supplementary vivâ voce* test, page 37, definitions of various astronomical and other terms used in navigation.* He must have a competent knowledge of the first five rules of arithmetic, and the use of logarithms. He must be able to work a day's work complete, correcting the courses for deviation, lee-way, and variation. He will be required to find the latitude by meridian altitude of the sun, and the difference of longitude from a given departure by parallel sailing; also to find the course and distance from one position to another by Mercator's method. He will be required to find the time of high water at a given port, to observe and calculate the amplitude of the sun, and to find the error of the ship's compass therefrom, and also the deviation, the variation being given. He must be able to find the daily rate of the chronometer from error observed, and to find the longitude from altitude of the sun by the usual methods. He must understand the use of the sextant, with its adjustments, and be able to observe with it, find the index error by the horizon, and *read off* and *on the arc*.† He must also pass a satisfactory examination in the International Code of Signals.‡

49. IN SEAMANSHIP, &c.—He must give satisfactory answers as to the standing and running rigging of ships; as to bending, unbending, setting, reefing, taking in and furling sail; as to sending masts and yards up and down, &c., &c.; as to the management of a ship when under canvas; of a ship's boat in heavy weather, and as to dunnaging and stowing cargo, &c. He must have a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog, and sound signals,§ and be able to describe the signals of distress, and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals ‖ He must be able to mark and use the lead and log lines. He must also understand the use and management of the rocket apparatus in the event of his vessel being stranded, and other questions of a like nature appertaining to the duties of the Second Mate of a ship, which the Examiners may think necessary to put to him. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Second Mates' Certificates of Competency for Foreign-going Steam-ships.

50. AN ONLY AND FIRST MATE.—An Only Mate and a First Mate must be not less than nineteen years of age, and must have served five years at sea, of which in the case of a First Mate, one year must have been as Second or Only Mate. *See* also paras. 11, 16 and 27.

On and after the 1st April 1890, no Candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediataly preceding the date of his application to be examined.

Only and First Mate.

A Candidate for an Ordinary Certificate of *any* grade, who does not already hold an Ordinary Certificate of a lower grade, must prove that he has served 12 months in a square-rigged sailing vessel within the last five years.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

51. IN NAVIGATION.—In addition to the qualifications required for a Second Mate, an Only and First Mate must be

* *See* Appendix A.

† *See* Appendix B. ‡ *See* Appendix C. § *See* Appendix D. ‖ *See* Appendix E.

able to find the true bearing of the sun and the error of the ship's compass from an observed azimuth of the sun, both from an altitude and also from the "Time Azimuth Tables," and with the variation given compute the deviation; to find the latitude from a single altitude of the sun off the meridian, and be able to use and adjust the sextant,* and to find the index error by the sun; also to ascertain the true bearing of the sun, &c., and the ship's position by Sumner's Method by Projection.† He must also be conversant with the use of Mercator's Chart, and be able to find, on either a "true" or "magnetic" chart,‡ the course to steer and the distance from one given position to another; and find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of ship from the object at the time of taking the second bearing. He must also understand how to keep a ship's Log Book. He will also be required to answer certain questions in writing (*and orally*) relative to cyclones or revolving storms.§

52. In Seamanship, &c.—In addition to the qualifications required for a Second Mate, a more extensive knowledge of seamanship will be required, as to shifting large spars, rigging sheers, taking lower masts in and out, how to moor and unmoor ship, and to keep a clear anchor; to carry out an anchor; how to manage a ship in stormy weather; how to cast a ship on a lee shore; how to secure the masts in the event of accident to the bowsprit; and how to rig purchases for getting heavy weights, anchors, machinery, &c., in and out. He must give satisfactory answers as to the ventilation of holds and the stowage of explosives. He must also know how to rig a sea anchor, and what means to apply to keep a vessel disabled or unmanageable out of the trough of the sea, and lessen her lee drift; how to get a cast of deep sea lead in heavy weather; and answer any other questions appertaining to the duties of an Only and First Mate of a ship which the Examiners may think necessary to put to him. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Only and First Mate's Certificates of Competency for Foreign-going Steam-ships.

53. A MASTER must be twenty-one years of age, and have been six years at sea, of which one year must have been as First or Only Mate in a Foreign-going Ship, and one year as Second or Only Mate; or he must have been six and-a-half years at sea, of which two and-a-half years must have been as Second Mate of a Foreign-going Ship, during the last twelve months of which service as Second Mate he must have been in possession of a First Mate's Certificate. *Vide also paras.* 11, 12 and 17. Master

On and after the 1st June 1889, no Candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

A Candidate for an Ordinary Certificate of any grade, who does not already hold an Ordinary Certificate of a lower grade, must prove that he has served 12 months in a square-rigged sailing vessel within the last five years.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

54. In Navigation.—In addition to the qualifications required for a Second, Only, and First Mate, a Master must be able to compute the latitude from the meridian altitude of a star, &c. He must be able to find the magnetic bearing from

* *See* Appendix B.
† *See* Appendix I.
‡ *See* Appendix F. The terms "true" and "magnetic" are used throughout the Regulations for the sake of brevity and convenience for indicating charts that have compasses engraved upon them showing the "true" or "magnetic" points of the compass respectively.
§ *See* Appendix K.

equidistant compass bearings of any fixed object when at sea, and compute the deviation therefrom. He must construct a deviation curve upon a "Napier's" diagram, which will be furnished by the Examiner, and understand the practical application of the same, and give satisfactory written (*and oral*) answers to certain practical questions on the effect of the ship's iron upon the compasses, the method of determining the deviation, and compensating same by magnets and soft iron.* He will be required to find the course to steer by compass in order to counteract the effect of a given current, and find the distance the ship will make good towards a given point in a certain time and to work out practically the correction to apply to soundings taken at a given time and place to compare with the depth marked on the chart.†

55. In Seamanship, &c.—In addition to the qualifications required of a Second, Only, and First Mate, he must be able to construct jury rudders for both wooden and iron vessels, and also rafts. He will be examined as to his resources for the preservation of the ship's crew in the event of wreck; as to the management of ships in heavy weather; as to rescuing the crew of a disabled ship; as to steps to be taken when a ship is on her beam ends, or in any danger or difficulty; or if disabled or unmanageable and on a lee shore; heaving a keel out, &c. He must explain the mode of procedure when placing ship in dry dock, directing repairs, and if putting in to port in distress with damage to cargo and ship. He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew, and as to penalties, and entries to be made in the official log, and a knowledge of the measures for preventing and checking the outbreak of scurvy on board ship, and the law as to load line marks, and the entries and reports to be made respecting them. He will be questioned as to his knowledge of invoices, charter party, bills-of-lading, Lloyd's agent, and as to the nature of bottomry, also bills-of-exchange, surveys, averages, &c., and must answer any other questions of a like nature appertaining to the management of a ship which the Examiners may consider it necessary to touch upon. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Masters' Certificates of Competency for Foreign-going Steam-ships.

Fore and Aft rigged ships.

Certificates for Fore and Aft rigged Vessels.

56. Certificates for the grades of Master, First Mate, Only Mate, and Second Mate, on which the words "for Fore and Aft rigged vessels only" will be written, will be issued to Candidates who have not complied with the regulation which requires them to have served at least one year in square-rigged *sailing* vessels, or who prove in course of examination that they are ignorant of the management of square-rigged ships.

57. A certificate "for Fore and Aft rigged vessels only" will not entitle the possessor to act in a capacity for which a certificate is required in square-rigged vessels, amongst which are classed full-rigged ships, barques, brig, barquentines, brigantines, and steam-ships carrying square sails.

58. A Candidate possessing a certificate "for Fore and Aft rigged vessels only," and desiring to obtain an ordinary certificate of the same grade, must prove that he has served at sea at least one year in a square-rigged *sailing* vessel, and will be re-examined both in navigation and seamanship.

Foreign-going Steam-Ships.

Qualifications for Certificates of Competency for Foreign-going Steam-ships only.

59. Certificates of Competency will be issued, subject to the examinations hereinafter described, for officers who have served in steam-ships, and who, owing to absence of service in square-rigged sailing ships, cannot under the

* *See* Appendices G and M.
† *See* Appendix F.

existing regulations obtain Certificates of Competency to act in the capacity of Masters or Mates of square-rigged ships.

60. These certificates will entitle the holders to go to sea as Masters and Mates of foreign-going steam-ships, but will not entitle the holders to go to sea as Masters or Mates of foreign-going sailing ships.

61. There will be no distinction in respect of "Fore and Aft" and "Square-rigged" steam-ships.

62. EXAMINATION IN COLOURS.—All Candidates for Certificates of Competency must pass the examination in Colours.

63. A SECOND MATE must be not less than seventeen years of age, and must have been four years at sea. *See* also para. 11. Second Mate.

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

64. IN NAVIGATION, &c.—He must write a legible hand, and will be required to give in writing (*vide supplementary vivâ voce test, page* 39) definitions of various astronomical and other terms used in navigation.* He must have a competent knowledge of the first five rules of arithmetic, and the use of logarithms. He must be able to work a day's work complete, correcting the courses for deviation, leeway, and variation. He will be required to find the latitude by meridian altitude of the sun, and the difference of longitude from a given departure by a parallel sailing; also to find the course and distance from one position to another by Mercator's method. He will be required to find the time of high water at a given port, to observe and calculate the amplitude of the sun, and to find the error of the ship's compass therefrom, and also the deviation, the variation being given. He must be able to find the daily rate of the chronometer from error observed, and to find the longitude from altitude of the sun by the usual methods. He must understand the use of the sextant with its adjustments, and be able to observe with it, find the index error by the horizon, and read *off* and *on* the arc.† He must also pass a satisfactory examination in the International Code of Signals.‡

65. IN SEAMANSHIP, &c.—He must give satisfactory answers as to the standing and running rigging of steam-ships; as to bending, unbending, setting, reefing, taking in and furling sail; as to sending masts and yards up and down, &c., &c., as to seeing everything in readiness and clear for getting under way, and as to the precautions to be then observed with regard to engines, propellers, &c.; as to the management of a steam-ship when under canvas; and of a ship's boat in heavy weather, and as to dunnaging and stowing cargo, &c. He must have a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog, and sound signals,§ and be able to describe the signals of distress and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals.‖ He must be able to mark and use the lead and log lines. He must also understand the construction, use, and action of the sluices, and of the water-ballast tanks, engine-room, telegraph, &c.; the use and management of the rocket apparatus in the event of his vessel being stranded, and other questions of a like nature, appertaining to the duties of the Second Mate of a steam-ship, which the Examiners may think necessary to put to him.

66. AN ONLY AND FIRST MATE.—An Only Mate must be not less than nineteen years of age, and must have served five years at sea. A First Mate must be nineteen years of age, and must have served five years at sea, of which Only and First Mate.

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* *See* Appendix A. † *See* Appendix B. ‡ *See* Appendix C.
§ *See* Appendix D. ‖ *See* Appendix E.

one year must have been as Second or Only Mate of a Foreign-going Steam-ship. *See also paras.* 11, 16 *and* 27.

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last three years immediately preceding the date of his application to be examined

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

67. IN NAVIGATION.—In addition to the qualifications required for a Second Mate, an Only or First Mate must be able to find the true bearing of the sun and the error of the ship's compass from an observed azimuth of the sun both from an altitude and also from the "Time Azimuth Tables," and with the variation given compute the deviation; to find the latitude from a single altitude of the sun off the meridian, and to be able to use and adjust the sextant,* and to find the index error by the sun; and also to ascertain the true bearing of the sun, &c., and the ship's position by Sumner's Method by Projection.† He must also be conversant with the use of Mercator's Chart, and be able to find on either a "true" or "magnetic" chart,‡ the course to steer and the distance from one given position to another; and find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of ship from the object at the time of taking the second bearing. He must also understand how to keep a ship's Log Book. He will also be required to answer certain questions in writing (*and orally*) relating to cyclones or revolving storms.

68. IN SEAMANSHIP.—In addition to the qualifications required for a Second Mate, a more extensive knowledge of seamanship will be required, as to shifting large spars, rigging sheers, taking lower masts in and out, how to moor and unmoor ship and to keep a clear anchor, to carry out an anchor; how to manage a steam-ship in stormy weather, and how to rig purchases for getting heavy weights, anchors, machinery, &c., in and out. He must give satisfactory answers as to the ventilation of holds, and the stowage of explosives. He must be able to describe the effects of the screw race upon the rudder; and the effect produced on the direction of the head of the ship by going [ahead] [astern] with a [right] [left] handed screw when the rudder is [ported] [starboarded]. He must also know how to rig a sea anchor, and what means to apply to keep a steamer with machinery disabled out of the trough of the sea, and lessen her lee drift. How to turn a steam-ship short round; how to get cast of deep sea lead in heavy weather, and other questions of a like nature appertaining to the duties of an Only and First Mate of a steam-ship, which the Examiners may think necessary to put to him.

Master.

69. A MASTER—Must be not less than twenty-one years of age, and have been six years at sea, of which one year must have been as First or Only Mate in a Foreign-going Steam-ship, and one year as Second or Only Mate; or he must have been six and-a-half years at sea, of which two and-a-half years must have been as Second or Only Mate in a Foreign-going Steam-ship, during the last twelve months of which he must have been in possession of a First Mate's Certificate. *See also paras.* 11, 12 *and* 17.

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

70. IN NAVIGATION.—In addition to the qualification required for a Second, Only, and First Mate, he must be able

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* *See* Appendix B. † *See* Appendix I. ‡ *See* Appendix F.
Also page 24 foot-note ‡.

to compute the latitude from the meridian altitude of a star, he must be able to find the magnetic bearing from equidistant compass bearings of any fixed object when at sea, and compute the deviation therefrom. He must construct a deviation curve upon a "Napier's" diagram which will be furnished by the Examiner, and understand the practical application of the same, and give satisfactory written (*and oral*) answers to certain practical questions on the effect of the ship's iron upon the compasses, the method of determining the deviation, and compensating same by magnets and soft iron * He will be required to find the course to steer by compass in order to counteract the effect of a given current, and find the distance the ship will make good towards a given point in a certain time, and to work out practically the correction to apply to soundings taken at a given time and place, to compare with the depth marked on the chart.†

71. In Seamanship, &c.—In addition to the qualifications required of a Second, Only, and First Mate, he must be able to construct rafts and jury rudders suitable for a screw steam-ship. He will be examined as to his resources for the preservation of the ship's crew in the event of wreck; as to the management of steam-ships in heavy weather; as to rescuing the crew of a disabled ship; as to steps to be taken when a ship is on her beam ends; or if disabled and on a lee shore. How to use steam appliances in the event of fire, and the best arrangement for towing vessels under different circumstances, placing ship in dry dock, directing repairs, and the mode of procedure if putting into port in distress with damage to cargo and ship. He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew, and as to penalties and entries to be made in the official log, and a knowledge of the measures for preventing and checking the outbreak of scurvy on board ship, and the law as to load line marks, and the entries and reports to be made respecting them. He will be questioned as to his knowledge of invoices, charter-party, bills-of-lading, Lloyd's agent, and as to the nature of bottomry; also bills-of-exchange, surveys, averages, &c., and answer any other questions of a like nature, appertaining to the management of a steam-ship, which the Examiners may consider it necessary to touch upon.

Service in Royal Navy.

Service in Royal Navy.

72. Officers of the Royal Navy are at liberty to apply for Certificates of service and to be examined for Certificates of Competency in the Mercantile Marine, but they must submit their applications in the manner directed by the Lords Commissioners of the Admiralty.

73 Officers of the Royal Navy desirous of being examined for Certificates of Competency in the Mercantile Marine will be required to prove the following service, of which twelve months must have been sea service under sail alone.

74. For Second Mate.—A Candidate must produce satisfactory evidence of four years' service at sea, or that he has attained the rank of acting Sub-Lieutenant.

75. For Only Mate.—A Candidate must prove five years' service at sea.

76. For First Mate or Masters.—A Candidate must show that he has attained the rank of Sub-Lieutenant, or Navigating Sub-Lieutenant.

Voluntary Examination in the Laws of the Deviation of the Compasses of Iron Ships.

Voluntary Examination of Masters and Mates in the Syllabus.

77. Any Master or Mate who wishes to pass a *voluntary* examination in the Syllabus* of examination on the Laws of the Deviation of the Compasses of an Iron Ship, &c., can at any time be examined upon filling up the form of application, and the payment to the Port Officer of the prescribed fee. If the candidate passes the examination successfully, an endorsement to that effect will be duly made upon the Master's or Mate's Certificate held by him.

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* *See* Appendices G and M. † *See* Appendix F. ‡ *See* Appendix A.

Failure.

Re-examination in case of failure

78. In all cases of failure the Candidate must be examined *de novo*. If a Candidate fails in *Seamanship* he will not be re-examined *until after a lapse* of SIX MONTHS. Whether the whole or part of this period must be served at sea must depend upon the subjects in Seamanship in which the Candidate failed, but what amount (if any) of sea service will be required will be left to the discretion of the Port Officer, subject, however, to revision by the Government, should they see fit.

79. The Examiners in making out their report on Form Exn. 14 should state what amount (if any) of further sea service the Candidate must perform, and they should also insert this information under Division H. in Form Exn. 2.*

80. If he fails three times in *Navigation* he will not be re-examined until after a lapse of THREE MONTHS from the date of the *last failure*.

Certificate of lower grade.

81. If a Candidate has failed in his Examination, but the subjects in which he has failed are not included in the subjects required for a Certificate of a lower grade, he may, if he desires it, receive a Certificate of such lower grade.

82. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled, for re-examination for the higher grade of Certificate he will be required to pay a further full fee.

83. If a Candidate fails for bad spelling or writing, he will not be re-examined until after a lapse of at least three months.

84. If a Candidate fails in his examination for an ordinary Certificate, he may, if qualified, and upon payment of another fee, &c., be examined for a Certificate of Competency for Foreign-going Steam-ships without waiting the usual time after failure.

Fees.

85. Candidates for examination, in making their application on Form Exn. 2, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause, except failure to pass the colour tests, not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be, they will be allowed to again present themselves for examination for a Certificate of the same grade without paying any further fee.

Fees to be paid by applicants for examination, s. 133.

86. The fee for examination must be paid to the Port Officer. In any case in which a Candidate offers money to any other officer, and in any place but in the Port office, the Candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be again examined for twelve months.

87. If a Candidate fail in his examination *no part of the fee will be returned to him.*

88. The fees are as follow:—

FOR "FOREIGN-GOING SAILING AND STEAM SHIPS."

	Rs.
Second Mate	12
First and Only Mate, if previously possessing an inferior certificate, either granted by the Board of Trade, or by the Government of a British Possession *under section* 8 *of the "Merchant Shipping (Colonial) Act*, 1869"	6
If not	12
Master	24
Where a Candidate is in possession of a Certificate for Fore and Aft rigged Vessels, for an Ordinary or Steam-ship Certificate of the same grade	12

* *See* Appendix H.

FOR "VOLUNTARY EXAMINATION IN STEAM."

	Rs.
Mate (Only or First)	12
Master	12

FOR "VOLUNTARY EXAMINATION IN DEVIATION OF THE COMPASS."

	Rs.
Mate (Second, Only or First)... ...	12
Master	12

GENERAL.

89. Certificates of Competency shall be made and issued by the Government in the forms hereunto annexed.

90. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate and the other shall be kept and recorded by the Port Officer of Calcutta.

90A. No application from the holder of a certificate granted by the Government of any other British Possession or by the Board of Trade to be examined for a certificate of the same legal value shall be entertained.

General Instructions to Examiners and Candidates.

Prohibited books and papers.

91. All instruments necessary for use in the examinations are supplied by the Government.

92. Before commencing the examination, the tables or desks must be cleared of all scraps of paper, or books that are not used in the examination, and care should be taken that the candidates do not bring into the examination room any book, paper, document, or memoranda of any description whatever. No person whatever should be allowed in the room during the time of examination, but those whose duties require them to be present.

93. No instructors will be allowed on the premises.

Candidates not to leave premises during examination.

94. Candidates will under no pretence whatever be allowed to leave the premises while the examination is proceeding. If a Candidate has occasion to visit the retiring room he will only be allowed to do so on the completion of the paper on which he may be engaged, when he will be required to enter in a book, kept for the purpose, the exact time of his leaving and returning to the examination room. When only a few Candidates are under examination, two persons will not be allowed to leave the room at the same time.

Position of Candidates at examination.

95. Candidates should be so placed as to prevent one copying from the other, and no communication whatever between the Candidates should be allowed.

Blotting paper.

96. If any blotting paper is allowed it should be black; and when the first examination paper is issued each Candidate should be furnished with a piece which should be returned to the Examiner upon the completion of the last paper.

How examination papers should be issued.

97. The examination papers should be issued to the Candidates in half sheets only, and one at a time. This will prevent a Candidate from spreading out the sheets on the table in an apparently careless manner, but so as to enable his nearest neighbour to look over and copy, or examine the problems. It will also enable the Examiner to look over and report upon the work on one half sheet, while the Candidate is at work upon another, and so on. When the errors are not too numerous, or when they are not from ignorance of the subject, the incorrect problems may be returned to the Candidate for correction, but in no case should the errors be pointed out by the Examiner, neither should any marks be made on the correct work of the problem, which would at once indicate how far or to what extent the work is correct. Should the problems be returned to the Examiner the second time incorrect, this would be a failure; and as the time allowed is considered ample for working out the papers carefully, this rule is expected to be strictly observed.

In certain cases problems may be corrected on morning following examination day.

98. When from the large number of the Candidates, it may be found impossible to look over the work, on the day of examination during the office hours, an hour in the morning of the following day may be allotted for the purpose of correcting the problems, but in no case should a Candidate have his problem returned to him for correction after he has made the second attempt.

Re Exn. 4A

99. The paper (Exn. 4A) is only for those Candidates who present themselves for examination for the first time. It is intended not only to ensure on the part of the Candidate a knowledge of the meaning of a variety of terms of great use to the Navigator respecting which much ignorance exists at present, but at the same time to test his handwriting and spelling.

100. In using this paper, the Examiner will place a mark against the numbers of the particular questions which he selects for answers, and not less than ten questions should be selected. The Candidate will then write against the questions so marked his definition of the terms in a clear and legible hand, so as to prevent the possibility of any letter being mistaken. Attention should be paid to the spelling and writing of all grades of Candidates. The *supplementary viva voce* test should also be applied as usual.

Re questions on Deviation of the Compass. (Exn. 7, Appendix G.)

101. In the questions on Deviation of the Compass (Exn. 7, Appendix G) the Examiner should indicate by a mark against at least twelve of the questions for answers, and those indicated must be correctly answered. The selected questions should be varied frequently, and no two Candidates should have precisely the same questions. The Candidate should be furnished with sheets of blank ruled paper which is supplied for that purpose with instructions that he is to write only on one side of the paper, and to answer each of the questions against which a mark is placed in a clear and legible hand, and to commence each answer by writing down the number of the question to which it relates in the margin left for that purpose. In answering question 19, besides giving a full explanation in writing, of the *tentative* method* of compass adjustment (accompanied by the usual *supplementary viva voce* test), the Candidates should be required to illustrate by diagrams how the poles of the magnets are placed with regard to the compass needle for correcting the semi-circular deviation, as well as the heeling error, and also how the soft iron should be placed for correcting the quadrantal deviation, or the Candidate may be tested by "Beall's Compass Deviascope," in which case it will not be necessary for him to give the written answer and sketches.

Viva voce examination

102. In the *viva voce* examination a reasonable time should be allowed for the Candidate to give his answers: No assistance should be given or leading question put.

Adjustment of sextant

103. Particular attention should be paid to the adjustments of the sextant, and the written answers should be given on the ruled paper in the same manner as the answers to the questions on Exn. 7, and the *supplementary viva voce* test applied as usual. Every Candidate should have a practical knowledge of what is known as the first three adjustments, and be able to read correctly *off* the arc, a supposed index error to be given by the Examiner as additive, as well as reading *on* the arc in the usual way.

Minor corrections.

104. All outstanding or minor corrections should appear in the margin of each problem paper; also on the chart papers Exn. 9C and Exn. 9D; and unless all these corrections appear on the papers of the Candidate they will not be considered complete.

Examination to commence with that for Second Mate

105. In every case the Examination, whether for Only Mate, First Mate, or Master, is to commence with the problems for Second Mate.

Problems required as tests.

106. Examiners should bear in mind that the problems to be performed are required as tests, and for the purposes of an Examination, and not for sea-going or practical purposes alone.

107. The Candidates will be allowed to work out the various problems according to the method and the tables they have been accustomed to use.

Time allowed for Problems and Writings.

Time allowed for working problems.

108. *Candidates for Second Mates' Certificates of Competency* must complete the whole of their Examination in Navigation in *eight hours*, including the time allowed for writing the definitions (Exn. 4*a*), the paper on the adjustment of the sextant, and the correction of *all* errors and oversights; but

* See Appendix M.

the nautical problems on Forms "Exn. 4" and "Exn. 5" must be completed within *six hours*, and without the Candidates leaving the premises during that period.

109. *Candidates for Only and First Mates' Certificates* must complete the whole of their examination in Navigation in *twelve and-a-half hours*,* including the time allowed for the papers on the sextant; the chart; cyclones or revolving storms; and for the correction of *all* errors and oversights; but the nautical problems on Forms "Exn. 4," "Exn. 5," and "Exn. 6" must be completed within *six hours*, and without the Candidates leaving the premises during that period.

110. *Candidates for Certificates as Masters,' Ordinary*, must complete the whole of their examination in Navigation in *fifteen hours;* including the time allowed for the papers on the sextant; the chart; compass deviation; cyclones or revolving storms; and for the correction of *all* errors and oversights; but the problems on Forms "Exn. 4," "Exn. 5," and "Exn. 6," must be completed within *six hours*, and without the Candidates leaving the premises during that period

111. *Candidates after finishing the problems required of the respective grades* on the first day of examination should proceed, until the end of that day, with such subjects as the definitions, sextant, chart, and Question 19 of Form "Exn. 7."

112. *The Summer Problem* (*Exn. 6a*) must on no account be given out to any of the grades on the first day of the examination, but should be the commencement of the Candidate's work on the second day, and on completion of this problem the Candidates for Masters' Certificates should proceed with the problems on paper "Exn. 7."

113. *Candidates for Foreign-going Steam-ship Certificates of Competency* will be allowed the same amount of time to perform their navigation, &c., as hereinbefore laid down for the respective grades for the Ordinary Foreign-going Certificates.

114. *Deviation of the Compass.*—A period not exceeding eleven hours will be allowed to Candidates for the completion of the whole of the examination in the Syllabus, including the correction of all errors and oversights in both the problems and writings.

115. Punctually at the expiration of the prescribed time all the papers should be called up, whether completed or not, and if not completed, the Candidate will be declared to have failed, unless the Port Officer or the Examiner see fit to lengthen the period in any special case If, however, the period is lengthened in any case, the special circumstances of that case, and the reasons for lenthening the period, together with the time allowed, must be reported to the Government by the Examiners, in the column for "remarks" on the Form Exn 14. It should be noted that the periods prescribed in the foregoing paragraphs are not intended to include the time occupied by the *viva voce* part of the examination. Additional time allowed in special cases.

116. It is anticipated that but few of the Candidates for Certificates of Competency for any of the foregoing grades will require the whole of the time herein allowed for completing their Examination in Navigation; and ample time has been prescribed, so that Candidates may perform their work in a careful, clear, and legible manner, and to the entire satisfaction of the Examiners.

Degree of Precision required in the Solution of the Problems.

117. In order to prevent any misapprehension as to the degree of precision required by the Regulations in working out the various problems in the Examinations for Masters' and Mates' Certificates, the attention of Examiners and Candidates is particularly directed to the following Instructions: —

(*a.*) Candidates are expected to work out their answers to all problems within or not to exceed a margin of *one mile of position* from a correct result (*e.g.*, in problems where the answer required is a latitude, longitude, or distance), excepting in finding the

* A Candidate other than Second Mate who may not previously have passed an examination may be allowed the time occupied in writing his definitions on Exn. 4*a*, in addition to the above.

ship's position by "Sumner's" method, where a margin of 2½ miles will be allowed.

(*b.*) In such problems as the "Amplitude" and "Alt-Azimuth," where the bearings, deviations, &c, only are required, a margin of 2′, or 3′, from a correct result will be sufficiently accurate

(*c.*) In no problem is the Candidate for an "ordinary" Certificate required by the Regulations to correct for *second differences* in taking out the quantities from the Nautical Almanac.

(*d.*) In solving the "Time Azimuth" problem, an answer not exceeding half a degree from the exact result will be sufficiently near. But in all cases the actual latitude, declination, and time used, together with the exact bearing (from the North or South) as given in the tables, must be clearly shown by the Candidate on his papers.

(*e.*) In interpolating for the correct deviation to be applied in solving the Chart question, Papers "Exn. 9 C." and "Exn. 9 D," it will usually be sufficiently near if the Candidate works throughout with the nearest degree of deviation taken from the "Deviation Card," and even in cases where the deviations may vary but little, the nearest half degree used throughout will be sufficiently precise, and will at the same time prove whether the Candidate understands the method of arriving at the amount of, and applying, deviations. It is not necessary that the Candidate should waste his time in solving the course to *odd minutes* as is sometimes done.

(*f.*) In calculating the correction to apply to the Soundings, Question 5 of Paper "Exn. 9 D," the Candidate is not required to work out to the exact inch, as is sometimes done. It will be sufficiently near if he brings his answer within half a foot or so of a precise result.

It must be clearly understood in reading the foregoing Instructions that it is always provided the work of the Candidate is correct in principle.

Supplementary viva voce *Examination on written Papers.*

118. An impression prevails in regard to the examination of Masters and Mates, that so long as a Candidate can commit to paper correct answers to the various questions requiring written answers (*e.g.*, *Forms Exn.* 4*a*, *Exn.* 7, *Exn.* 9*a*, *Exn.* 9*c*, *Exn.* 32. 70, *&c.*), no matter how indicative the answers may be of their having been learnt off by rote *only*, the duty and responsibility of the Examiners are at an end, and that they have no power or authority to reject a Candidate should his written answers be correct.

119. Lest, therefore, such an impression should prevail, Candidates for Certificates of Competency should bear in mind that they are not only expected to give correct written answers, which may merely be learnt off by rote, but they are expected to possess an intelligent knowledge of the various subjects prescibed in the Regulations, particularly as regards the important subject of the Deviation of the Compass.

120. This result may be easily attained by the Examiner putting a few *viva voce* questions to the Candidate as the papers are brought up for inspection, or at any subsequent time if more convenient. The oral questions (suggested by the printed questions and the answers given) should be such that the Examiner may satisfy himself that the candidate possesses a real knowledge of what he has written, and should be confined strictly to the subjects of the printed questions. Should the candidate then exhibit ignorance of the subjects, the Examiner (who is in a position to judge of the real knowledge the man before him possesses) should deal with him at his discretion, notwithstanding that the candidate may have written all the answers correctly by rote.

121. When an Examiner finds it necessary to fail a Candidate in this *supplementary viva voce* test, a memorandum containing the particulars of the points on which the candidate was ignorant, *i.e.*, *the identical questions and the identica*

answers given, must in each case be attached to his examination papers, when forwarded in the usual course to the Port Officer, or the particulars may be set forth by the Examiner in the margins of the candidate's papers in red ink.

122. If the Candidate passes, he will receive the Form Exn. 16, upon which the Government, will issue the Certificate to the candidate, whose testimonials, &c., will be returned at the same time. Form Exn. 16 Completion of examination

Special Notice to Candidates.

123. The attention of Candidates is specially called to the following Regulations :—

124. Candidates are required to appear at the examination-room punctually at the time appointed.

125. Candidates are prohibited from bringing into the examination-room books, paper, or memoranda of any kind whatever. The slightest infringement of this regulation will subject the offender to all the penalties of a failure, and he will not be allowed to present himself for re-examination for a period of three months.

126. In the event of any Candidate being detected in defacing, blotting, writing in, or otherwise injuring any book or books belonging to the Government, the papers of such Candidate will be detained until the book or books so defaced be replaced by him. He will not, however, be at liberty to remove the damaged book, which will still remain the property of the Government.

127. In the event of any Candidate being discovered referring to any book or memoranda. copying from another, or affording any assistance or giving any information to another, or communicating in any way with another, during the time of examination or copying any part of the problems for the purpose of taking out of the Examination rooms, he will subject himself to all the penalties of a failure, and he will not be allowed to be examined for a period of six months.

128. No Candidate will be allowed to work out his problems on a slate or on waste paper.

129. No Candidate will be permitted to leave the room until he has given up the paper on which he is engaged.

130. Candidates will find it more convenient both here and at sea, to correct the declination and other elements from the Nautical Almanac by the "hourly differences." which have been given in that work in order to facilitate such calculations ; they will thereby render themselves independent of any proportional or logarithmic table for such purpose.

131. The corrections by inspection from tables given in some of the works on Navigation will not be allowed (*see* Tables IX, XI and XXI in Norie's Epitome, &c.) ; every correction must appear on the papers of the Candidates.

132. Any candidate who may be guilty of insolence to the Examiner or of other misconduct will render himself liable to the postponement of his examination, or, if he has passed, to the detention of his Certificate for such period as the Government may direct.

133. For rules as to amount of time allowed to perform the work, *see* page 36.

Masters' and Mates' Voluntary Examinations in Steam.

134. These examinations are limited to Masters and First or Only Mates who are possessed of or entitled to Certificates of Competency, and are provided for the purpose of giving them an opportunity of undergoing a voluntary examination as to their practical knowledge of the use and working of the steam engine. They are conducted under the superintendence of the Port Officer at such times as they may appoint for the purpose ; and the Examiners are selected by the Government from the Engineer-Surveyors appointed under the Indian Steam Ships Act, 1884. *Voluntary Examinations in Steam.*

135. Any Master or Mate desiring to be examined in Steam must deliver to the Port Officer a statement in writing to that effect, upon the Form of Application (Exn. 2), and the applicant's Certificate of Competency must be delivered to the Port Officer along with his statement. If he is about to pass an examination for a Certificate of Competency at the same time, the applications should be sent in together. Application, how to be made. Exn. 2.

136. A fee of Rs. 12 must be paid by the applicant for the examination *in Steam*, and the Port Officer will thereupon inform him of the time and place at which he is to attend to Fee to be pai Conduct of examination, &c.

be examined, and the examination will then and there proceed in the same manner as the other examinations. If the applicant fails, and has given in his Certificate, it will be at once returned to him.

Record of Certificate. Exn. 14.

137. If the applicant passes, the Report (Exn. 14.) and the Certificate of Competency with the Form (Exn. 2.) will be sent to the Government; the words "*Passed in Steam,*" with the date and place of examination, will then be entered on the Certificate and its counterpart, and the Certificate will be sent to the Port Officer to be delivered to the applicant in the usual manner.

Failure.

138. If the applicant fails he may not present himself for re-examination until the expiration of three months from the date of failure.

Extent of examination.

139. The examination is for the most part *vivâvoce*, and extends to a general knowledge of the practical use and working of the steam engine, and of the various valves, fittings, and pieces of machinery connected with it. Intricate theoritical questions on calculations of horse-power or areas of cylinders and valves, or any of the more difficult questions which appertain to steam engines and boilers, will not be asked. The examination will in fact be confined to what a Master of a steam-vessel may be called upon to perform in the case of the death, incapacity, or delinquency of the engineer.

140. Examiners are to be careful in their examinations to satisfy themselves that applicants really do know the names and uses of the various parts of engines and boilers, and their connecting pipes, valves, cocks, &c. Practical knowledge, as distinguished from theories, abstruse calculations, and book learning, is to be the test of the applicant's fitness to have his Certificate indorsed.

Where examination to be conducted

141. The Examiner should arrange to conduct part of the examination in the engine-room of a Steam-ship, unless from circumstances he finds it impossible to do so; and if an oppportunity offer the applicant should be permitted, under the guidance of the Examiner, to start and stop the engine of some vessel which may have her steam up.

142. The Examiner, in sending in his report of examinations of Masters and Mates in steam, should state where the examination has been held.

Examination in elementary questions.

143. Candidates will be required to give written answers to sixteen out of twenty questions taken from a book of Elementary Questions pulished by the Government.* These questions will be altered from time to time without notice. The twenty questions are not to be difficult, theoretical, or book questions, but are to be such as any man of ordinary capacity ought to answer who has any "*practical knowledge of the use and working of the steam-engine.*"

Answers to be sent to the Board of Trade.

144. These questions, with the Candidate's answers, should be sent to the Government, with the reports, after each examination

145. These answers will also assist in enabling the Government to decide any question that may hereafter arise in cases where it is alleged that applicants have been improperly passed, or improperly rejected.

Candidates referring to books, &c., to be put down as failed.

146. The Examiners will be careful that if any Candidate refers to any book or paper or memorandum, or obtains information from another Candidate during the examination, he will be treated as having failed, will forfeit his fee, and will not be allowed to be re-examined for a period of three months.

In cases of failure Examiner to report questions that decided it.

147. The Examiners will report in the case of failure, the nature of the question or questions that decided the failure, or the point in the management of the engine in which the Candidate was deficient.

Service on board Steam-Ship unnecessary.

148. There is nothing in the Regulations requiring that applicants for the voluntary examination shall have served on board Steam-Ships; all that is required is that they shall have a "practical knowledge." Examiners will, of course, not fail to appreciate the fact, when passing applicants, that practical knowledge is best gained in the engine-room; and the examination of an Officer who does not produce official evidence of service in Steam Ships, and of experience of engines, must necessarily be more searching than in the case of one who produces evidence of such service and experience.

See Appendix. Q.

APPENDIX A.

N.B.—*The Candidate is to write a short definition against so many of the following terms as may be marked with a cross by the Examiner. The Examiner will not mark less than* 10. *The writing should be clear, and the spelling should not be disregarded.*

1. The Equator.
2. The Poles.
3. A Meridian.
4. The Ecliptic.
5. The Tropics.
6. Latitude.
7. Parallels of Latitude.
8. Longitude.
9. The Visible Horizon.
10. The Sensible Horizon.
11. The Rational Horizon.
12. Artificial Horizon and its use.
13. True Course of a Ship.
14. Magnetic Course.
15. Compass Course.
16. Variation of the Compass.
17. Deviation of the Compass.
18. The Error of the Compass.
19. Lee Way.
20. Meridian Altitude of a Celestial Object.
21. Azimuth.
22. Amplitude.
23. Declination.
24. Polar Distance.
25. Right Ascension.
26. Dip or Depression of the Horizon.
27. Refraction.
28. Parallax.
29. Semi-diameter.
30. Augmentation of Moon's Semi-diameter.
31. Observed Altitude.
32. Apparent Altitude.
33. True Altitude.
34. Zenith Distance.
35. Vertical Circles.
36. Prime Vertical.
37. Civil Time.
38. Astronomical Time.
39. Sidereal Time.
40. Mean Time.
41. Apparent Time.
42. Equation of Time.
43. Hour Angle of a Celestial Object.
44. Complement of an Arc or Angle.
45. Supplement of ditto.

APPENDIX B.

Adjustments of the Sextant.

The Applicant will answer in writing, on paper which will be given him by the Examiner, all the following questions, numbering his answers with the numbers corresponding to the questions :—

Question.

1. What is the first adjustment of the sextant ?
2. How do you make that adjustment ?
3. What is the second adjustment ?
4. Describe how you make that adjustment ?
5. What is the third adjustment ?
6. How would you make the third adjustment ?
7. In the absence of a screw how would you proceed ?
8. How would you find the index error by the horizon ?
9. How is it to be applied ?
10. Place the index at error of minutes to be added, clamp it, and leave it.

(Note.—The Examiner will see that it is correct).

11. The Examiner will then place the zero of the vernier on the arc, not near any of the marked divisions, and the Candidate will read it.

Note.—In all cases the applicants will name or otherwise point out the screws used in the various adjustments.

(*The above completes the Examination of Second Mates.*)

Candidates for Only Mates', First Mates', and Masters' Certificates will be required to give, in writing, replies to the following questions, *in addition* to those required of Candidates for Second Mates' Certificates as above.

1. How do you find the index error by the Sun ?
2. The readings being { } What is the Index Error, and how do you apply it ?
3. What proof have you that those measurements or angles have been taken with tolerable accuracy ?

APPENDIX C.

EXAMINATION OF MASTERS AND MATES IN THE INTERNATIONAL CODE OF SIGNALS.

Instructions to Examiners.

The Government desire to direct the attention of the Examiners to the principal points connected with the International Code of Signals (which is to be treated as a subject in Navigation) as to which Candidates for Examination should be questioned in order to qualify for Certificates of Competency.

The Government would recommend to the Examiners a perusal of the *Report of the Signal Committee* of 1855 (which will be found at the commencement of the Signal Book), and also the *first few pages of the Book*. The information therein given will be found sufficient to make the Examiners theoretically acquainted with the characteristics of the Code, and the advantages it claims to possess over other Codes, and will enable them to appreciate and urge upon Candidates for Examination the facilities which this System of Signalling affords for easy and rapid communication.

The "comprehensiveness" and "distinctness" of the International Code are its chief recommendations.

The form of the Hoist generally indicates the nature of the Signal made, so that an observer can at sight understand the character of the Signal he sees flying.

The annexed plate gives examples which illustrate this.

The Examinations should tend to elicit a knowledge of the distinctive features of the Code above alluded to.

With this object the Examiners should make the 2, 3, and 4 Flag Signals on the Frame board which is furnished for the purpose *(always taking care first to show the Ensign and the Code Pennant at the Gaff)*,* questioning the Candidates as to the distinguishing Forms of the respective Hoists (*See Plate annexed*), which will be indicated according as a Burgee, or a Pennant, or a Square Flag, is uppermost.

The Candidate ought to know how to find in the Signal Book the communication or the inquiry he desires to make, and how to make the Signal. The Signal to be made should *invariably* be sought for by the Candidate in the Vocabulary and Index, Part II, and never in Part I.

The Candidate ought to know how to interpret a Signal.

The Examiner should place a Signal on the Frame board and vary the Signal by showing a 2 or 3 Flag Signal, or a "Geographical" or a "Vocabulary" Signal, or the name of a Merchant Ship or a Ship of War.

The two latter signals would not of course be found in the Signal Book. The Candidate ought to point them out in the *Code List of Ships*.

A Candidate ought to be able to read off a Signal at sight, so far as to name the Flags composing the Hoist.

He ought to know the use of the Code Pennant, and of the Pennants C. and D., "Yes" and "No."

The Candidate should be practised in the use of the Spelling Table, by being made to spell his own name, or some word not in the Vocabulary of the Code.

A knowledge of the Distant Signals should be required of the Candidate, their object and the mode of signalling by the Distant Code, which will be found at the end of the Signal Book.

For this purpose two Black Balls, two Black Square Flags, and two Black Pennants will be furnished with the Frame board, and the Candidate should be required to make one or two Distant Signals, and to read off one or two made by the Examiners.

The Ball being the distinguishing symbol of the Distant Signal, any Pennants or Flags of the Code may be employed in conjunction with it, irrespective of colour. The Black Pennants and Flags are merely sent as showing best in the light background of the Frame board.

The Examiners should be careful to ascertain that the Candidate possesses a knowledge of the Distress Signals which came into operation November 1st, 1873.

Semaphores.

A plate at the end of the Signal Book explains the method by which the arms of the Semaphore are made to represent by their position (up, down, or horizontal,) the three symbols used for Distant Signalling, viz. a Flag, a Ball, or a Pennant. Before making Signals with the Semaphore, the Black Disc with the white rim should be placed on the top of the Semaphore Mast, as it properly forms a part of the Mast itself.

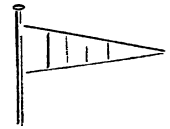
The International Code is used on board Her Majesty's Ships and it has been adopted by all the principal maritime powers for their Imperial as well as for their Mercantile Navies.

Note.—The International Code of Signals, with the Code List, is prepared by the Registrar-General of Shipping and Seamen, and may be had of the Publishers, Messrs. Spottiswood & Co., 54, Gracechurch Street, London, and the principal Booksellers at the various ports.

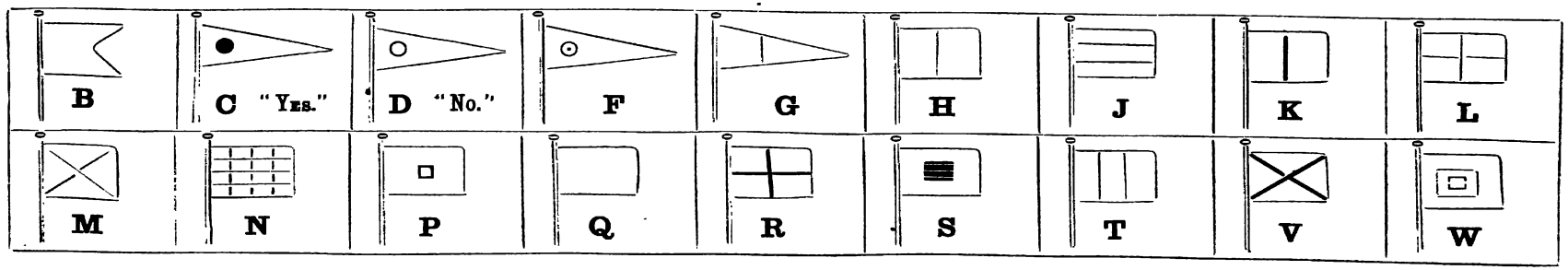
The Official Mercantile Navy List and Maritime Directory published for the use of Merchants, Shipowners, Shipbrokers, and others, may be obtained in like manner, price 12*s*.

* The object of this is, of course, to distinguish the Signals from those of another Code.

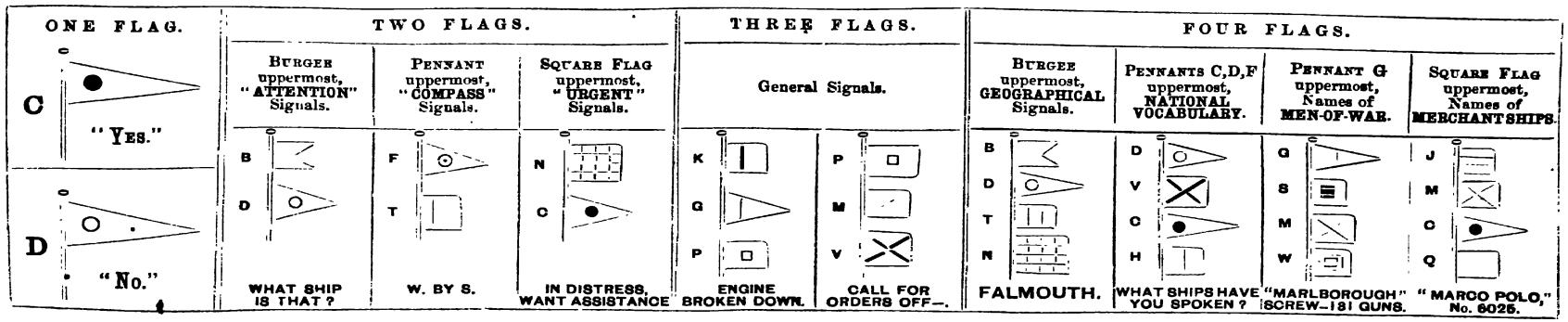
FLAGS OF THE INTERNATIONAL CODE OF SIGNALS.

"CODE SIGNAL" AND  "ANSWERING PENNANT."

N.B.—When used as the "Code Signal," this Pennant is to be hoisted under the "Ensign;" when used as the "Answering Pennant," where best seen.



The following examples will serve to illustrate how the *form of a Hoist* will usually denote the *nature of the Signal* made :—



APPENDIX D.

Regulations respecting Lights and Fog Signals and Steering and Sailing Rules Issued by the Board of Trade.

NOTICE.

The Board of Trade have had their attention drawn to the necessity of a more strict examination of applicants for Certificates of Competency in their knowledge of the regulations for preventing collisions at sea.

In order that the rule of the road at sea may be better understood, and that a uniform system of examination may prevail, the Board of Trade have issued the following catechism.

This catechism has received the approval of the Trinity House and Admiralty in England, and of the Council of the Admiralty of France.

The Board of Trade attach very great importance to a thorough knowledge of the steering and sailing rules on the part of every applicant for a Certificate of Competency, and a thorough examination on the part of the examiners.

All applicants for examination, whether for certificates as masters or mates, are to be examined as to their knowledge of the steering and sailing rules each time they present themselves for examination.

Questions suggested by the following heads of Examination are to be asked in addition to, and are not to supersede, any other questions proper and necessary to be asked by the Examiner.

The following questions need not be adhered to literally by the Examiner, and are not all to be asked ; but the substance of the leading questions should be asked, and all that are asked should be satisfactorily answered, before an applicant is reported to have passed his examination. The Examiner should make such a selection of the questions as each case appears to him to require.

Thomas Gray,
Assistant Secretary.

Board of Trade,
Marine Department.

Heads of Examination in Regulations respecting Lights and Fog Signals and in the Steering and Sailing Rules.

1. What light or lights are required by the regulations to be exhibited by sailing vessels at anchor ?

One light only, viz., a white light.

2. What light or lights are required by the regulations to be exhibited by steam-ships at anchor ?

The same as for sailing vessels.

3. Where is the anchor light to be exhibited ?

Where it can best be seen. It must of course be placed where there is the least possible chance of obstruction from spars, ropes, &c., &c.

4. To what height may the anchor light be hoisted ?

It may be exhibited at any height where it can best be seen not exceeding 20 feet above the deck.

5. What is the description of the lantern containing the anchor light required by the regulations ?

A globular lantern of not less than eight inches in diameter.

6. In what direction or directions must the anchor light show ?

It must show a clear, uniform, and unbroken light, visible all round the horizon.

7. At what distance must it be visible ?

At least one mile.

8. What is the number of lights required by the regulations to be carried by sailing ships when under weigh at night ?

Two side-lights, and to have in readiness a white light or a flare-up light to show from their stern to any vessel overtaking them.

9. Of what colour are these lights, and how are they to be placed on board the ship ?

A green light on the starboard side, and a red light on the port side.

10. What description of light must be shown from the sides of sailing vessels under weigh ; and over how many points of the compass, and in what directions, and how far, are they required to show ?

Each light must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass ; so fixed as to throw the light from right ahead to two points abaft the beam on the starboard and port sides respectively

and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

11. What lights are they to carry when being towed at night ?

The same.

12. Are the side-lights required to be fitted with screens ; and if so, of what length, and how ?

Yes on the inboard side ; at least three feet in length, measuring forward from the light. They are to be so fitted as to prevent the coloured lights from being seen across the bows.

13. What is the number of lights required by the regulations to be carried by steam ships when under steam at night ?

Three lights, and to have in readiness a white light or flare-up light to show from their stern to any vessel overtaking them.

14. Of what colour are these lights, and how are they to be placed on board the ship ?

A white light on or in front of the foremast at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth. A green light on the starboard side, and a red one on the port side.

15. Over how many points of the compass, in what direction, and how far, is the foremast-head light of a steamer required to show ?

Over 20 points, viz., from right ahead to two points abaft the beam on both sides. It must be of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

16. Are the side-lights required to be fitted with screens ; and if so, of what length ?

The green and red lights are to be fitted with screens on the inboard side, extending at least three feet forward from the light, as in the case of sailing vessels.

17. Over how many points of the compass, in what directions, and how far, are the coloured side-lights of steamers required to show ?

The side-lights must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, on each side of the ship, *i.e.*, from right ahead to two points abaft the beam on the starboard and port sides respectively, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles.

18. What description of lights are steamers required by the regulations to carry when they are not under steam, but under sail only ?

Side-lights only, the same as sailing vessels.

19. What exceptional lights are to be carried by small sailing vessels in certain cases ?

Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use ; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

20. What description of lights are pilot vessels required to carry when on their stations on pilotage duty ?

A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

21. What description of lights are pilot vessels required to carry when not on their station on pilotage duty ?

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

22. What lights are open boats and fishing vessels of less than 20 tons net register required to carry when under way and not actually engaged in fishing.

Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights ; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

23. What lights are fishing vessels and fishing boats of 20 tons net register, or upwards, required to carry when under way and not actually engaged in fishing?

They must carry similar lights to those of other ships when under way.

24. What lights are steam trawlers of 20 tons gross register, or upwards, whilst actually engaged in trawling, and not being stationary, required to carry?

All steam-vessels engaged in trawling must carry either one of the two following arrangements of lights, whichever of the two may be the more convenient:—

(*a*) The usual green and red side-lights, and foremast-head light, similar to those carried by other steam-ships; or

(*b*) They must carry on or in front of the foremast-head, and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side; such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: and (2) a white light in a gobular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform, and unbroken light all round the horizon; the lanthorn containiug such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet, nor more than 12 feet.

25. What lights are sailing trawlers whilst actually engaged in trawling, and not being stationary, required to carry?

All sailing vessels, of whatever tonnage, whilst engaged in trawliug, must carry either one of the three following arrangements of lights, whichever of the three, (*a*), (*b*), or (*c*), may be the most convenient:—

(*a*) They may carry the green and red side-lights similar to those of other sailing ships; or

(*b*) They may carry on or in front of the foremast-head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side and the red light from right ahead to four points abaft the beam on the port side; and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet; or

(*c*) They may carry a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon, and visible on a dark night, with a clear atmosphere, for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by, another ship or vessel in sufficient time to prevent collision.

26. What lights are vessels whilst actually engaged in drift net fishing required to carry?

All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than 5 feet and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character and contained in lanterns of such construction as to show all round the horizon, on a dark night, with a clear atmosphere, for a distance not less than three miles.

27. What lights are vessels whilst actually engaged in line fishing required to carry?

A vessel engaged in line fishing is required to carry the same lights as a vessel engaged in drift net fishing.

28. If a vessel, when fishing, becomes stationary in consequence of her gear getting fast to a rock or other obstruction, what signal must she make?

She must show the same light, and if a fog, mist, or falling snow prevail, she must make the same fog signals as if she were at anchor.

29. What lights are fishing vessels and open boats required to exhibit when at anchor?

Between sunset and sunrise they must exhibit a white light, visible all round the horizon at a distance of at least one mile, the same as any other vessel.

30. What sound signals are fishing vessels required to make whilst engaged in fishing in thick weather?

In fog, mist, or falling snow, a drift net vessel attached to her nets, and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

31. May fishing vessels and open boats use flare-up lights, and if so, at what part, or parts, of the vessel should they be exhibited?

Yes. Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

32. Do these regulations referring specially to fishing vessels and boats apply to foreign vessels, and to all parts of the world?

No, with the exception of the *first paragraph* of Article 10 of the regulations, they apply only to British vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre.

33. What lights are steam-ships required to carry when towing other ships?

A steam-ship, when towing another ship, shall, in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position as the white light which other steam-ships are required to carry.

34. What light is a ship which is being overtaken by another required to show?

A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

35. Describe the lights and the day signals that vessels employed in laying or picking up a telegraph cable are required to carry.

A ship, whether a steam-ship or a sailing ship employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line over one another, not less than six feet apart: the highest and lowest of these lights shall be red and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than her foremast-head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

36. Describe the lights and the day signals that vessels which from any cause are not under command are required to carry.

A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same

position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles ; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of but not lower than her foremast-head, three black balls or shapes, each two feet in diameter.

37. Are the above-mentioned ships to carry side-lights ?

The above ships, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

38. What are the previous mentioned shapes and lights intended to indicate to approaching ships ?

These shapes and lights are to be taken by approaching ships as signals that the ship using them is not under command, and cannot therefore get out of the way.

39. Do these rules prevent squadrons and convoys from carrying special lights ?

No. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war, or for ships sailing under convoy.

40. What sound signals are steam-ships and sailing ships required by the regulations to be provided with ?

A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by bellows or other mechanical means, and also with an efficient bell. A sailing ship shall be provided with a similar fog-horn and bell.

41. When are these signals to be used ?

In fog, mist, or falling snow, whether by day or night.

42. What sound signal is to be made by steam-ships and sailing ships when not under way ?

A steam-ship and a sailing ship when not under way shall, at intervals of not more than two minutes, ring the bell.

43. What sound signal is required to be made by a steam-ship when under way ?

A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

44. What sound signals are required to be made by sailing ships when under way ?

A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

45. Do the regulations require ships to take any other precaution during thick weather ?

Yes. Art. 13 says every ship, whether a sailing ship or steam-ship, shall, in a fog, mist, or falling snow, go at a moderate speed.

46. Is it optional for a steam-ship to make any other signals with her steam whistle ?

Yes; but only to vessels in sight, *i.e.*, not to vessels which are so obscured by fog, mist, or falling snow that they cannot be seen, though their whistles may be heard.

Art. 19 provides that in taking any course authorised or required by the regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.:—

One short blast to mean "I am directing my course to starboard :"

Two short blasts to mean "I am directing my course to port :"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

47. What precaution is to be taken by steamers approaching another vessel ?

If there is risk of collision, the steamer is to slacken speed, or, if necessary, stop and reverse.

48. If you see two white lights in a vertical line one over the other, what do they denote as regards the vessel carrying them ?

They denote the presence of a steamer towing with her side lights not within sight on account of distance, fog, &c. ; or a vessel end on to me engaged in drift net fishing, or in line fishing, or it may be a steam trawler end on, or within 2 points of being end on, to me.

49. If you see a green, or a red, light with a white light below, what do they denote?

They denote the presence of either a sailing, or a steam, vessel engaged in trawling.

50. If you see both the green and red lights with a white light below them, what do they denote?

They denote the presence of a sailing trawler coming end on to me.

51. If you see a white light alone, what does it denote as regards the ship carrying it?

It denotes the presence of a vessel or boat at anchor; or a pilot vessel on her station; or the mast-head light of a vessel, under steam, with her side-lights not within sight on account of distance, fog, &c., or a fishing vessel stationary through her gear getting fast to some obstruction, or a sailing traveller engaged in trawling (1) under one arrangement of lights heading so that her side-lights or obscured, (2) under another arrangement from the red pyrotechnic light not having been exhibited, or it may be a light shown from the stern of a vessel which is being overtaken.

52. If you see a green or a red light without a white light, or both a green and a red light without a white light, is the vessel carrying the light or lights seen, a vessel under steam or a vessel under sail?

A vessel under sail.

53. How do you know?

Because there is no white mast-head light.

54. If you see a white light over a coloured light, is the vessel a vessel under sail or a vessel under steam?

A vessel under steam. The mast-head light denotes that the vessel is under steam.

[The Examiner will then take one model of a vessel, which he will place on the table, and call it A. He will then take the mast or stand with a white and a red ball on it, and place it at the other end of the table and call it B.

The Examiner should be careful that the model of one vessel only is used when the questions numbered 55 to 60 are asked.]

55. A is a steamer going north, seeing a white light and red light right ahead at B. Are A and the vessel B showing the two lights meeting end on or nearly end on, or is B passing A, or is B crossing the path of A, and in what direction, and how do you know?

Passing to port, because if I see a red light ahead, I know that the head of the vessel carrying that red light must be pointing away in some direction to my own port or left hand. The ship showing the red light has her port or left side more or less open to A.

56. If A is going north, within what points of the compass must the vessel B showing the white and red lights be steering?

B must be going from a little W. of S. to W.N.-W.

57. How do you know this?

Because the screens being properly fitted, I could not see the red light of B at all with the vessel's head in any other direction.

58. A is a steamer going north, and seeing a white and green light ahead. Are A and B meeting, or is B passing A, or is B crossing the course of A, and in what direction; and how do you know?

B is passing to starboard of A, because if I see a green light ahead, I know that the head of the vessel carrying that green light must be pointing away in some direction to my starboard or right hand. The ship showing the green light has her right or starboard side more or less open to me.

59. As A is going north, within what points of the compass must the vessel showing the white and green lights be steering?

B must be going from a little E. of South to E.N.-E.

60. How do you know?

Because the screens being properly fitted, I cannot see the green light at all with the vessel's head in any other direction.

61. If a steamer A sees the *three* lights of another steamer B ahead or nearly ahead, are the two steamers meeting, passing, or crossing?

Meeting end on, or nearly end on.

62. Do the regulations expressly require the course of a ship to be altered to starboard in any case; and if so, when?

Yes; in the case of two steamers meeting end on, or nearly end on.

63. Do they expressly require the course of a ship to be altered to starboard in any other case; and if so, in what other?

No. It is not in any other case expressly required by the regulations.

[The Examiner should see that the candidate puts the models in the position indicated by the question 64, and following.]

64. If a steamer A sees another steamer's red light B on her own starboard side, are the steamers meeting, passing, or crossing; and how do you know?

Crossing, because the red light of one is opposed to the green light of the other; and whenever a green light is opposed to a red light, or a red light to a green light, the ships carrying the lights are crossing ships.

65. Is A to stand on; and if not, why not?

A has the other vessel B on her own starboard side. A knows she is crossing the course of B, because she sees the red light of B on her (A's) own starboard side. A also knows she must get out of the way of B, because Article 16 expressly requires that the steamer that has the other on her own starboard side shall keep out of the way of the other.

66. Is A to starboard or to port in such a case?

A must do what is right so as to get herself out of the way of B: it is generally preferable to pass under a ship's stern rather than attempt to cross her bows, but it depends entirely on the position and relative speed of the two ships, and therefore the regulations wisely leave the giving way ship to get out of the way in any manner that may be most desirable, so always that she does get out of the way.

67. If A gets into collision by porting, will it be because she is acting on any rule?

No; the rule does not require her either to port or to starboard. If she ports, and gets into collision by porting, it is not the fault of any rule.

68. If a steamer A sees the green light of another steamer B on her own (A's own) port bow, are the two steamers meeting, passing, or crossing; and how do you know?

Crossing, because the green light of one ship is shown to the red light of the other.

69. What is A to do, and why?

By the rule contained in Article 22 of the Regulations, A is required to keep her course, subject only to the qualification that due regard must be had to all dangers of navigation; and that due regard must also be had to any special circumstances which may exist in any particular case rendering a departure from that rule necessary in order to avoid immediate danger. The crossing ship B on A's port side must get out of the way of A, because A is on B's starboard side.

70. A, a steamer, sees the green light of another steamer, B, a point on her A's port bow. Is there any regulation requiring A to port in such a case; and if so, where is it to be found?

There is not any.

71. Are steam-ships to get out of the way of sailing ships?

If a steamer and a sailing ship are proceeding in such direction as to involve risk of collision, the steamer is to get out of the way of the sailing ship, unless the sailing ship is overtaking the steamer.

72. What is to be done by A, whether a steamer or a sailing ship, if overtaking B?

A is to keep out of the way of B.

73. When the by rules one of two ships is required to keep out of the way of the other, what is the other to do?

To keep her course. This is absolutely necessary to enable the commander of the ship required by the regulations to keep out of the way, to act with decision and promptitude, which he cannot possibly, unless he knows what the other vessel is going to do.

74. Is there any qualification or exception to this?

Yes. Due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case, and require a departure from the regulations to avoid immediate danger.

75. Is there any general direction in the steering and sailing rules; and if so, what is it?

Yes, it is this: that nothing in the rules shall exonerate any ship, or the owner, master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

76. Can you repeat article (———) of the regulations, I refer to the article containing the rule for (———)?

[The Examiner should repeat this question, naming a different article each time.]

77. What does the Act of Parliament provide as to the obligation of owners and masters in obeying the regulations respecting lights, fog signals, and steering and sailing?

Section 27 of "the Merchant Shipping Act Amendment Act, 1862," provides that owners and masters shall be bound to obey the regulations, and it also provides that in case of wilful default

by the master or owner he shall be deemed to be guilty of a misdemeanor for each infringement.

78. What do breaches of the regulations imply ?

If an accident happens through non-observance of the regulations, it implies wilful default on the part of the person in charge of the deck at the time, unless it is shown to the satisfaction of the court hearing the case that the special circumstances of the case rendered a departure from the rules necessary.

79. If collision ensues from a breach of there gulations, who is to be deemed in fault for the collision ?

The person by whom the regulations are infringed, unless the court hearing the case decides to the contrary.

80. Is there any special rule for steam-ships navigating narrow channels ?

In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which is on the starboard side of such ship.

81. Do the regulations apply to sea-going ships in harbours and in rivers ?

Yes: unless there is any rule to the contrary made by a competent authority.

82. Do they apply to British ships only ?

No, to foreign ships as well, with the exception of paragraphs (*a*), (*b*), (*c*), (*d*), (*e*), (*f*) and (*g*) of Article 10, which apply to only British fishing vessels.

83. Do you know where the present regulations are to be found ?

Yes, in the Orders in Council of the 11th August 1884, the 30th December 1884, and 24th June 1885. Copies are given away on application to the Board of Trade.

84. Is one ship bound to assist another in case of collision ?

Yes.

85. What is the penalty for default ?

If the master or person in charge of the ship fails to render assistance without reasonable excuse, the collision is, in absence of proof to the contrary, to be deemed to be caused by his wrongful act, neglect, or default.

86. Is there any other penalty attached to not rendering assistance ?

Yes. If it is afterwards proved that he did not render assistance, his certificate may be cancelled or suspended by the court investigating the case.

87. Is it not expected that you should understand the regulations before you take charge of the deck of a ship ?

It is.

88. Why ?

If I do not understand them and am guilty of default, the consequences will be very serious to me.

89. What would be a serious offence ?

To cause a collision by porting the helm or doing anything not required by the regulations and without due consideration.

Regulations for preventing collisions at sea. Order in Council of 11th August 1884.

Preliminary.

Art. 1. In the following rules every steam-ship which is under sail and not under steam is to be considered a sailing ship ; and every steam-ship which is under steam, whether under sail or not, is to be considered a ship under steam.

Rules concerning Lights.

Art. 2. The lights mentioned in the following Articles, numbered 3, 4, 5, 6, 7, 8, 9, 10 and 11, and no others, shall be carried in all weathers, from sunset to sunrise.

Art. 3. A sea-going steam-ship when under way shall carry—

(*a*) On or in front of the foremast, at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth, a bright white light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 20 points of the compass ; so fixed as to throw the light 10 points on each side of the ship, viz. from right ahead to two points abaft the beam on either side ; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

(*b*) On the starboard side, a green light so constructed as to show an uniform and unbroken light over an arc of the

horizon of 10 points of the compass; so fixed as to throw the light from right ahead to 2 points abaft the beam on the starboard side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*c*) On the port side, a red light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass; so fixed as to throw the light from right ahead to 2 points abaft the beam on the port side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*d*) The said green and red side-lights shall be fitted with inboard screens projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

Art. 4. A steam-ship, when towing another ship, shall in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position, as the white light which other steam-ships are required to carry.

Art. 5. (*a*.) A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of, but not lower than, her foremast-head, three black balls or shapes, each two feet in diameter.

(*b*.) A ship, whether a steam-ship or a sailing ship, employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over another, not less than six feet apart: the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than, her foremast-head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

(*c*.) The ships referred to in this Article, when not making any way through the water, shall not carry the side-lights, but when making way, shall carry them.

(*d*.) The lights and shapes required to be shown by this Article are to be taken by other ships as signals that the ship showing them is not under command, and cannot therefore get out of the way. The signals to be made by ships in distress and requiring assistance are contained in Article 27.

Art. 6. A sailing ship under way, or being towed, shall carry the same lights as are provided by Article 3 for a steam-ship under way, with the exception of the white light, which she shall never carry.

Art. 7. Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

Art. 8. A ship, whether a steam-ship or a sailing ship, when at anchor, shall carry, where it can best be seen, but at height not exceeding 20 feet above the hull, a white light, in a globular lantern of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light visible all round the horizon at a distance of at least one mile.

Art. 9. A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but

shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

Art. 10. Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

The following portion of this article applies only to fishing vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre :—

(*a*) All fishing vessels and fishing boats of 20 tons net registered tonnage, or upwards, when under way and when not required by the following regulations in this article to carry and show the lights therein named, shall carry and show the same lights as other vessels under way.

(*b*) All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than five feet, and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night with a clear atmosphere, for a distance of not less than three miles.

(*c*) A vessel employed in line fishing with her lines out shall carry the same lights as a vessel when engaged in fishing with drift nets.

(*d*) If a vessel when fishing becomes stationary in consequence of her gear getting fast to a rock or other obstruction, she shall show the light and make the fog signal for a vessel at anchor.

(*e*) Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this Article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

(*f*) Every fishing vessel and every open boat when at anchor between sunset and sunrise shall exhibit a white light visible all round the horizon at a distance of at least one mile.

(*g*) In fog, mist, or falling snow, a drift net vessel attached to her nets and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

Art. 11. A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

Sound Signals for Fog, &c.

Art. 12. A steam-ship shall be provided with a steam whistle or toher efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog horn to be sounded by a bellows or other mechanical means, and also with an efficient bell.* A sailing ship shall be provided with a similar fog-horn and bell.

In fog, mist, or falling snow, whether by day or night, the signals described in this Article shall be used as follows; that is to say—

(*a*) A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

(*b*) A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the

* In all cases where the regulations require a bell to be used, a drum will be substituted on board Turkish vessels.

Speed of Ships to be moderate in [illegible]

Art. 13. Every ship, whether a sailing ship or steam-ship, shall in a fog, mist, or falling snow, go at a moderate speed.

Steering and Sailing Rules.

Art. 14. When two sailing ships are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other, as follows, viz.—

(*a*) A ship which is running free shall keep out of the way of a ship which is close-hauled.

(*b*) A ship which is close-hauled on the port tack shall keep out of the way of a ship which is close-hauled on the starboard tack.

(*c*) When both are running free with the wind on different sides, the ship which has the wind on the port side shall keep out of the way of the other.

(*d*) When both are running free with the wind on the same side, the ship which is to windward shall keep out of the way of the ship which is to leeward.

(*e*) A ship which has the wind aft shall keep out of the way of the other ship.

Art. 15. If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

This Article only applies to cases where ships are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two ships which must, if both keep on their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of the two ships is end on, or nearly end on, to the other; in other words, in cases in which, by day, each ship sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each ship is in such a position as to see both the side-lights of the other.

It does not apply, by day, to cases in which a ship sees another ahead crossing her own course; or by night, to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

Art. 16. If two ships under steam are crossing, so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

Art. 17. If two ships, one of which is a sailing ship, and the other a steam-ship, are proceeding in such directions as to involve risk of collision, the steam-ship shall keep out of the way of the sailing ship.

Art. 18. Every steam-ship, when approaching another ship, so as to involve risk of collision, shall slacken her speed or stop and reverse, if necessary.

Art. 19. In taking any course authorised or required by these Regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.—

One short blast to mean "I am directing my course to starboard:"

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

Art. 20. Notwithstanding anything contained in any preceding Article, every ship, whether a sailing ship or a steam-ship, overtaking any other shall keep out of the way of the overtaken ship.

Art. 21. In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such ship.

Art. 22. Where by the above rules one of two ships is to keep out of the way, the other shall keep her course.

Art. 23. In obeying and construing these rules due regard shall be had to all dangers of navigation; and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

No Ship, under any circumstances, to neglect proper Precautions.

Art. 24. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Reservation of Rules for Harbours and Inland Navigation.

Art. 25. Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland navigation.

Special Lights for Squadrons and Convoys.

Art. 26. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war or for ships sailing under convoy.

Art. 27. When a ship is in distress, and requires assistance from other ships or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, that is to say—

In the day-time—

1. A gun fired at intervals of about a minute.
2. The International Code signal of distress indicated by N C.
3. The distant signal, consisting of a square flag, having either above or below it a ball or anything resembling a ball.

At night—

1. A gun fired at intervals of about a minute.
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.).
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals.

ORDERS IN COUNCIL OF 30TH DECEMBER 1884 AND 24TH JUNE 1885.

ALTERNATIVE LIGHTS FOR TRAWLERS WHEN ENGAGED IN TRAWLING, HAVING THEIR TRAWLS IN THE WATER AND NOT BEING STATIONARY.

1884.—PART I.—STEAM-VESSELS OF 20 TONS GROSS REGISTER TONNAGE OR UPWARDS.

(1.) On or in front of the foremast head and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side, such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet nor more than 12 feet.

1884.—PART II.—SAILING VESSELS OF 20 TONS NET REGISTER TONNAGE OR UPWARDS.

(1.) On or in front of the foremast head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft

the beam on the port side: and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet.

1885.—Sailing Trawlers of any Tonnage.

As regards sailing vessels engaged in trawling, such vessels having their trawls in the water and not being stationary in consequence of their gear getting fast to a rock or other obstruction, if they do not carry and show the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in Part 2 of the Schedule to the said recited Order in Council of the 30th of December, 1884, shall carry and show in lieu of the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in paragraph 2 of the Schedule to the said recited Order, other lights as follows, that is to say:

A white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, and visible on a dark night with a clear atmosphere for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by another ship or vessel in sufficient time to prevent collision.

Aids to Memory in four verses, by Thomas Gray.

1. *Two Steam-ships meeting.*

When both side-lights you see ahead—
Port your helm and show your RED.

2. *Two Steam-ships passing.*

GREEN TO GREEN——or, RED TO RED——
Perfect safety——Go ahead!

3. *Two Steam-ships crossing.*

Note.—This is the position of greatest danger: there is nothing for it but good look-out, caution, and judgment.

If to your starboard RED appear,
It is your duty to keep clear;
To act as judgment says is proper:—
To port—or Starboard—Back,—or, Stop her!

But when upon your Port is seen
A Steamer's Starboard Light of GREEN,
There's not so much for you to do,
For GREEN to Port keeps clear of you.

4. *All Ships must keep a good look-out, and Steam-ships must stop and go astern, if necessary.*

Both in safety and in doubt
Always keep a good look-out;
In danger, with no room to turn,
Ease her, stop her, go astern.

14th October 1867.

APPENDIX E.

Distress and Pilot Signals.

The following sections, together with the schedules referred to therein, of the "Merchant Shipping Acts Amendment Act, 1873," relate to Signals of Distress and signals for Pilots. (*See also* "*Regulations for preventing Collisions at sea.*" *Article* 27.)

M. S. Act, 1873.

18. The signals specified in the first schedule to this Act shall be deemed to be signals of distress.

Signals of distress.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals, except in the case of a vessel being in distress, shall be liable to pay compensation for any labour undertaken, risk incurred, or loss sustained in consequence of such signal having been supposed to be a signal of distress, and such compensation may, without prejudice to any other remedy, be recovered in the same manner in which salvage is recoverable.

Signals for pilots.

19. If a vessel requires the services of a pilot, the signals to be used and displayed shall be those specified in the second schedule to this Act.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals for any other purpose than that of summoning a pilot, or uses or causes or permits any person under his authority to use any other signal for a pilot, shall incur a penalty not exceeding twenty pounds.

Power to alter rules as to signals.

20. Her Majesty may from time to time by Order in Council repeal or alter the rules as to signals contained in the schedules to this Act, or make new rules in addition thereto, or in substitution therefor, and any alterations in or additions to such rules made in manner aforesaid shall be of the same force as the rules in the said schedules.

SCHEDULES.

SCHEDULE I.

Signals of Distress.

In the day-time.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress in the day-time:—

1. A gun fired at intervals of about a minute;
2. The International Code signal of distress indicated by N C;
3. The distant signal, consisting of a square flag having either above or below it a ball, or anything resembling a ball.

At night.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress at night:

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, of any colour or description, fired one at a time, at short intervals.

SCHEDULE II.

Signals to be made by Ships wanting a Pilot.

In the day-time.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot in the day-time, viz.—

1. To be hoisted at the fore, the Jack or other national colour usually worn by merchant ships, having round it a white border, one-fifth of the breadth of the flag; or
2. The International Code pilotage signal indicated by P T.

At night.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot at night, viz.—

1. The pyrotechnic light, commonly known as a blue light, every fifteen minutes; or
2. A bright white light, flashed or shown at short or frequent intervals, just above the bulwarks, for about a minute at a time.

APPENDIX F.

Examination in Chart.

For all Grades where the Chart is used.

[The candidate will be required to work out the following questions on either a "true" or "magnetic" chart* whichever may be handed to him by the Examiner; and also determine whether the chart is a "true" or "magnetic" one, and whether it is for the northern or southern, and eastern or western hemisphere.]

* The terms "true" and "magnetic" are used for the sake of brevity and convenience, for indicating charts that have compasses delineated upon them showing the "true" or "magnetic" point of the compass respectively.

1. Using deviation [card] [curve*] No. , find the course to steer by compass from to ; also the distance.

Answer.—Compass course °

Distance °

Variation °

Deviation ° °

2. With the ship's head on the above-named compass course a [point] [light-house] bore by compass and bore by the same compass, find the ship's position.

Answer.—Latitude °

Longitude °

3. With the ship's head as above, a [point] [light-house] bore by compass , and after continuing on the same course miles it bore , find the position of ship and her distance from at the time of taking the second bearing.

Answer.—Latitude °

Longitude °

Distance °

All the foregoing questions must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature °

Date °

Chart used °

Additional for Masters.

4. Find the course to steer by compass from to (*see* Question 1) to counteract the effect of a current which set at the rate of miles per hour, the ship making by log miles per hour; also the distance the ship would then make good in hours towards

Answer.—Compass course °

Distance °

5. On being off took a cast of the lead; required the correction to be applied to the depth obtained by the lead line before comparing it with the depth marked on the chart.

6. What do you understand the small numbers to indicate that you see placed about the chart, and at what time of tide?

7. What do the Roman numerals indicate that are occasionally seen near the coasts and in harbours?

8. How would you find, approximately, the time of high water at any place, the Admiralty tables not being at hand, nor any other special tables available?

All the foregoing questions, and those on Form Exn. 9C., must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature

Date

* A Candidate for a Master's Certificate is expected to use either a card of deviations or a curve of deviations on a Napier's diagram, whichever the Examiner may think proper to put before him.

APPENDIX G.

DEVIATION OF THE COMPASS.

N. B.—***The Examiner will not mark less than 12 of the following questions, which must be correctly answered by the candidate, and the Examiner's attention is specially called to the importance of Questions 7, 8, 9, 10, and 19, which should be marked in all cases.***

1. What do you mean by Deviation of the Compass?
2. How do you determine the deviation (*a*) when in port, and (*b*) when at sea?
3. Having determined the deviation with the ship's head on the various points of the Compass, how do you know when it is easterly and when westerly?
4. Why is it necessary, in order to ascertain the deviations, to bring the ship's head in more than one direction?
5. For accuracy, what is the least number of points to which the ship's head should be brought?
6. How would you find the deviation when sailing along a well-known coast?
7. In the following table give the correct magnetic bearing of the distant object, and thence the deviation:—

Ship's head by Standard Compass.	Bearing of distant object by Standard Compass.	Deviation required.	Ship's head by Standard Compass.	Bearing of distant object by Standard Compass.	Deviation required.
North			South		
N.-E.			S.-W.		
East			West		
S.-E.			N.-W.		

8. With the deviation as above, give the courses you would steer by the Standard Compass to make the following courses, correct magnetic [ ].
9. Supposing you have steered the following courses by the Standard Compass, find the correct magnetic courses made from the above deviation table [ ].
10. You have taken the following bearings of two distant objects by your Standard Compass as above; with the ship's head at , find the bearings, correct magnetic [ ].
11. Name some suitable objects by which you could readily obtain the deviation of the Compass when sailing along the coasts of the English Channel.
12. Do you expect the deviation to change; if so, state under what circumstances?
13. How often is it advisable to test the accuracy of your table of deviations?
14. State briefly what you have chiefly to guard against in selecting a position for the Compass.
15. The Compasses of iron ships are more or less affected by what is termed the heeling error; on what courses does this error vanish, and on what courses is it the greatest?
16. State to which side of the ship, in the majority of cases, is the North point of the Compass drawn in the Northern Hemisphere; and what effect has it on the assumed position of the ship when she is steering on Northerly, and also on Southerly courses?
17. The effect being as you state, on what courses would you keep away, and on what courses would you keep closer to the wind, in order to make good a given Compass course?
18. Does the same rule hold good in both hemispheres with regard to the heeling error?
19. Your Steering Compass having a large error, how would you proceed to correct that Compass by compensating magnets and soft iron, in order to reduce the error within manageable limits?

APPENDIX H.

SYLLABUS OF EXAMINATION in the LAWS of the DEVIATION of the COMPASSES of an IRON SHIP, and in the Means of compensating or correcting it.

Candidates for the voluntary examination in Compass Deviation, and also for Extra Masters' Certificates, will be examined in the whole of this syllabus, and will be required to answer all

the questions correctly, and to the entire satisfaction of the Examiner.

1. Describe an artificial magnet, and how a steel bar or needle is usually magnetized.

2. [*For the sake of simplicity it is desirable to adopt the nomenclature of the Astronomer Royal, and call that pole of the compass needle that points to the magnetic north the red, and the other the blue pole.*] What effect has the pole of one magnet of either name on the pole of the same name of another magnet, and what would be the consequence of the pole of one magnet of either name being brought near enough to affect the pole of contrary name, if in these cases both magnets were freely suspended?

3. By applying this law to all magnets, natural as well as artificial, show what would be the result on a magnetic bar or needle, freely suspended, but by weight or by the nature of its mounting constrained to preserve a horizontal position; and what result, if so mounted, but free to move in every direction, the earth being regarded as a natural magnet?

4. Which is the red magnetic pole of the earth, and which the blue?

5. What is the cause of the variation of the compass?

6. What is meant by the deviation of the compass?

7. Describe the sub-permanent magnetism of an iron ship, and state when and how it is acquired, and which is the sub-permanent red, and which is the blue pole, and why it is called sub-permanent magnetism.

8. What is meant by "the composition of forces" and "the parallelogram of forces," and show how the knowledge of these is valuable in ascertaining and compensating the sub-permanent magnetism of an iron ship?

9. Describe the co-efficients B and C, plus (+), and minus (—), and why they are said to produce semi-circular deviations.

10. On what points by compass bearing of the ship's head does + B give westerly deviation, and on what does it give easterly; and also on what point does — B give westerly, and on what points easterly?

11. On what points does + C give westerly, and on what points easterly; also on what points does — C give westerly, and on what points easterly deviation?

12. How would you compensate the co-efficient C?

13. How would you compensate the co-efficient B?

14. If the value either of co-efficient B or C be given, also the magnetic direction of the ship's head while she was being built, how by the traverse tables would you determine the approximate value of the other co-efficient C or B; and if the value of both these co-efficients be given, how would you determine approximately the direction, by compass, of the ship's head whilst being built?

15. What is meant by transient induced magnetism?

16. Under what circumstances does induced magnetism give semi-circular deviation?

17. How would you compensate — B resulting from induced magnetism, and why for this purpose would you adopt a different mode of compensation to that employed in correcting — B produced by sub-permanent magnetism?

18. Describe quadrantal deviation, and state what co-efficients represent it; also on what points of the ship's head, by compass, each of these co-efficients gives the greatest amount of deviation.

19. On what points of the compass will each of these co-efficients, D and E + and —, give easterly, and on what points westerly deviation?

20. Generally + D gives the greatest amount of *quadrantal* deviation: how should it be compensated?

21. If D be compensated in the manner you have described, will it remain so in every latitude? If so, state the reason why.

22. What conditions of the iron of a ship will produce + D and what — D?

23. Describe the nature of the deviation resulting from + A and —A, and describe the error in the construction of the compass that frequently produces them.

24. Under what circumstances does the character of A and E so change as to render it desirable that these co-efficients should be disregarded or modified?

25. The value of A, B, C, D, and E being given, or B, C, and D only, find the deviation on any required point of the compass, or construct a table of deviation, if required.

26. Describe how you would determine the deviation by means of a distant object, by reciprocal bearings, or by the figures on the dock walls.

27. If it be required to determine the deviation of two or more compasses, it is most convenient to bring the ship's head, correct magnetic, on as many points as may be necessary. To determine the co-efficients B, C, and D, the bearing of the ship's head by each compass is required. How would you for this purpose employ a Graphic Method?

28 State your rule for determining whether deviation is easterly or westerly.

29. Describe the use of the "dumb card," or an azimuth card without a needle, in compensating a compass.

30. If you determine the deviation by an azimuth or an amplitude of a heavenly body, it is then combined with variation,* which together is sometimes called the *correction* for the compass. State when the deviation is the difference between the variation and the *correction*, and when the sum; and when it is of the same name as that of the *correction*, and when of the contrary name.

31. In observing azimuths of heavenly bodies, the best method is by "time azimuths," since these can be observed without an altitude when the ship is in port, or the horizon cannot be defined from any cause. Given the sun's declination, the hour of the day, and the latitude to find the true bearing of the sun.†

32. By night, if it be desirable to observe the *correction* of the compass. Given the day of the year, and time at ship, also the latitude of the place to determine what† star will be in good position for this purpose.

33. If your correcting magnets are so mounted that their positions can be altered, describe the process by which, on open sea, you can place the ship's head correct magnetic N. (or S.), and correct magnetic E. (or W.), and can make the correction perfect.

34. Given the name of a star, the time, the place of ship, the variation of the compass, and the bearing of the star by compass. Determine the deviation, and name it east or west.

35. If an ordinary standard compass placed higher than the iron top sides be compensated whilst the ship is upright, what coefficient will be effected by heeling?

36. When generally will this co-efficient be plus, and when minus?

37. State the exceptions to this general rule.

38. Does the heeling error arise from the altered position of the sub-permanent poles of the ship, or from a change in the induced magnetism?

39. To what extent is the heeling error altered by a change in the magnetic latitude of the ship?

40. If a ship is beating to windward; when she tacks, under what circumstances will the heeling error retain the same name, and under what circumstances will it take the contrary name?

41. If a ship is placed on the opposite tack by the change of wind, the ship's course being the same by compass, will the heeling error change its name?

42. Under what circumstances will the heeling error, if disregarded, take the ship to windward, or when to leeward?

43. Can the heeling error be compensated? If so, state the means to be employed.

44. Can the compensation of the heeling error be depended on in every latitude? If not, state the reason.

45. Given the heel, the direction of the ship's head by compass, and the heeling error observed, to find the approximate heeling error, with a greater or less given heel, and with the ship's head on some other named point of the compass, the ship's magnetic latitude being in both cases the same.

46. Describe any instrument to show the ship's heel (generally called a clinometer), and state how and where it should be fixed.

47. Should the clinometer be observed when the ship is swung to determine the deviation when the ship is upright? If so, state the reason why.

APPENDIX I.

Particulars of Examination in Sumner's Method by Projection.

Candidates are required to compute their longitude by chronometer worked with two assumed latitudes.

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* The magnetic variation is best determined by a chart of the curves of equal magnetic variation.

† The process of finding time azimuths by the ordinary formulæ of spherical trigonometry is tedious, and since on board an iron ship these observations should be often repeated, the candidate will be allowed to use any table or graphic or linear method that will solve the problem within a half of a degree, the altitude of the heavenly body not being given.

They are to mark off on the chart the two positions ascertained by the first altitude, and are then to connect them with a straight line, termed the *line of position*, or the line of equal altitude, which will show the bearing of any land it may intersect.

They will then be required to correct the first *line of position* for the ship's change of station, in the interval between the two observations, to project the *line of position* corresponding to the second observation on the chart, showing by its intersection with the first *line of position*, as corrected for change of station, the position of the ship at the time of the second observation.

The longitudes corresponding to the two latitudes by the second observation are no longer furnished by the Examiners. The candidates are consequently required to work out the whole of the problem for themselves (in place of the explanation recently required), and must be prepared to find the sun's true bearing by projection at the time of taking either the first or second observation; and when necessary to produce the *lines of positions* on the chart in order to make them cut one another should the position of the ship happen to be outside the parallels of the two assumed latitudes given in the question. Outline charts, extending from 46° to 49° and from 49° to 52° of latitude, respectively, are furnished by the Board of Trade to the different examiners for this purpose.

APPENDIX K.

The Candidate must answer in writing, on paper supplied to him by the Examiner, the following questions, numbering the answer to correspond with the questions.

Question—

Questions relating to cyclones or revolving storms common in tropical seas.

1. The direction of the wind in a cyclone being*_____ state the probable bearing of its centre from the ship in the* _____ Hemisphere.
2. And suppose that the wind during the passage of the same cyclone were found to change towards the*_____ _____, what would be the ship's position with reference to the line of progression of the centre of the cyclone, and what action would you take?
3. Under what conditions would the change in the direction of the wind in the cyclone be the reverse of the above?
4. What are the usual indications of a ship being on the line of progression of the centre of a cyclone?
5. What are the usual indications that a ship is (*a*) approaching the centre of a cyclone; (*b*) receding from it?
6. Describe the track usually taken by cyclones in the †_____, and state the seasons of the year in which they most frequently occur in that region.

APPENDIX L.

Instructions to Examiners.

Examination in Colours.

Herewith are—

(*a*) A lanthorn having in it a lamp in which kerosine is to be burnt.

(*b*) A slide having ground glass in it.

(*c*) Nine slides, each having a coloured glass in it. The colours are as follows:—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1).
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

* These spaces to be filled in by the Examiners, and frequently varied.

† The Examiners to fill in whether North Atlantic, Bay of Bengal, China Seas, Indian Ocean, &c., &c.

(*d*) Cards, five of each as follow :—

1. White.
2. Black.
3. Red.
4. Pink.*
5. Green.
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (*Cards.*)

In conducting the examination by daylight, the examiner should do it in three ways—

1. The cards should be mixed up. The examiner should then hold up each card separately, and ask the candidate to name the colour, and if the candidate does so without hesitation, he is to be regarded as having passed the daylight test.
2. If the candidate hesitates in any of his answers, so as to raise a doubt in the mind of the examiner as to his ablity to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that, they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

Examination by artificial Light.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn, and at least 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour ; and if so, what colour ?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star * is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having " failed " if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c. ; or to name card No. 7 as red, green, or yellow ; or glass No. 2 as green, blue, or yellow ; or glass No. 5 as red, pink, salmon, &c. ; or glass No. 7 as bright red or bright green ; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B.

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black, by daylight ; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown), he may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

APPENDIX M.

Instructions to Examiners.

Compass Adjustment.

It is of the utmost importance that masters of ships should thoroughly understand the tentative method of Compass Adjust-

ment as generally practised in merchant ships, and Examiners are therefore directed to fully satisfy themselves that all Candidates for Masters' Certificates have this particular knowledge. It should be tested in connexion with the Form of Examination, "Exn. 7," or it may be tested by Captain Beall's "Deviascope" at those ports which have been supplied with this instrument. Where the "Deviascope" is used it will not be necessary for the Candidates to give the written answers and sketches illustrative of the Question 19 of Form Examination 7.

A concise statement of the present method of tentative Compass Adjustment is forwarded for the use of Examiners. The Government wish them, however, distinctly to understand that the Government are not in any way advocating the correction of that part of co-efficient B which arises from vertical induction in soft iron by a permanent magnet instead of by a soft iron bar. The Government have no authority to interfere with the methods in use amongst Compass adjusters for the adjustment of Compasses in iron ships, but instruct the Examiners to satisfy themselves that masters are acquainted with the ordinary method as at present practised.

The examination by the "Deviascope" is at present only experimental, and no Candidate should be reported as having "failed" who does not pass the examination in it, provided he has answered satisfactorily the Question 19, "Exn. 7."

The "Deviascope" is sent only to three ports at present, and its extended use will depend upon experience at those ports.

The Tentative Method of Compass Adjustment as generally practised by Compass Adjusters in Ships of the Mercantile Marine.

Before describing the practice it will be as well to briefly state the co-efficients used to express the different magnetic forces:—

Co-efficient	A	represents	a constant quantity.
,,	B	,,	semi-circular deviation due to fore and aft magnetic forces.
,,	C	,,	semi-circular deviation due to transverse magnetic forces.
,,	D	,,	quadrantal deviation due to horizontal induction in soft iron.
,,	E	,,	quadrantal deviation due to horizontal induction in soft iron unsymmetrically distributed.

Signs and Effects of Co-efficients A, B, C, D, and E.

Co-efficient A represents a constant deviation of the same nature and amount, on all points of the compass; + A signifying easterly, and — A, westerly deviation.

Co-efficient + B represents an attraction towards the ship's head, and causes easterly deviations with ship's head in the eastern semi-circle of the Compass, and westerly deviations in the western semi-circle, attaining a maximum value on the east and west points, decreasing to zero on north and south points, by Compass.

Co-efficient — B represents an attraction towards the ship's stern, and causes easterly deviations with ship's head in the western semi-circle, and westerly deviations with the ship's head in the eastern semi-circle, with a maximum value on the east and west points, decreasing to zero on the north and south points, by Compass.

Co-efficient + C represents an attraction towards the starboard side of the ship, and causes easterly deviations with ship's head in the northern semi-circle, and westerly deviations in the southern semi-circle, attaining a maximum value on the north and south points, decreasing to zero on the east and west points, by Compass.

Co-efficient — C represents an attraction towards the port side of the ship, and causes westerly deviations with ship's head in the northern semi-circle, and easterly in the southern semi-circle, attaining a maximum value on the north and south points, decreasing to zero on the east and west points, by Compass.

Co-efficient + D gives easterly deviations with ship's head between N. and E. and S. and W., and westerly deviations between S. and E. and N. and W.

Co-efficient — D gives results exactly the reverse to + D.

Note.—Both + D and — D have a maximum value on the four quadrantal points, and become zero on the cardinal points by Compass.

Co-efficient + E gives easterly deviations with ship's head *between N.E. and N.W. and S.E. and S. W. and westerly deviations between N.E. and S.E. and N.W. and S.W.*

Co-efficient — E gives results exactly the reverse to + E.

Note.—Both + E and — E have a maximum value on the cardinal points, and become zero on the four quadrantal points, but are usually very small in amount in Compasses placed in the middle line of the ship.

Heeling Error.—The heeling error arises partly from vertical induction in transverse iron, and iron vertical to the ship's deck, and partly from the vertical component of the sub-permanent magnetism of the ship. In the Northern Hemisphere in the majority of cases the N. point of the Compass needle is drawn to windard or the high side of the ship, with, as a rule, a maximum heeling error on N. and S. points, and zero on E. and W. points by Compass. If the Compass is not properly placed in the ship, there may be a sensible heeling deviation on E. and W. courses.

Tentative Corrections.

To correct co-efficient C.—With ship's head north or south, magnetic, place a bar magnet (or more than one if necessary) horizontally and exactly athwart ship, either on the deck or on any convenient platform, with its centre on the fore and aft line passing through the centre of the Compass card, placing its red or marked end to starboard if the N. point of the needle deviates to the starboard side, or to port if it deviates to the port side of the ship, moving the magnet to or from the Compass until it points correctly.

Note.—The deviation represented by co-efficient C varies inversely as the earth's horizontal force, providing the iron is symmetrically arranged on each side of the Compass.

To correct co-efficient B.—With ship's head east or west, magnetic, place a bar magnet (or more than one if necessary) horizontally and exactly parallel to the fore and aft midship line of the ship, either on the deck or on any convenient platform, with its centre on the athwart ship line passing through the centre of the Compass, the red or marked end of the magnet being directed aft if the end point of the Compass needle deviates towards the stern, or forward if it deviates towards the bow, moving the magnet to or from the Compass until it points correctly.

Note.—The co-efficient B consists of two parts: one is due to the permanent magnetism of the ship, which varies inversely as the earth's horizontal force; the other to vertical induction in soft iron, which varies as the tangent of the dip. As ships in the merchant service are rarely built with a view of providing a satisfactory position for the standard Compasses, it is very difficult in many ships to find a position for it where it will not be affected by vertical iron. It follows, therefore, that if this deviation be compensated, as is customary, by a fore and aft permanent magnet instead of by a vertical soft iron bar, the poles of the magnet may in some cases require to be reversed in high southern latitudes.

To correct co-efficient + D.—With ship's head on one of the quadrantal points, magnetic, the + D is generally corrected by boxes of small chain, cylinders of soft iron, or soft iron globes placed athwart ships on the same level, and at equal distances, on the port and starboard sides of the Compass, with the centre of their mass on a level with the Compass needle, move them to or from the Compass till the needle points correctly.

To correct co-efficient—D.—Co-efficient—D, which is of very rare occurrence, is corrected by placing the above correctors on the fore and aft sides of the compass.

Note.—When once the co-efficient D is properly corrected by soft iron it is correct for all magnetic latitudes, provided the distribution of the iron in the ship is not materially changed, and provided the magnetism of the soft iron has not been affected by the Compass needles. With short needles having small magnetic power, such for instance as Sir Wm. Thomson's, there will probably be no change; but when the needles are long and powerful, one-half the original D may be expected to return when approaching the magnetic equator. *See* Admiralty Manual, 1882, page 96, as follows:—"When "a compass with long and powerful needless is employed, "soft iron correctors placed very near it become mag- "netized by induction according to the power of the

" needles, and the resulting correction will not remain " strictly perfect in all latitudes."

To correct Heeling Error.—The heeling error is corrected for any given magnetic latitude by placing a vertical magnet exactly under the centre of the Compass card, with its N. or red pole uppermost if the heeling error is to windward or to the high side of ship, or its S. or blue end uppermost if to leeward or to the low side of ship, moving the magnet to or from the Compass until the heeling error is corrected.

Note.—The heeling error, due to the permanent par of the magnetism, varies inversely as the earth's horizontal force, and consequently is greatest in high latitudes, diminishes as the ship approaches the magnetic equator, and increases again, still retaining the same name, as the ship recedes from the magnetic equator in the Southern Hemisphere. The heeling error, due to transverse and vertical soft iron, decreases as the ship approaches the magnetic equator, where it is zero, and is of a contrary name in the Southern Hemisphere. It is probable that the poles of the vertical magnet may require to be reversed in high southern latitudes.

A divided scale should be marked or fitted outside the tube or some other convenient place, so as to show the proper position for the correcting magnet as found in any given magnetic latitude, and the same recorded as a guide for approximately placing the magnet in position on any subsequent voyage in the same locality, and especially on the return of the ship to the United Kingdom.

Candidates should understand that the object of tentative adjustment is to bring the deviations within manageable limits, and also to equalise the directive force of the needle so far as is practicable on all courses ; but no system of adjustment whatever is sufficiently reliable in character to absolve the navigator from the necessity of using every precaution, and especially of ascertaining the deviation on every available opportunity by observations of the sun by day and the other heavenly bodies by night.

APPENDIX N.

(From Memorandum on Examination of Engineers.)

EXAMINATION OF A MASTER OR MATE IN STEAM

The regulations under which these examinations are conducted are printed at pages 41 to 43 of the regulations for examinations of masters and mates. (Exn. 1.)

A candidate for this examination is required to have a thorough grasp of the construction of the steam engine and boiler, to enable him, in the first place, to understand the nature and importance of any defect which may be reported to him by the engineer, and so that he may work in harmony with the engineer in affording time and facilities for disconnexions, inspections, adjustments, and repairs.

To have a looking-on knowledge of what the principal repairs are about engines and boilers and pipes, and how these repairs are accomplished.

To be able to form an independent opinion as to a breakdown and the consequent propriety or impropriety of proceeding under steam with temporarily repaired or defective machinery.

To understand how to estimate approximately the reduction of fuel required for reduced speed, and consequently to sanction such reduction of speed as may seem to him to be warranted by the report of the engineer, and to satisfy himself before leaving port that there is sufficient coal for the voyage.

To have an intelligent grasp of the general run of pipes and connexions in the engine room, the marking of cocks, the opening and closing of cocks and valves, how mistakes of importance may be made in the confusion of an accident, and how best to guard against such mistakes.

To be capable of being left in charge of the feeding of a set of boilers, to understand the working of the water-gauge, and to be able to guard against being misled by false indications of the gauge glass.

To understand about blowing down and surfacing, the reasons for doing so, and the danger which may result from the neglect of these under certain circumstances. A master or mate presenting himself for examination in steam must be understood to have made up for his want of practical experience by reading up

about the steam engine. He ought, therefore, to show that he has given his mind to intelligently understanding the *rationale* of the action of the steam engine. Under this head, he should, therefore, be able to state approximately the quantity of heat required in the formation of steam, the remarkable relation of "latent" heat to "sensible" heat, using these popular names, how much steam can be raised by the combustion of one pound of coal, what horse-power measure is, what indicated horse-power is, the action of the slide-valve, the course of the steam through the engine, the advantage of working expansively, and how the expansive action is shown by the indicator diagram.

The candidate has to answer in writing 16 out of 20 questions selected from the book of Elementary Questions * Selections for this examination are given on the alphabetic sheet for "Steam." Generally, these answers are given by candidates as learned by rote from a book; the candidate should therefore be asked such *vivâ voce* questions as will necessitate his giving his answers in different words, so as to discover whether he has the root of the matter in him.

The principal part of the *vivâ voce* is the examination on board a steamer, preferably one with which he is unacquainted. He is told to look about and try to find out the run of the machinery without the assistance of any one; the Examiner to be in the engine-room to see that this independent examination is properly carried out. When the candidate reports that he thinks he knows the whole arrangement of the machinery, the Examiner will then question him on the uses of the parts,get him to point out the different cylinders, pumps, valves, condenser, &c. He must show that he understands the run of the pipes in the bilges, not necessarily that he has gone over every one of them, but he ought to be directed to trace, at least, one important range of pipes, and to thoroughly satisfy the Examiner that he could be safely trusted to manipulate the valves or cocks in connexion therewith. It will not often be practicable for the candidate to be asked to actually work engines under steam, but he must satisfy the Examiner that he knows how to do so, and that he is aware what precautions have to be taken in regard to water in the cylinder, &c. It is most important that a candidate should show that, in the event of an accident depriving him of the assistance of engineers, he knows what to do to safely take his vessel to an anchorage, or to stop the engines and proceed under sail alone.

The examination of a mate in steam is the same as that of a master. The knowledge is not with reference to the mate's position. A mate may be examined, but such examination implies that the mate will one day be a master, when the possession of the knowledge will be an advantage to him in the discharge of his duties as master.

APPENDIX O.

The following is a reprint of

INSTRUCTIONS

TO

EXAMINERS OF MASTERS AND MATES.

1. The Examiners already understand that they are to be very careful (in examining all applicants for Certificates of Competency) to satisfy themselves that the applicants understand the Rule of the Road at Sea, and should decline to pass every applicant who does not understand it.

2. As a serious misapprehension has, however, arisen in a recent case in which Sound Signals were being made by a steamer under way in thick weather, contrary to the express wording of Articles 12*a* and 19 of the Regulations, it is more than ever incumbent on Examiners not to pass any applicant unless the Examiner is satisfied that the applicant understands that the Signals named in Article 19 are purely optional, and are only allowed to be made in cases in which the weather is so clear that the ship making them has the other vessel in sight.

3. Any Master using these *optional* Sound Signals, even when the other vessel is in sight, does so in every case on his own

* Printed at end of Engineers' Regulations, Exn. 1*a*.

responsibility ; but if he uses them when the other vessel is *not* in sight, he commits a very serious act of disobedience to the Regulations, and must abide the consequences of his illegal act.

4. Applicants must be made to understand that the compulsory Sound Signal which *must* be made by a steamer under way in a fog is a prolonged blast under Article 12*a*, and no other Sound Signal.

5. In examining an applicant on the application of Articles 12 and 13, the Examiner should, by answers to questions, ascertain that the applicant understands that it is his duty to go at a moderate speed in fog, while, as regards Article 24, the Examiner should impress on the applicant that an "ordinary precaution" to be observed in the navigation of a steam-ship in a fog is to get the way off his own vessel immediately he hears the Sound Signal of another steamer, and then he should go ahead very slowly, blowing the "prolonged blast" at intervals, and feeling his way until all danger of collision is passed.

APPENDIX P.

FORMS used in connection with the EXAMINATION and CERTIFICATES of MASTERS AND MATES.

Name of Form.	Initial Letters and Numbers.
Regulations relating to the Examinations of Masters and Mates.	Exn. 1
Masters' and Mates' Form of Application for Examination.	Exn. 2
Form of Application for Examination (Colours) ...	Exn 2*a*
Examination Paper, to be used in the examination of Second Mates.	Exn. 4
Ditto, to be used by all candidates when appearing for examination for the first time only.	Exn. 4*a*.
Ditto, Second Mates	Exn. 5
Ditto, Only and First Mates	Exn. 6
Ditto, ditto ditto	Exn. 6*a*
Ditto, Masters, Ordinary	Exn. 7
Ditto, for adjustments of the Sextant	Exn. 9*a*
Ditto, Examination in Chart (for Mates)...	Exn. 9*c*.
Ditto, (for Masters)	Exn. 9*d*.
Examiners' Report of Masters' and Mates' Examination	Exn. 14
Examiners' Authority for delivery of Certificate to successful candidate.	Exn. 16
Examiners' Certificate (Colours)	Exn. 16*d*
Ditto authority for return of Fee to unsuccessful candidate (Colours).	Exn. 17*a*
Ditto Report on Colours tests	Exn. 17*b*.
Application for renewed Certificate	Exn. 23
Deviation cards	Exn. 24
Napier's Diagram	Exn. 25
Examination papor on Cyclones on revolving storms ...	Exn. 32

Government of Bengal.

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issued under section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

AS

MASTER.

T

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of MASTER in the Merchant Service, I do hereby, in pursuance of Act I of 1859, grant you this Certificate of Competency.*

By order of the Government of Bengal,

*this*_____*day of*_____18____.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate 

Address of Owner _____

Date and Place of Birth _____

Signature _____

This Certificate is given upon an ORDINARY EXAMINATION passed at _____ *on the* _____ *day of* _____ 18—.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the _____ *day of* _____ 18—.

_____

_____

Government of Bengal.

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act,* 1869.

Colonial Certificate of Competency

AS

FIRST MATE.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of FIRST MATE in the Merchant Service, I do hereby, in pursuance of Act I of* 1859, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18__.

Under-Secy. to the Govt. of Bengal,

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate [redacted]

Address of Owner _____

Date and Place of Birth _____

Signature _____

This Certificate is given upon an ORDINARY EXAMINATION passed at _____ *on the* _____ *day of* _____ 18—.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the _____ *day of* _____ 18—.

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

ONLY MATE.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of ONLY MATE in the Merchant Service, I do hereby, in persuance of Act I of* 1859, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

*this*_____*day of*_____18__.

Under-Secy. to the Govt. of Bengal.

Registered at the Offic of the Port Officer of Calcutta.

(93)

BENGAL.

No. of Certificate 

Address of Owner———————————————————

Date and Place of Birth———————————————————

Signature———————————————

This Certificate is given upon an ORDINARY EXAMINATION passed at———————*on the*———————
day of———————18——.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the———————*day of*———————18——.

———————————————————

———————————————————

(18)

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

SECOND MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of SECOND MATE in the Merchant Service, I do hereby, in persuance of Act I of* 1859, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18—.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate [redacted]

*Name and address of owner*_____

*Date and Place of Birth*_____

*Signature*_____

*This Certificate is given upon an ORDINARY EXAMINATION passed at*_____ *on the*_____ *day of*_____ 18 .

Any MASTER or MATE who fails to deliver up a certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

*Issued at the Port of Calcutta on the*_____ *day of*_____ 18 .

_____

_____

No. 26 Marine, dated Calcutta, the 31st January 1890.

NOTIFICATION—By the Govt. of Bengal, P. W. Dept.

UNDER the powers conferred upon him by section 10 of Act I of 1859, and with the sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules for the examination of persons desirous of obtaining local certificates of competency as Masters and Mates in the Mercantile Marine. These rules supersede those contained in the Notification of the General (Marine) Department of this Government, dated the 28th August 1877, and published in the *Calcutta Gazette* of the 29th idem.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed, and arrangements have been made for holding the examinations periodically at the Port of Calcutta. The examinations will be held twice a quarter or at such other times as the Government may appoint.

Examinations continued till all the Candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Notice of application for examination to be given to the Port Officer.

3. Candidates for examination must make their application upon the appropriate Form (Exn. 2), which must be filled up at the Port Office. The Exn. 2, properly filled in, together with the Candidate's testimonials and discharges, must be lodged with the Port Officer of Calcutta, not later than the day before the day of examination, and the Candidate must conform to any regulations in this respect which may be laid down by the Government; as, if this be not done, delay may be occasioned.

Testimonials of character, conduct and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges have to be verified before the Candidate can be examined, it is desirable that they should be handed in together with the Form Exn. 2 as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners and of British seamen serving in foreign vessels, which cannot be verified by the Port Officer, must be confirmed either by the Consul of the country to which the ship in which the Candidate served belonged, or by some other recognized official authority of that country, or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case will be decided on its own merits, and if the sufficiency of the proofs given appears to be at all doubtful, it must be referred to the Government.

Certificates as to Age.

6. Should any doubt exist as to the age of a Candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel. In the case of natives of India, who may not be able to speak English, their Certificates shall be endorsed to the effect that they are only valid for vessels manned and officered entirely by Asiatics.

Verification of Services by the Port Officer.

8. The time for which length of service as Seaman or Officer in the Mercantile Marine is to be reckoned in all cases referred to in the following paragraphs is to commence at the date when the articles of agreement were signed by the applicant, and to end at the date when he was discharged as shown in the articles of agreement. The certificates of discharge will generally be sufficient evidence of this, but great care must be exercised by the Port Officer and Examiners to detect any tampering in any way with the information contained in them, and to report to the Government at once any suspicious cases.

9. Services which cannot be verified by proper Entries in the Articles of the Ships in which the Candidates have served cannot be counted. For instance, a man will state his service to have been as Second or Only Mate, and to support his assertion will produce a Certificate of Discharge or of Employment by the Master to the effect that he served as Mate, when, on reference to the articles, it appears that he has actually been rated as Boatswain: the service in such a case will not be regarded as having been in the capacity of Mate.

Service as an Apprentice.

10. Time for which Indentures of Apprenticeship are in force will be accepted as sea service, provided that the Apprentice has remained by the ship for at least four-fifths of the time covered by the Indentures, and that the Indentures of the applicant are endorsed by the Owner or Master to whom he has been bound to the effect that he has performed his service faithfully for the whole time agreed upon.

Service as 2nd, 3rd or 4th Mate to qualify for Master.

12. Service as Second, Third, or Fourth Mate may be accepted as equivalent to service as First or Only Mate to qualify a Candidate for examination for a Master's Certificate of Competency, provided he can produce satisfactory evidence of his having served at sea 12 months as Second, Third, or Fourth Mate of a Foreign-going Ship while in possession of a First Mate's Certificate of Competency, valid in the United Kingdom. It will be noted that occasional service in charge of a watch in the daytime will not be accepted as Mate's service under the Regulations.

Service on board a Training Ship.

13. Part of the time served on board a training ship will be allowed to count as service at sea, provided that the Candidate can produce amongst his testimonials a Certificate from the Committee that he has conducted himself creditably, and passed a good examination in seamanship so far as practised in the training ship as well as in other matters down to the time of his leaving the ship.

14. No period of service on board a training ship will be allowed to count for more than one year's sea service.

Service in capacities other than as Apprentices or Seaman.

15. Candidates whose services have been in capacities other than Apprentice, Ordinary Seaman, or Able Seaman, *e.g.*, Cook, Steward, Carpenter, &c., will be required to satisfy the Port Officer that they have a good knowledge of Seamanship. This may possibly be proved by the production of satisfactory Certificates from Masters with whom the applicants have served. Failing satisfactory evidence, the applicant may be required to perform additional service, which must be in the capacity of Ordinary Seaman or Able Seaman.

Service on rivers and in smooth water

16. Service performed on rivers, no matter of what size, or in smooth water or partially smooth water limits, cannot be accepted.

Partial loss of sight.

17. A person who has lost the sight of one eye cannot be permitted to be examined for a Certificate of Competency. If he already holds a Certificate, he cannot be examined for a Certificate of a higher grade.

Service in Light-ships and Engine-room.

18. Service in Light-ships or in an Engine-room will not be accepted as sea service for a Master's or Mate's Certificate of Competency.

Service as Hooghly Master Pilot.

19. Service as a First Class Pilot will be accepted as qualifying for examination for a Master's Certificate for Home Trade Ships, notwithstanding that he may not have served in the capacity of Mate, but only provided that his *Sea Services* are sufficient. For the purpose of this rule, a Hooghly Master Pilot will be held to be a First Class Pilot.

Service as Pilot's Apprentice.

20. Half the amount of service performed as an Apprentice in a Pilot Ship propelled by sails may count as actual Sea Service to qualify for examination for a Certificate of Competency.

Service in Tug Boats.

21. Service performed in Tug Boats employed in Sandheads Service or outside Port limits may be accepted as Sea Service for qualifying for a Mate's Certificate for Home Trade Ships. Service on Hooghly River survey vessels may be accepted on the same conditions. Service in the Hooghly Pilot vessels at the Sandheads is Sea Service.

Desertion and gross misconduct.

22. Candidates who have neglected to join their vessels after having signed Articles, or who have deserted their vessels after having joined, or who have been found guilty

of gross misconduct on board, will be required to produce satisfactory proofs of two years' subsequent service and good conduct at sea, unless the Government, after having investigated the matter, should see fit to reduce the time.

If after passing examination services are found to have been insufficient.

23. If after a Candidate has passed his Examination it is discovered on further investigation, *e.g.*, by verification *on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for* which he has passed, it will not be granted to him; but if the Government are satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, he will be allowed to go up for re-examination without payment of a further fee when he has performed the amount of service in which he was deficient.

Certificate of a lower grade may be granted on certain conditions.

24. If in such a case the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference, if any, between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate, may be placed to his credit.

Must be re-examined for certificate of higher grade.

25. In such a case, when the applicant has by further service made up the amount in which he was found to be short, he must, before he can receive the higher Certificate, be re-examined in all the subjects.

Colour Tests.

26. The Local Government have made the following arrangements for the examination of persons as to their ability to distinguish colours :—*

27. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

28. Any person, including the holders of Certificates of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in Colours only*, must make application to the Port Officer on Form Exn. 2ᵃ, and pay a fee of one rupee.

29. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a certificate to that effect.

30. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

31. The application of a *Candidate who is presenting himself for Examination for a Master's or Mate's Certificate* must be made on Form Exn. 2. Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any of the colours used in the test, he will not be allowed to proceed with the examination in Navigation and Seamanship.

32. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will in such event be returned to him.

33. A Candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the Colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If he fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

34. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form Exn. 2ᵃ.

35. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination in Navigation and Seamanship for the Certificate of the higher grade.

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* *See* Appendix O.

36. Should he pass this examination, the following statement will be written on the face of the higher Certificate which may be granted to him, viz.—"This Officer has failed to pass the Examination in Colours."

37. Should he ultimately fail to pass the Examination in Navigation and Seamanship, a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

38. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency for Home Trade Ship.

40. All Candidates for Certificates of Competency must first be examined in Colours.*

41. A MATE must be not less than 19 years of age, and have served four years at sea.

No candidate will be allowed to be examined unless he has served two years at sea within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

42. In Navigation, &c.—He must write a legible hand, and understand the first five rules of arithmetic, both simple and compound. He must be able to take a bearing by compass, and be conversant with the use of Mercator's chart, and be able to find, on either a "true" or "magnetic" chart,† the course to steer, and the distance from one given position to another; to find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of the ship from the object at the time of taking the second bearing.

43. He must also pass an examination in the International Code of Signals.‡

44. In Seamanship, &c.—He must possess a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog and sound signals.§ He must be able to describe the signals of distress, and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals;‖ also the use and management of the rocket apparatus in the event of his vessel being stranded. He must be able to mark and use the lead and log lines, to moor and unmoor a vessel, and to manage a ship's boat in heavy weather, &c., &c. He must also understand the construction, use, and action of the bulkhead sluices, the engine-room telegraph, &c., and to answer any other questions of a like nature appertaining to the duties of the Mate of a Home Trade Vessel which the Examiners may think proper to put to him.

45. A MASTER must be not less than 20 years of age, and have served five years at sea, of which one year must have been as First or Only Mate in the Home or Foreign Trade, during which service he must have been in possession of a Mate's Certificate for Home Trade Ships or of a First or Only Mate's Certificate for Foreign-going Ships. *Vide also para.* 19.

No candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

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* *See* Appendix F.

† *See* Appendix D. The terms "true" and "magnetic" are used throughout the Regulations for the sake of brevity and convenience for indicating charts that have compasses engraved upon them, showing the "true" or "magnetic" point of the compass respectively.

‡ *See* Appendix A.

§ *See* Appendix B.

‖ *See* Appendix C.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

46. In Navigation, &c.—In addition to the qualifications required of a Mate of a Home Trade Ship, a Master will be required to find on a chart the course to steer by compass in order to counteract the effect of a given current, and to find the distance the ship will make good towards a given point in a certain time, and to *work out practically* the correction to apply to soundings taken at a given time and place, to compare with the depth marked on the chart,* &c. He will also be required to understand the use of the quadrant, to be able to observe with it, to read *off* and *on* the arc, and to find the index error by the horizon. He will also be required to find the latitude by a meridian altitude of the sun, and to give written answers (*vide supplementary vivâ voce test, page* 40) to certain practical questions on the subject of the deviation of the compass.†

47. In Seamanship, &c.—In addition to the qualifications required of a Mate of a Home Trade Ship, a Master must understand how to rig a sea anchor, and what means to apply to keep a steamer with machinery disabled out of the trough of the sea, &c. How to get a cast of the lead in heavy weather, &c. He will be examined as to his resources for the preservation of the crew and passengers in the event of wreck, and the steps to be taken if his vessel is disabled and drifting towards a lee shore, and will be required to answer any other questions appertaining to the management of Home Trade Vessels which the Examiner may think necessary to put to him.

Failure.

Re-examination in case of failure.

48. In all cases of failure the Candidate must be examined *de novo*. If a Candidate fails in *Seamanship*, he will not be re-examined *until after a lapse* of six months. Whether the whole or part of this period must be served at sea must depend upon the subjects in Seamanship in which the Candidate failed, but what amount (if any) of sea service will be required will be left to the discretion of the Port Officer, subject, however, to revision by the Government should they see fit.

49. The Examiners in making out their Report on Form Exn. 14 should state what amount (if any) of further sea service the Candidate must perform, and they should also insert this information under Division H in Form Exn. 2.

50. If he fails three times in *Navigation* he will not be re-examined until after a lapse of three months from the date of the *last failure*.

Certificate of a lower grade.

51. If a Candidate has failed in his Examination, but the subjects in which he has failed are not included in the subjects required for a certificate of a lower grade, he may, if he desires it, receive a certificate of such lower grade.

52. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled, for re-examination for the higher grade of Certificate he will be required to pay a further full fee.

53. If a Candidate fails for bad spelling or writing, he will not be re-examined until after a lapse of at least three months.

Fees.

54. Candidates for examination, in making their application on Form Exn 2, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause, except failure to pass the colour tests, not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as

* *See* Appendix D.
† *See* Appendix E.

the case may be, they will be allowed to again present themselves for examination for a Certificate of the same grade without paying any further fee.

55. The fee for examination must be paid to the Port Officer. In any case in which a Candidate offers money to any other officer, and in any place but in the Port office, the Candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be again examined for twelve months. Fees to be paid by applicants for examination.

56. If a Candidate fail in his examination, *no part of the fee he has paid will be returned to him.* Fees to be paid by applicants for examinations. 133.

57. The fees are as follow :—

FOR "HOME TRADE SHIPS."

	Rs
Mate	6
Master	12
For the renewal of any certificate ...	5

General Instructions to Examiners and Candidates.

58. All instruments necessary for use in the examinations are supplied by the Government. Instruments used in examinations.

59. Before commencing the examination, the tables or desks must be cleared of all scraps of paper or books that are not used in the examination, and care should be taken that the candidates do not bring into the examination room any book, paper, document, or memoranda of any description whatever. No person whatever should be allowed in the room during the time of examination, but those whose duties require them to be present. Prohibited books and papers.

60 No instructors will be allowed on the premises.

61. Candidates will under no pretence whatever be allowed to leave the premises while the examination is proceeding. If a candidate has occasion to visit the retiring room, he will only be allowed to do so on the completion of the paper on which he may be engaged, when he will be required to enter in a book kept for the purpose the exact times of his leaving and returning to the examination room. When only a few candidates are under examination, two persons will not be allowed to leave the room at the same time. Candidates not to leave premises during examination.

62. Candidates should be so placed as to prevent one copying from the other, and no communication whatever between the Candidates should be allowed. Position of Candidates at examination.

63. If any blotting paper is allowed, it should be black; and when the first examination paper is issued, each Candidate should be furnished with a piece, which must be returned to the Examiner upon the completion of the last paper. Blotting paper.

64. The examination papers should be issued to the Candidates in half sheets only, and one at a time. This will prevent a Candidate from spreading out the sheets on the table in an apparently careless manner, but so as to enable his nearest neighbour to look over and copy, or examine the problems It will also enable the Examiner to look over and report upon the work on one half sheet, while the Candidate is at work upon another, and so on. When the errors are not too numerous, or when they are not from ignorance of the subject, the incorrect problems may be returned to the Candidate for correction, but in no case should the errors be pointed out by the Examiner, neither should any marks be made on the correct work of the problem, which would at once indicate how far or to what extent the work is correct. Should the problems be returned to the Examiner the second time incorrect, this would be a failure; and as the time allowed is considered ample for working out the papers carefully, this rule is expected to be strictly observed. How examination papers should be issued.

65. When from the large number of the candidates it may be found impossible to look over the work on the day of examination during the office hours, an hour in the morning of the following day may be allotted for the purpose of correcting the problems, but In certain cases problems may be corrected on morning following examination day.

in no case should a Candidate have his problem returned to him for correction after he has made the second attempt.

Vivâ voce examination.

66. In the *vivâ voce* examination a reasonable time should be allowed for the Candidate to give his answers. No assistance should be given or leading question put.

Minor corrections.

67. All outstanding or minor corrections should appear in the margin of each problem paper; also on the chart papers Exn. 9C and Exn. 9D; and unless all these corrections appear on the papers of the Candidate, they will not be considered complete.

Examination to commence with that for Second Mate.

68. In every case the examination, whether for Only Mate, First Mate, Master, is to commence with the problems for Second Mate.

Problems required as tests.

69. Examiners should bear in mind that the problems to be performed are required as tests, and for the purposes of an Examination, and not for sea-going or practical purposes alone.

70 The Candidates will be allowed to work out the various problems according to the method and the tables they have been accustomed to use.

Time allowed for Problems and Writings.

71. The rules as to the amount of time allowed are as follow: —

72. *Candidates for Home Trade Mate's Certificates* must complete the whole of their arithmetical and chart papers within *eight hours*, and Candidates for Home Trade Masters' Certificates within *ten hours*.

Additional time allowed in special cases.

73. Punctually at the expiration of the prescribed time all the papers should be called up, whether completed or not, and if not completed the Candidate will be declared to have failed, unless the Examiner see fit to lengthen the period in any special case. If, however, the period is lengthened in any case, the special circumstances of that case, and the reasons for lengthening the period, together with the time allowed, must be reported to the Government by the Examiner, in the column for "remarks" on the Form Exn. 14. It should be noted that the periods prescribed in the foregoing paragraphs are not intended to include the time occupied by the *vivâ voce* part of the examination.

74. It is anticipated that but few of the Candidates for Certificates of Competency will require the whole of the time herein allowed for completing their examination in navigation; and ample time has been prescribed, so that Candidates may perform their work in a careful, clear and legible manner, and to the entire satisfaction of the Examiners.

Supplementary vivâ voce Examination on written Papers.

75. An impression prevails in regard to the examination of Masters and Mates, that so long as a Candidate can commit to paper correct answers to the various questions requiring written answers (*e. g.*, *Forms Exn. 4a*, *Exn. 7*, *Exn. 9a*, *Exn. 9c*, *Exn. 32*, &c.), no matter how indicative the answers may be of their having been learnt off by rote *only*, the duty and responsibility of the local Examiners are at an end, and that they have no power or authority to reject a Candidate should his written answers be correct.

76. Lest, therefore, such an impression should prevail, the Government wish to point out that Candidates for Certificates of Competency are not only expected to give correct written answers, which may merely be learnt off by rote, but they are expected to possess an intelligent knowledge of the various subjects prescribed in the Regulations, particularly as regards the important subject of the Deviation of the Compass.

77. This result may be easily attained by the Examiner putting a few *vivâ voce* questions to the candidate as the papers are brought up for inspection, or at any subsequent time if more convenient. The oral questions (suggested by the printed questions and the answers given) should be such that the Examiner may satisfy himself that the candidate possesses a real knowledge of what he has written, and should be confined strictly to the subjects of the printed questions. Should the candidate then exhibit ignorance of the subjects, the Examiner (who is in a position to judge of the real knowledge the man before him posses-es) should deal with him at his discretion, notwithstanding that the candidate may have written all the answers correctly by rote.

78. When an Examiner finds it necessary to fail a Candidate in this *supplementary vivâ voce* test, a memorandum containing the particulars of the points on which the candidate was ignorant, *i.e.*, *the identical questions and the identical answers given*, must in each case be attached to his examination papers, when forwarded in the usual course to the Port Officer, or the particulars may be set forth by the Examiner in the margins of the candidate's papers in red ink.

79. If the Candidate passes he will receive the Form Exn. 16, upon which the Government will issue the certificate to the Candidate, whose testimonials, &c., will be returned at the same time. Form Exn. 16 Completion of examination.

Special Notice to Candidates.

80. The attention of Candidates is specially called to the following Regulations:—

81. Candidates are required to appear at the examination-room punctually at the time appointed.

82. Candidates are prohibited from bringing into the examination-room books, paper, or memoranda of any kind whatever. The slightest infringement of this regulation will subject the offender to all the penalties of a failure, and he will not be allowed to present himself for re-examination for a period of three months.

83. In the event of any Candidate being detected in defacing, blotting, writing in, or otherwise injuring any book or books belonging to the Government, the papers of such Candidate will be detained until the book or books so defaced be replaced by him. He will not, however, be at liberty to remove the damaged book, which will still remain the property of the Government.

84. In the event of any Candidate being discovered referring to any book or memoranda, copying from another, or affording any assistance or giving any information to another, or communicating in any way with another, during the time of examination, he will subject himself to all the penalties of a failure, and he will not be allowed to be examined for a period of six months.

85. No Candidate will be allowed to work out his problems on a slate or on waste paper.

86. No Candidate will be permitted to leave the room until he has given up the paper on which he is engaged.

87. Any Candidate who may be guilty of insolence to the Examiner or of other misconduct will render himself liable to the postponement of his examination, or, if he has passed, to the detention of his certificate for such period as the local Government may direct.

General.

88. Certificates of competency will be made and issued in the forms hereunto annexed.

89. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

90. No application from the holder of a certificate granted by the Government of Bombay to be examined for a certificate of the same legal value shall be entertained.

APPENDIX A.

EXAMINATION OF MASTERS AND MATES IN THE INTERNATIONAL CODE OF SIGNALS.

Instructions to Examiners.

The Government desire to direct the attention of the Examiners to the principal points connected with the International Code of Signals (which is to be treated as a subject in Navigation) as to which Candidates for Examination should be questioned in order to qualify for Certificates of Competency.

The Government would recommend to the Examiners a perusal of the *Report of the Signal Committee of* 1855 (which will be found at the commencement of the Signal Book), and also the *first few pages of the Book*. The information therein given will be found sufficient to make the Examiners theoretically acquainted with the characteristics of the Code, and the advantages it claims to possess over other Codes, and will enable them to appreciate and urge upon Candidates for Examination the facilities which this System of Signalling affords for easy and rapid communication.

The "comprehensiveness" and "distinctness" of the International Code are its chief recommendations.

The form of the Hoist generally indicates the nature of the Signal made, so that an observer can at sight understand the character of the Signal he sees flying.

The annexed plate gives examples which illustrate this.

The Examinations should tend to elicit a knowledge of the distinctive features of the Code above alluded to.

With this object the Examiners should make the 2, 3, and 4 Flag Signals on the Frame board which is furnished for the purpose (*always taking care first to show the Ensign and the Code Pennant at the Gaff*),* questioning the Candidates as to the distinguishing Forms of the respective Hoists, *(see Plate annexed)*, which will be indicated according as a Burgee, or a Pennant, or a Square Flag, is uppermost.

The Candidate ought to know how to find in the Signal Book the communication or the inquiry he desires to make, and how to make the Signal. The Signal to be made should *invariably* be sought for by the Candidate in the Vocabulary and Index, Part II, and never in Part I

The Candidate ought to know how to interpret a Signal.

The Examiner should place a Signal on the Frame board, and vary the Signal by showing a 2 or 3 Flag Signal, or a "Geographical" or a "Vocabulary" Signal, or the name of a Merchant Ship or a Ship of War.

The two latter signals would not of course be found in the Signal Book. The Candidate ought to point them out in the *Code List of Ships*.

A Candidate ought to be able to read off a Signal at sight, so far as to name the Flags composing the Hoist.

He ought to know the use of the Code Pennant, and of the Pennants C. and D., "Yes" and "No."

The Candidate should be practised in the use of the Spelling Table, by being made to spell his own name, or some word not to the Vocabulary of the Code.

A knowledge of the Distant Signals should be required of the Candidate, their object and the mode of signalling by the Distant Code, which will be found at the end of the Signal Book.

For this purpose two Black Balls, two Black Square Flags, and two Black Pennants will be furnished with the Frame board, and the Candidate should be required to make one or two Distant Signals, and to read off one or two made by the Examiners.

The Ball being the distinguishing symbol of the Distant Signal, any Pennants or Flags of the Code may be employed in conjunction with it, irrespective of colour. The Black Pennants and Flags are merely sent as showing best in the light background of the Frame board.

The Examiners should be careful to ascertain that the Candidate possesses a knowledge of the Distress Signals which came into operation November 1st, 1873.

Semaphores.

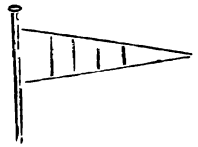
A plate at the end of the Signal Book explains the method by which the arms of the Semaphore are made to represent by their position (up, down, or horizontal) the three symbols used for Distant Signalling, viz., a Flag, a Ball, or a Pennant. Before making Signals with the Semaphore, the Black Disc with the white rim should be placed on the top of the Semaphore Mast, as it properly forms a part of the Mast itself.

The International Code is used on board Her Majesty's Ships and it has been adopted by all the principal maritime powers for their Imperial as well as their Mercantile Navies.

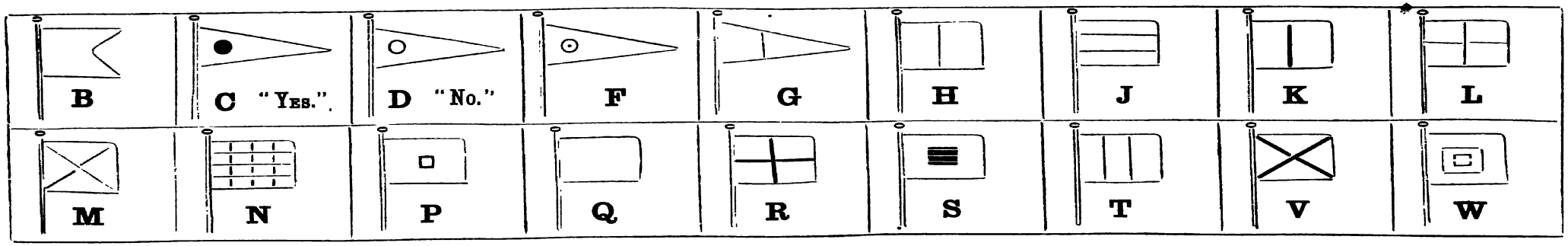
Note.—The International Code of Signals, with the Code List, is prepared by the Registrar-General of Shipping and Seamen, and may be had of the Publishers, Messrs. Spottiswoode & Co.,

* The object of this is, of course, to distinguish the Signals from those of another Code.

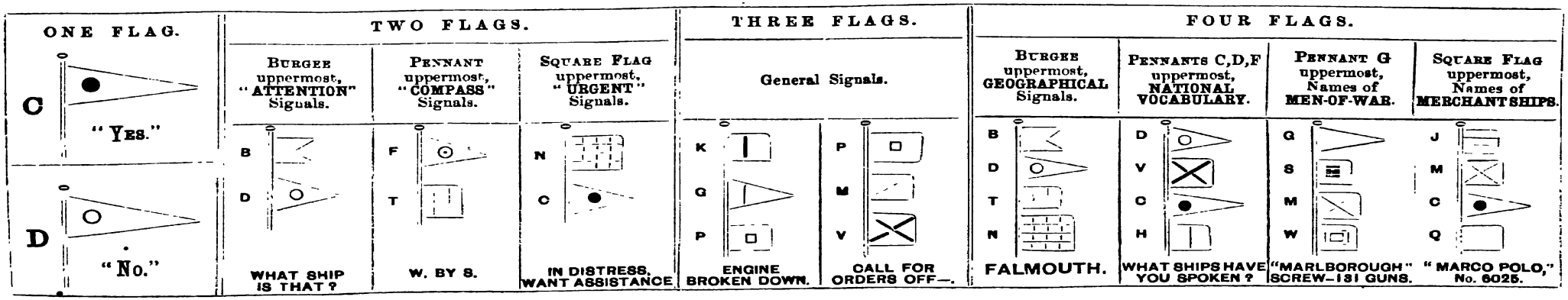
FLAGS OF THE INTERNATIONAL CODE OF SIGNALS.

"CODE SIGNAL" AND  "ANSWERING PENNANT."

N.B.—When used as the "Code Signal," this Pennant is to be hoisted under the "Ensign;" when used as the "Answering Pennant," where best seen.



The following examples will serve to illustrate how the *form of a Hoist* will usually denote the *nature of the Signal* made :—



54, Gracechurch Street, London, and the principal Booksellers at the various ports.

The Official Mercantile Navy List and Maritime Directory published for the use of Merchants, Shipowners, Shipbrokers, and others, may be obtained in like manner; price 12*s*.

APPENDIX B.

REGULATIONS RESPECTING LIGHTS AND FOG SIGNALS AND STEERING AND SAILING RULES ISSUED BY THE BOARD OF TRADE.

NOTICE.

The Board of Trade have had their attention drawn to the necessity of a more strict examination of applicants for Certificates of Competency in their knowledge of the regulations for preventing collisions at sea.

In order that the rule of the road at sea may be better understood, and that a uniform system of examination may prevail, the Board of Trade have issued the following catechism.

This catechism has received the approval of the Trinity House and Admiralty in England, and of the Council of the Admiralty of France.

The Board of Trade attach very great importance to a thorough knowledge of the steering and sailing rules on the part of every applicant for a Certificate of Competency, and a thorough examination on the part of the Examiners.

All applicants for examination, whether for certificates as masters or mates, are to be examined as to their knowledge of the steering and sailing rules each time they present themselves for examination.

Questions suggested by the following heads of examination are to be asked in addition to, and are not to supersede, any other questions proper and necessary to be asked by the Examiner.

The following questions need not be adhered to literally by the Examiner, and are not all to be asked; but the substance of the leading questions should be asked, and all that are asked should be satisfactorily answered, before an applicant is reported to have passed his examination. The Examiner should make such a selection of the questions as each case appears to him to require.

THOMAS GRAY,
Assistant Secretary.

Board of Trade,
Marine Department.

HEADS OF EXAMINATION IN REGULATIONS RESPECTING LIGHTS AND FOG SIGNALS AND IN THE STEERING AND SAILING RULES.

1. What light or lights are required by the regulations to be exhibited by sailing vessels at anchor?

One light only, viz., a white light.

2. What light or lights are required by the regulations to be exhibited by steam-ships at anchor?

The same as for sailing vessels

3. Where is the anchor light to be exhibited?

Where it can best be seen. It must of course be placed where there is the least possible chance of obstruction from spars, ropes, &c., &c.

4. To what height may the anchor light be hoisted?

It may be exhibited at any height where it can best be seen, not exceeding 20 feet above the deck.

5. What is the description of the lantern containing the anchor light required by the regulations?

A globular lantern of not less than eight inches in diameter.

6. In what direction or directions must the anchor light show?

It must show a clear, uniform, and unbroken light, visible all round the horizon.

7. At what distance must it be visible?

At least one mile.

8. What is the number of lights required by the regulations to be carried by sailing ships when under weigh at night?

Two side-lights, and to have in readiness a white light or a flare-up light to show from their stern to any vessel overtaking them

9. Of what colour are these lights, and how are they to be placed on board the ship?

A green light on the starboard side, and a red light on the port side.

10. What description of light must be shown from the sides of sailing vessels under weigh; and over how many points of the compass, and in what directions, and how far, are they required to show.

Each light must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass;

so fixed as to throw the light from right ahead to two points abaft the beam on the starboard and port sides respectively; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

11. What lights are they to carry when being towed at night?

The same.

12. Are the side-lights required to be fitted with screens; and if so, of what length, and how?

Yes, on the inboard side; at least three feet in length, measuring forward from the light. They are to be so fitted as to prevent the coloured lights from being seen across the bows.

13. What is the number of lights required by the regulations to be carried by steam-ships when under steam at night?

Three lights, and to have in readiness a white light or flare-up light to show from their stern to any vessel overtaking them.

14. Of what colour are these lights, and how are they to be placed on board the ship?

A white light on or in front of the foremast at a height above the hull of not less than 20 feet; and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth. A green light on the starboard side, and a red one on the port side.

15. Over how many points of the compass, in what direction, and how far, is the foremast-head light of a steamer required to show?

Over 20 points, viz., from right ahead to two points abaft the beam on both sides. It must be of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

16. Are the side-lights required to be fitted with screens; and if so, of what length?

The green and red lights are to be fitted with screens on the inboard side, extending at least three feet forward from the light, as in the case of sailing vessels.

17. Over how many points of the compass, in what directions, and how far, are the coloured side lights of steamers required to show?

The side-lights must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, on each side of the ship, *i.e.*, from right ahead to two points abaft the beam on the starboard and port sides respectively, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles.

18. What description of lights are steamers required by the regulations to carry when they are not under steam, but under sail only?

Side-lights only, the same as sailing vessels.

19. What exceptional lights are to be carried by small sailing vessels in certain cases?

Whenever, as in the case of small vessels during bad weather, the green and red side lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

20. What description of lights are pilot vessels required to carry when on their stations on pilotage duty?

A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

21. What description of lights are pilot vessels required to carry when not on their station on pilotage duty?

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

22. What lights are open boats and fishing vessels of less than 20 tons net registered required to carry when under way and not actually engaged in fishing.

Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

23. What lights are fishing vessels and fishing boats of 20 tons net register, or upwards, required to carry when under way and not actually engaged in fishing?

They must carry similar lights to those of other ships when under way.

24. What lights are steam trawlers of 20 tons gross register, or upwards, whilst actually engaged in trawling, and not being stationary, required to carry?

All steam-vessels engaged in trawling must carry either one of the two following arrangements of lights, whichever of the two may be the more convenient:—

(*a*) The usual green and red side-lights, and foremast head light, similar to those carried by other steamships; or

(*b*) They must carry on or in front of the foremast head, and in the same position as the white light which other steamships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side; such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: and (2) a white light in a gobular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform, and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet, nor more than 12 feet.

25. What lights are sailing trawlers whilst actually engaged in trawling, and not being stationary, required to carry.

All sailing vessels, of whatever tonnage, whilst engaged in trawling, must carry either one of the three following arrangements of lights, whichever of the three, (*a*), (*b*), or (*c*), may be the most convenient:—

(*a*) They may carry the green and red side-lights similar to those of other sailing ships; or

(*b*) They may carry on or in front of the foremast head a lanthorn having a green glass on the starbord side and a red glads on the port side, so constructed, fitted, and arranges that the red and green do not converge, and so as to show an uniform and unbroken green light over an are of the horizon of 12 points of the compass, and an uniform and unbroken red light over an are of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft the beam on the port side; and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet; or

(*c*) They may carry a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed at to show a clear, uniform and unbroken light all round the horizon, and visible on a dark night, with a clear atmosphere, for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by, another ship or vessel in sufficient time to prevent collision.

26. What lights are vessels whilst actually engaged in drift net fishing required to carry?

All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than 5 feet and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night, with a clear atmosphere, for a distance of not less than 3 miles.

27. What lights are vessels whilst actually engaged in line fishing required to carry?

A vessel engaged in line fishing is required to carry the same lights as a vessel engaged in drift net fishing.

28. If a vessel, when fishing, becomes stationary in consequence of her gear getting fast to a rock or other obstruction, what signal must she make?

She must show the same light, and if a fog, mist, or falling snow prevail, she must make the same fog signal, as if she were at anchor.

29. What lights are fishing vessels and open boats required to exhibit when at anchor?

Between sunset and sunrise they must exhibit a white light, visible all round the horizon at a distance of at least one mile, the same as any other vessel.

30. What sound signals are fishing vessels required to make whilst engaged in fishing in thick weather?

In fog, mist, or falling snow, a drift net vessel attached to her nets, and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

31. May fishing vessels and open boats use flare-up lights, and if so, at what part, or parts, of the vessel should they be exhibited?

Yes. Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

32. Do these regulations referring specially to fishing vessels and boats apply to foreign vessels, and to all parts of the world?

No, with the exception of the *first paragraph* of Article 10 of the regulations, they apply only to British vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre.

33. What lights are steam-ships required to carry when towing other ships?

A steam-ship, when towing another ship, shall, in addition to her side lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position as the white light which other steam-ships are required to carry.

34. What light is a ship which is being overtaken by another required to show?

A ship which is being overtaken by another shall show from her stern to such last mentioned ship a white light or a flare-up light.

35. Describe the lights and the day signals that vessels employed in laying or picking up a telegraph cable are required to carry.

A ship, whether a steam-ship or a sailing-ship employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line over one another, not less than six feet apart; the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than her fore-mast head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

36. Describe the lights and the day signals that vessels which from any cause are not under command are required to carry.

A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over than other, not less than three feet apart, and of such a charater as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of but not lower than her foremast head, three black balls or shapes, each two feet in diameter.

37. Are the above-mentioned ships to carry side-lights?

The above ships, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

38 What are the previous mentioned shapes and lights intended to indicate to approaching ships?

These shapes and lights are to be taken by approaching ships as signals that the ship using them is not under command, and cannot therefore get out of the way.

39. Do these rules prevent squadrons and convoys from carrying special lights?

No. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war, or for ships sailing under convoy.

40. What sound signals are steam-ships and sailing ships required by the regulations to be provided with?

A steam-ship shall be provided with a steam whistle or other efficient steam-sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by a bellows or other mechanical means, and also with

an efficient bell. A sailing ship shall be provided with a similar fog-horn and bell.

41. When are these signals to be used?

In fog, mist, or falling snow, whether by day or night.

42. What sound signal is to be made by steam-ships and sailing ships when not under way?

A steam-ship and a sailing ship when not under way shall, at intervals of not more than two minutes, ring the bell.

43. What sound signal is required to be made by a steam-ship when under way?

A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes a prolonged blast.

44. What sound signals are required to be made by sailing ships when under way?

A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

45. Do the regulations require ships to take any other precaution during thick weather?

Yes. Art. 13 says every ship, whether a sailing ship or steam-ship, shall, in a fog, mist, or falling snow, go at a moderate speed.

46. Is it optional for a steam-ship to make any other signals with her steam whistle?

Yes; but only to vessels in sight, *i.e.*, not to vessels which are so obscured by fog, mist, or falling snow that they cannot be seen, though their whistles may be heard.

Art. 19 provides that in taking any course authorised or required by the regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz:—

One short blast to mean "I am directing my course to starboard."

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

47. What precaution is to be taken by steamers approaching another vessel?

If there is risk of collision, the steamer is to slacken speed, or, if necessary, stop and reverse.

48. If you see two white lights in a vertical line one over the other, what do they denote as regards the vessel carrying them?

They denote the presence of a steamer towing with her side lights not within sight on account of distance, fog, &c.; or a vessel end on to me engaged in drift net fishing, or in line fishing or it may be a steam trawler end on, or within two points of being end on, to me.

49. If you see a green, or a red, light with a white light below, what do they denote?

They denote the presence of either a sailing, or a steam, vessel engaged in trawling.

50. If you see both the green and red lights with a white light below them, what do they denote?

They denote the presence of a sailing trawler coming end on to me.

51. If you see a white light alone, what does it denote as regards the ship carrying it?

It denotes the presence of a vessel or boat at anchor; or a pilot vessel on her station; or the mast-head light of a vessel, under steam, with her side-lights not within sight on account of distance fog, &c.; or a fishing vessel stationary through her gear getting fast to some obstruction, or a sailing trawler engaged in trawling (1) under one arrangement of lights heading so that her side-lights are obscured, (2) under another arrangement from the red pyrotechnic light not having been exhibited, or it may be a light shown from the stern of a vessel which is being overtaken.

52. If you see a green or a red light without a white light, or both a green and a red light without a white light, is the vessel carrying the light or lights seen, a vessel under steam or a vessel under sail?

A vessel under sail?

53. How do you know?

Because there is no white mast-head light.

54. If you see a white light over a coloured light, is the vessel a vessel under sail or a vessel under steam?

A vessel under steam. The mast-head light denotes that the vessel is under steam.

[The Examiner will then take one model of a vessel, which he will place on the table, and call it A. He will then take the mast or stand with a white and red ball on it and place it at the other end of the table and call it B.

The Examiner should be careful that the model of one vessel only is used when the questions numbered 55 to 60 are asked.]

55. A is a steamer going north, seeing a white light and red light right ahead at B. Are A and the vessel B showing the two lights meeting end on or nearly end on, or is B passing A, or is B crossing the path of A, and in what direction, and how do you know?

Passing to port, because if I see a red light ahead, I know that the head of the vessel carrying that red light must be pointing away

in some direction to my own port or left hand. The ship showing the red light has her port or left side more or less open to A.

56. If A is going north, within what points of the compass must the vessel B showing the white and red lights be steering?

B must be going from a little W. of S. to W. N.-W.

57. How do you know this?

Because the screens being properly fitted, I could not see the red light of B at all with the vessel's head in any other direction.

58. A is a steamer going north, and seeing a white and green light ahead. Are A and B meeting, or is B passing A, or is B crossing the course of A, and in what direction; and how do you know?

B is passing to starboard of A, because if I see a green light ahead, I know that the head of the vessel carrying that green light must be pointing away in some direction to my starboard or right hand. The ship showing the green light has her right or starboard side more or less open to me.

59. As A is going north, within what points of the compass must the vessel showing the white and green lights be steering?

B must be going from a little E. of South to E.N.E.

60. How do you know?

Because the screens being properly fitted, I cannot see the green light at all with the vessel's head in any other direction.

61. If a steamer A sees the *three* lights of another steamer B ahead or nearly ahead, are the two steamers meeting, passing, or crossing?

Meeting end on, or nearly end on.

62. Do the regulations expressly require the course of a ship to be altered to starboard in any case, and if so, when?

Yes; in the case of two steamers meeting end on, or nearly end on.

63. Do they expressly require the course of a ship to be altered to starboard in any other case; and if so, in what other?

No. It is not in any other case expressly required by the regulations.

[The Examiner should see that the candidate puts the models in the positions indicated by the question 64, and following.]

64. If a steamer A sees another steamer's red light B on her own starboard side, are the steamers meeting, passing, or crossing; and how do you know?

Crossing, because the red light of one is opposed to the green light of the other; and whenever a green light is opposed to a red light or a red light to a green light, the ships carrying the lights are, crossing ships.

65. Is A to stand on; and if not, why not?

A has the other vessel B on her own starboard side. A knows she is crossing the course of B, because she sees the red light of B on her (A's) own starboard side. A also knows she must get out of the way of B, because Article 16 expressly requires that the steamer that has the other on her own starboard side shall keep out of the way of the other.

66. Is A to starboard or to port in such a case?

A must do what is right so as to get herself out of the way of B: it is generally preferable to pass under a ship's stern rather than attempt to cross her bows, but it depends entirely on the position and relative speed of the two ships, and therefore the regulations wisely leave the giving way ship to get out of the way in any manner that may be most desirable, so always that she does get out of the way.

67. If A gets into collision by porting, will it be because she is acting on any rule?

No; the rule does not require her either to port or to star board If she ports, and gets into collision by porting, it is not the fault of any rule.

68. If a steamer A sees the green light of another steamer B on her own (A's own) port bow, are the two steamers meeting, passing, or crossing; and how do you know?

Crossing, because the green light of one ship is shown to the red light of the other.

69. What is A to do, and why?

By the rule contained in Article 22 of the Regulations, A is required to keep her course, subject only to the qualification that due regard must be had to all dangers of navigation; and that due regard must also be had to any special circumstances which may exist in any particular case rendering a departure from that rule necessary in order to avoid immediate danger. The crossing ship B on A's port side must get out of the way of A, because A is on B's starboard side.

70 A, a steamer, sees the green light of another steamer, B, a point on her A's port bow. Is there any regulation requiring A to port in such a case; and if so, where is it to be found?

There is not any.

71. Are steam-ships to get out of the way of sailing ships?

If a steamer and a sailing ship are proceeding in such direction as to involve risk of collision, the steamer is to get out of the way of the sailing ship, unless the sailing ship is overtaking the steamer.

72. What is to be done by A, whether a steamer or a sailing ship, if overtaking B?

A is to keep out of the way of B.

73. When by the rules one of two ships is required to keep out of the way of the other, what is the other to do?

To keep her course. This is absolutely necessary to enable the commander of the ship required by the regulations to keep out of the way, to act with decision and promptitude, which he cannot possibly, unless he knows what the other vessel is going to do.

74. Is there any qualification or exception to this?

Yes. Due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case, and require a departure from the regulations to avoid immediate danger.

75. Is there any general direction in the steering and sailing rules; and if so, what is it?

Yes, it is this: that nothing in the rules shall exonerate any ship, or the owner, master, or crew thereof, from the consequences of any neglect to carry lights, or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

76. Can you repeat article (———) of the regulations, I refer to the article containing the rule for (———)?

[The Examiner should repeat this question, naming a different article each time.]

77. What does the Act of Parliament provide as to the obligation of owners and masters in obeying the regulations respecting lights, fog signals, and steering and sailing?

Section 27 of "the Merchant Shipping Act Amendment Act, 1862," provides that owners and masters shall be bound to obey the regulations, and it also provides that in case of wilful default by the master or owner he shall be deemed to be guilty of a misdemeanor for each infringement.

78. What do breaches of the regulations imply?

If an accident happens through non-observance of the regulations, it implies wilful default on the part of the person in charge of the deck at the time, unless it is shown to the satisfaction of the court hearing the case that the special circumstances of the case rendered a departure from the rules necessary.

79. If collision ensues from a breach of the regulations, who is to be deemed in fault for the collision?

The person by whom the regulations are infringed, unless the court hearing the case decides to the contrary.

80. Is there any special rule for steam-ships navigating narrow channels?

In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which is on the starboard side of such ship.

81. Do the regulations apply to sea-going ships in harbours and in rivers?

Yes; unless there is any rule to the contrary made by a competent authority.

82. Do they apply to British ships only?

No, to foreign ships as well, with the exception of paragraphs (*a*), (*b*), (*c*), (*d*), (*e*), (*f*) and (*g*), of Article 10, which apply only to British fishing vessels.

83. Do you know where the present regulations are to be found?

Yes, in the Orders in Council of the 11th August 1884, the 30th December 1884, and 24th June 1885. Copies are given away on application to the Board of Trade.

84. Is one ship bound to assist another in case of collision?

Yes.

85. What is the penalty for default?

If the master or person in charge of the ship fails to render assistance without reasonable excuse, the collision is, in absence of proof to the contrary, to be deemed to be caused by his wrongful act, neglect, or default.

86. Is there any other penalty attached to not rendering assistance?

Yes. If it is afterwards proved that he did not render assistance, his certificate may be cancelled or suspended by the court investigating the case.

87. Is it not expected that you should understand the regulations before you take charge of the deck of a ship?

It is.

88. Why?

If I do not understand them and am guilty of default, the consequences will be very serious to me.

89. What would be a serious offence?

To cause a collision by porting the helm or doing anything not required by the regulations and without due consideration.

REGULATIONS FOR PREVENTING COLLISIONS AT SEA, ORDER IN COUNCIL OF 11TH AUGUST 1884.

Preliminary.

Art. 1. In the following rules every steam-ship which is under sail and not under steam is to be considered a sailing ship; and every steam-ship which is under steam, whether under sail or not, is to be considered a ship under steam.

Rules Concerning Lights.

Art. 2. The lights mentioned in the following Articles, numbered 3, 4, 5, 6, 7, 8, 9, 10 and 11, and no others, shall be carried in all weathers, from sunset to sunrise.

Art. 3. A sea-going steam-ship when under way shall carry—

(*a*) On or in front of the foremast, at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth, a bright white light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 20 points of the compass, so fixed as to throw the light 10 points on each side of the ship, viz. from right ahead to two points abaft the beam on either side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

(*b*) On the starboard side, a green light so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*c*) On the part side, a red light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the port side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*d*) The said green and red side-lights shall be fitted with inboard screens projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

Art. 4. A steam-ship, when towing another ship, shall in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position, as the white light which other steam-ships are required to carry.

Art. 5. (*a*) A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles; and shall by day carry in a vertical line one over the other, not less than three feet apart, in front of, but not lower than, her foremast head, three black balls or shapes, each two feet in diameter.

(*b*) A ship, whether a steam-ship or a sailing ship, employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular laterns, each not less than 10 inches in diameter, in a vertical line one over another, not less than six feet apart; the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than, her foremast head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

(*c*) The ships referred to in this Article, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

(*d*) The lights and shapes required to be shown by this Article are to be taken by other ships as signals that the ship showing them is not under command, and cannot therefore get out of the way. The signals to be made by ships in distress and requiring assistance are contained in Article 27.

Art. 6. A sailing ship under way, or being towed, shall carry the same lights as are provided by Article 3 for a steam-ship under way, with the exception of the white light, which she shall never carry.

Art. 7. Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessels, ready for use: and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent a collision, in such a manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

Art. 8. A ship, whether a steam-ship or a sailing ship, when at anchor, shall carry, where it can best be seen, but at a height not exceeding 20 feet above the hull, a white light, in a globular lantern of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light visible all round the horizon at a distance of at least one mile.

Art. 9. A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall

carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

Art. 10. Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

The following portion of this article applies only to fishing vessels and boats when in the sea off the cost of Europe lying north of Cape Finisterre:—

(*a*) All fishing vessels and fishing boats of 20 tons not registered tonnage, or upwards, when under way and when not required by the following regulations in this article to carry and show the lights therein named, shall carry and show the same lights as other vessels under way.

(*b*) All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of th vessel shall be not less than five feet, and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night with a clear atmosphere, for a distance of not less than three miles.

(*c*) A vessel employed in line fishing with her lines out shall carry the same lights as a vessel when engaged in fishing with drift nets.

(*d*) If a vessel when fishing becomes stationary in consequence of her gear getting fast to a rock or other obstruction, she shall show the light and make the fog signal for a vessel at anchor.

(*e*) Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing, with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

(*f*) Every fishing vessel and every open boat when at anchor between sunset and sunrise shall exhibit a white light visible all round the horizon at a distance of at least one mile.

(*g*) In fog, mist, or falling snow, a drift net vessel attached to her nets and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

Art. 11. A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

Sound Signals for Fog, &c.

Art. 12. A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by a bellows or other mechanical means, and also with an efficient bell.* A sailing ship shall be provided with a similar fog-horn and bell.

In fog, mist, or falling snow, whether by day or night, the signals described in this Article shall be used as follows; that is to say—

(*a*) A steam-ship under way shall make with her steam whistle or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

(*b*) A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

(*c*) A steam-ship and a sailing ship, when not under way, shall, at intervals of not more than two minutes, ring the bell.

Speed of Ships to be moderate in Fog, &c.

Art. 13. Every ship, whether a sailing ship or steam-ship, shall in a fog, mist, or falling snow, go at a moderate speed.

* In all cases where the regulations require a bell to be used, a drum will be substituted on board Turkish vessels.

Steering and Sailing Rules.

Art. 14. When two sailing ships are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other, as follows, viz.—

(*a*) A ship which is running free shall keep out of the way of a ship which is close-hauled.

(*b*) A ship which is close-hauled on the port tack shall keep out of the way of a ship which is close-hauled on the starboard tack.

(*c*) When both are running free with the wind on different sides, the ship which has the wind on the port side shall keep out of the way of the other.

(*d*) When both are running free with the wind on the same side, the ship which is to windward shall keep out of the way of the ship which is to leeward.

(*e*) A ship which has the wind aft shall keep out of the way of the other ship.

Art. 15. If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

This article only applies to cases where ships are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two ships which must, if both keep on their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of the two ships is end on, or nearly end on, to the other; in other words, in cases in which, by day, each ship sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each ship is in such a position as to see both the side-lights of the other.

It does not apply, by day, to cases in which a ship sees another ahead crossing her own course; or by night, to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

Art. 16. If two ships under steam are crossing, so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

Art. 17. If two ships, one of which is a sailing ship, and the other a steam-ship, are proceeding in such directions as to involve risk of collision, the steam-ship shall keep out of the way of the sailing ship.

Art. 18. Every steam-ship, when approaching another ship, so as to involve risk of collision, shall slacken her speed or stop and reverse, if necessary.

Art. 19. In taking any course authorised or required by these Regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.—

One short blast to mean "I am directing my course to starboard:"

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

Art. 20. Notwithstanding anything contained in any preceding Article, every ship, whether a sailing ship or a steam-ship, overtaking any other shall keep out of the way of the overtaken ship.

Art. 21. In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such ship.

Art. 22. Where by the above rules one of two ships is to keep out of the way, the other shall keep her course.

Art. 23. In obeying and construing these rules due regard shall be had to all dangers of navigation; and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

No Ship, under any circumstances, to neglect proper Precautions.

Art. 24. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Reservation of Rules for Harbours and Inland Navigation.

Art. 25. Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland navigation.

Special Lights for Squadrons and Convoys.

Art. 26. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with

respect to additional station and signal lights for two or more ships of war or for ships sailing under convoy.

Art. 27. When a ship is in distress, and requires assistance from other ships or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, that is to say—

In the day-time—

1. A gun fired at intervals of about a minute;
2. The International Code signals of distress indicated by N. C.
3. The distant signal, consisting of square flag, having either above or below it a ball or anything resembling a ball.

At night—

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals.

ORDERS IN COUNCIL OF 30TH DECEMBER 1884 AND 24TH JUNE 1885.

ALTERNATIVE LIGHTS FOR TRAWLERS WHEN ENGAGED IN TRAWLING, HAVING THEIR TRAWLS IN THE WATER AND NOT BEING STATIONARY.

1884.—PART I.—STEAM-VESSELS OF 20 TONS GROSS REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side, such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet nor more than 12 feet.

1884.—PART II.—SAILING-VESSELS OF 20 TONS NET REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft the beam on the port side: and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than lanthorn the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet.

1885.—SAILING TRAWLERS OF ANY TONNAGE.

As regards sailing vessels engaged in trawling, such vessels having their trawls in the water and not being stationary in consequence of their gear getting fast to a rock or other obstruction, if they do not carry and show the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in Part 2 of the Schedule to the said recited Order in Council of the 30th of December 1884, shall carry and show in lieu of the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in paragraph 2 of the Schedule to the said recited Order, other lights as follows, that is to say:

A white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, and visible on a dark night

Steering and Sailing Rules.

Art. 14. When two sailing ships are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other, as follows, viz.—

(*a*) A ship which is running free shall keep out of the way of a ship which is close-hauled.

(*b*) A ship which is close-hauled on the port tack shall keep out of the way of a ship which is close-hauled on the starboard tack.

(*c*) When both are running free with the wind on different sides, the ship which has the wind on the port side shall keep out of the way of the other.

(*d*) When both are running free with the wind on the same side, the ship which is to windward shall keep out of the way of the ship which is to leeward.

(*e*) A ship which has the wind aft shall keep out of the way of the other ship.

Art. 15. If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

This article only applies to cases where ships are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two ships which must, if both keep on their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of the two ships is end on, or nearly end on, to the other; in other words, in cases in which, by day, each ship sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each ship is in such a position as to see both the side-lights of the other.

It does not apply, by day, to cases in which a ship sees another ahead crossing her own course; or by night, to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

Art. 16. If two ships under steam are crossing, so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

Art. 17. If two ships, one of which is a sailing ship, and the other a steam-ship, are proceeding in such directions as to involve risk of collision, the steam-ship shall keep out of the way of the sailing ship.

Art. 18. Every steam-ship, when approaching another ship, so as to involve risk of collision, shall slacken her speed or stop and reverse, if necessary.

Art. 19. In taking any course authorised or required by these Regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.—

One short blast to mean "I am directing my course to starboard:"

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

Art. 20. Notwithstanding anything contained in any preceding Article, every ship, whether a sailing ship or a steam-ship, overtaking any other shall keep out of the way of the overtaken ship.

Art. 21. In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such ship.

Art. 22. Where by the above rules one of two ships is to keep out of the way, the other shall keep her course.

Art. 23. In obeying and construing these rules due regard shall be had to all dangers of navigation; and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

No Ship, under any circumstances, to neglect proper Precautions.

Art. 24. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Reservation of Rules for Harbours and Inland Navigation.

Art. 25. Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland navigation.

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Art. 26. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with

respect to additional station and signal lights for two or more ships of war or for ships sailing under convoy.

Art. 27. When a ship is in distress, and requires assistance from other ships or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, that is to say—

In the day-time—

1. A gun fired at intervals of about a minute;
2. The International Code signals of distress indicated by N. C.
3. The distant signal, consisting of square flag, having either above or below it a ball or anything resembling a ball.

At night—

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals.

ORDERS IN COUNCIL OF 30TH DECEMBER 1884 AND 24TH JUNE 1885.

ALTERNATIVE LIGHTS FOR TRAWLERS WHEN ENGAGED IN TRAWLING, HAVING THEIR TRAWLS IN THE WATER AND NOT BEING STATIONARY.

1884.—PART I.—STEAM-VESSELS OF 20 TONS GROSS REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side, such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet nor more than 12 feet.

1884.—PART II.—SAILING-VESSELS OF 20 TONS NET REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft the beam on the port side: and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than lanthorn the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet.

1885.—SAILING TRAWLERS OF ANY TONNAGE.

As regards sailing vessels engaged in trawling, such vessels having their trawls in the water and not being stationary in consequence of their gear getting fast to a rock or other obstruction, if they do not carry and show the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in Part 2 of the Schedule to the said recited Order in Council of the 30th of December 1884, shall carry and show in lieu of the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in paragraph 2 of the Schedule to the said recited Order, other lights as follows, that is to say:

A white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, and visible on a dark night

with a clear atmosphere for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by another ship or vessel in sufficient time to prevent collision.

AIDS TO MEMORY IN FOUR VERSES, BY THOMAS GRAY.

1. *Two Steam-ships meeting.*

When both side lights you see ahead—
Port your helm and show your RED.

2. *Two Steam-ships passing.*

GREEN to GREEN—or, RED to RED—
Perfect safety—Go ahead!

3. *Two Steam-ships crossing*

Note.—This is the position of greatest danger: there is nothing for it but good look-out, caution, and judgment.

If to your starboard RED appear,
It is your duty to keep clear;
To act as judgment says is proper:—
To Port—or Starboard—Back,—or, Stop her!

But when upon your Port is seen
A Steamer's Starboard Light of GREEN,
There's not so much for you to do,
For GREEN to Port keeps clear of you.

4. *All Ships must keep a good look-out, and Steam-ships must stop and go astern, if necessary.*

Both in safety and in doubt
Always keep a good look-out;
In danger, with no room to turn,
Ease her, stop her, go astern.

14*th October* 1867.

APPENDIX C.

DISTRESS AND PILOT SIGNALS.

M. S. Act 1873.

The following sections, together with the schedules referred to therein, of the "Merchant Shipping Acts, Amendment Act, 1873," relate to Signals of Distress and Signals for Pilots. (*See also* "*Regulations for preventing Collisions at Sea. Article* 27.)

Signals of distress.

18. The signals specified in the first schedule to this Act shall be deemed to be signals of distress.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals, except in the case of a vessel being in distress, shall be liable to pay compensation for any labour undertaken, risk incurred, or loss sustained in consequence of such signal having been supposed to be a signal of distress, and such compensation may, without prejudice to any other remedy, be recovered in the same manner in which salvage is recoverable.

Signals for pilots.

19. If a vessel requires the services of a pilot, the signals to be used and displayed shall be those specified in the second schedule to this A

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals for any other purpose than that of summoning a pilot, or uses or causes or permits any person under his authority to use any other signal for a pilot, shall incur a penalty not exceeding twenty pounds.

Power to alter rules as to signals.

20. Her Majesty may from time to time by Order in Council repeal or alter the rules as to signals contained in the schedules to this Act or make new rules in addition thereto, or in substitution therefor, and any alterations in or additions to such rules made in manner aforesaid shall be of the same force as the rules in the said schedules.

SCHEDULES.

SCHEDULE I.—SIGNALS OF DISTRESS.

In the day time.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress in the daytime:—

1. A gun fired at intervals of about a minute;
2. The International Code signal of distress indicated by N C;
3. The distant signal, consisting of a square flag having either above or below it a ball, or anything resembling a ball.

At night.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress at night:

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, of any coloul or description, fired one at a time, at short intervals.

SCHEDULE II.—SIGNALS TO BE MADE BY SHIPS WANTING A PILOT.

In the day time.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot in the day time, viz:—

1. To be hoisted at the fore, the Jack or other national colour usually worn by merchant ships, having round it a white border, one-fifth of the breadth of the flag; or
2. The International Code pilotage signal indicated by P T.

At night.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot at night, viz.—

1. The pyrotechnic light, commonly known as a blue light, every fifteen minutes; or
2. A bright white light, flashed or shown at short or frequent intervals, just above the bulwarks, for about a minute at a time.

APPENDIX D.

EXAMINATION IN CHART.

FOR ALL GRADES WHERE THE CHART IS USED (INCLUDING "HOME TRADE" CANDIDATES).

[The candidate will be required to work out the following questions on either a "true" or "magnetic" chart, * whichever may be handed to him by the Examiner; and also determine whether the chart is a "true" or "magnetic" one, and whether it is for the northern or southern, and eastern or western hemispheres.

1. Using deviation [card] [curve] † No. find the course to steer by compass from to ; also the distance.

Answer.—Compass course .
Distance .
Variation .
Deviation .

2. With the ship's head on the above-named compass course a [point] [light-house] bore by compass and bore by the same compass, find the ship's position.

Answer.—Latitude . .
Longitude .

3. With the ship's head as above, a [point] [light-house] bore by compass , and after continuing on the same course miles, it bore , find the position of ship and her distance from at the time of taking the second bearing.

Answer.—Latitude .
Longitude .
Distance .

All the foregoing questions must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature .
Date .
Chart used .

ADDITIONAL FOR MASTERS (INCLUDING "HOME TRADE" CANDIDATES).

4. Find the course to steer by compass from to (*see* Question 1) to counteract the effect of a

* The terms "true" and "magnetic" are used for the sake of brevity, and convenience, for indicating charts that have compasses delineated upon them showing the "true" or "magnetic" points of the compass respectively.

† A candidate for a Master's Certificate is expected to use either a card of deviations, or a curve of deviations on a Napier's diagram, whichever the Examiner may think proper to put before him.

current which set ____ at the rate of ____ miles per hour, the ship making by log ____ miles per hour; also the distance the ship would then make good in ____ hours towards

Answer.—*Compass course*

Distance

5. *On* ____ *being off* ____ *took a cast of* the lead; *required the correction to be applied to the depth obtained* by the lead line *before* comparing it with the depth marked on the chart.

6. What do you understand the small numbers to indicate that you see placed about the chart, and at what time of tide?

7. What do the Roman numerals indicate that are occasionally seen near the coasts and in harbours?

8. How would you find, *approximately, the time of high water* at any place, the Admiralty tables not being at hand nor any other special tables available?

All the foregoing questions, and those on Form Exn. 9 C., must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature

Date

APPENDIX E.

DEVIATION OF THE COMPASS.

(For Masters of Home Trade Ships.)

[The Applicant must answer in writing, on paper given him by the Examiner, all the following questions, numbering his answers to correspond with the numbers of the questions.]

1. When taking a Meridian Altitude, how do you know when the sun is on the Meridian; or, in other words, when it is noon?
2. How does the sun bear when on the meredian of an observer in these latitudes (Home Trade Limits)?
3. What do you mean by deviation of the compass, and how is it caused?
4. Having determined the deviation, how do you know when it is easterly, and when westerly?
5. Supposing the sun when on the meridian bore by your compass ———— what would be the deviation of that Compass for the direction of the ship's head at the time, the variation given on the Chart being ———— ?
6. How could you find the deviation of your Compass when in port, or when sailing along a cost?
7. Name some suitable objects by which you could readily obtain the deviation of your Compass, when sailing along the coasts of the Channel you have been accustomed to use?
8. The bearing of two objects when in a line with each other was found on the Chart to be ———— magnetic; but when brought in a line on board they bore ———— by your Compass; required the deviation of your Compass for the direction of the ship's head at the time?
9. What means are there for checking the deviation of your Compass by night?
10. Supposing the North Star (*Polaris*) bore ———— by your Compass, what would be the deviation (approximately) of that Compass for the direction the ship's head at the time, supposing the variation given on the Chart to be ———— ?
11. Do you expect the deviation to change? if so, state under what circumstances?
12. What is meant by variation of the Compass, and what is the cause of it?

APPENDIX F.

INSTRUCTIONS TO EXAMINERS.

Examination in Colours.

Herewith are—

(*a*) A lanthorn having in it a lamp in which kerosine is to be burnt.

(*b*) A slide having ground glass in it.

(*c*) Nine slides, each having a coloured glass in it. The colours are as follow :—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1.
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

(*d*) Cards, five of each as follow :—

1. White
2. Black.
3. Red.
4. Pink.*
5. Green.
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight the examiner should do it in three ways—

1. The cards should be mixed up. The examiner should then hold up each card separately, and ask the candidate to name the colour, and if the candidate does so without hesitation, he is to be regarded as having passed the day-light test.
2. If the candidate hesitates in any of his answers so as to raise a doubt in the mind of the examiner as to his ability to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap
4. The result of the examination should be noted and recorded in each case.

Examination by Artificial light.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn ; and, at least, 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour, and if so, what colour ?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star* is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c. ; or to name card No. 7 as red, green, or yellow ; or glass No. 2 as green blue, or yellow ; or glass No. 5 as red, pink, salmon, &c. ; or glass No. 7 as bright red or bright green ; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B.

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black, by daylight ; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown), he may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Local Certificate of Competency

AS

MASTER.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of Master in the* _____ *service, I do hereby, in pursuance of Act No. I of* 1859 *of the Legislative Council of India, grant you this CERTIFICATE OF COMPETENCY.*

Given *under my* Hand and Seal,

this _____ *day of* _____ 18____.

By order of the Government of Bengal,

Under-Secy. to the Govt. of Bengal.

No. of Certificate

*Bearer*_____

*Date and Place of Birth*_____

*No. of Register Ticket*_____

*Signature*_____

Any ***MASTER*** *or* ***MATE*** *who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs.* 500.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Port Officer, Calcutta.

*Issued at Calcutta on the*_____*day of*_____18___.

Registered,

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Local Certificate of Competency

AS

MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of* _____ *Mate in the* _____ *service, I do hereby, in pursuance of Act No. I of* 1859 *of the Legislative Council of India, grant you this CERTIFICATE OF COMPETENCY.*

By order of the Government of Bengal,

Given under my Hand and Seal;

this _____ *day of* _____ 18____. *Under-Secy. to the Govt. of Bengal.*

No. of Certificate

Bearer _____

Date and Place of Birth _____

No. of Register Ticket _____

Signature _____

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at Calcutta on the _____ *day of* _____ 18___.

Registered,

Port Officer of Calcutta.

NOTICE.

Candidates applying to be examined for Certificates of Competency are hereby informed that no remuneration or gratuity whatever, either directly or indirectly, can be received by any Officer, Messenger, or Servant of the Government, except the lawful fees stated in the Regulations, which are to be paid to the Port Officer when the Candidate makes his application.

Any Officer, Messenger, or Servant of the Government accepting any present or gratuity is liable to summary dismissal, and any Candidate so offering money will be subject to the penalty mentioned in para. 16 of the Regulations relating to the examination of Masters, or para. 35 of those relating to the examination of Engineers and Engine-drivers as the case may be.

Every case in which an applicant has paid, or pays hereafter, any fee or gratuity to any Officer, Messenger, or Servant, on any pretence whatever, other than the prescribed fees for examination, should be reported to the Local Government.

W. B. BESTIC,

Under-Secy. to the Govt. of Bengal.

P. W. (Marine) Dept.

REGULATIONS

RELATING TO THE

EXAMINATION OF MASTERS OF INLAND STEAM-VESSELS.

Preliminary.

UNDER the provisions of the Inland Steam-Vessels Act, 1884, no inland steam-vessel having engines of eighty nominal horse-power or upwards is allowed to proceed on any voyage unless her master possesses a first class master's certificate granted under the Act, or a master's certificate granted under Act I of 1859 (*for the amendment of the law relating to merchant seamen*), or the Merchant Shipping Acts, 1854 to 1883, or a certificate to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869; and no such ship having engines of under eighty nominal horse-power is allowed to proceed on any voyage unless her master possesses a second class master's certificate granted under the Act, or a certificate of the higher grade of the nature referred to above:

Provided that a steam-vessel having engines of under eighty nominal horse-power shall be deemed to have complied with the law if she has as her master and engineer a person possessing both a second class master's certificate and an engine-driver's certificate granted under the Act

Any person who having been engaged to serve as master of an inland steam-vessel proceeds on any voyage in that steam-vessel as master without being at the time entitled to and possessed of the certificate required under the Act, and any person who employs any person as such master without ascertaining that he is at the time entitled to, and possessed of, the certificate required under the Act, is liable to be punished with fine which may extend to *five hundred rupees*.

No. 27 Marine, dated Calcutta, the 31st January 1890.

NOTIFICATION—By the Govt. of Bengal, P. W. Dept.

UNDER the powers conferred upon him by section 29 of the Inland Steam-Vessels Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to masters of inland steam-vessels.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose arrangements have been made for holding examinations periodically at the port of Calcutta.

Examinations continued till all the candidates are examined.

2. The examinations will be held by the Port Officer and one or more other examiners to be appointed by the Government from time to time They will commence early in the forenoon, and will be continued from day to day until all the Candidates whose names appear upon the Port Officer's list on the day of examination are examined.

3. Candidates for examination must make their application upon the appropriate form (Exn. 2*b*), which must be filled up at the Port Office. The Exn. 2*b* properly filled in, together with the candidates' testimonials and discharges, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials of character, conduct, and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges may have to be verified before the candidate can be examined, it is desirable that they should be handed in, together with the Forms Exn. 2*b*, as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners and of British Seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificates as to Age.

6. Should any doubt exist as to the age of a candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel. In the case of natives of India, who may not be able to speak English, their certificate shall be endorsed to the effect that they are valid only for vessels manned and officered entirely by Asiatics.

Colour Tests.

8. The Government have made the following arrangements for the examination of persons as to their ability to distinguish colours :—*

9. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

10. Any person, including the holders of Certificates of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in Colours only*, must make application to the Port Officer on Form Exn. 2*a*, and pay a fee of one rupee.

11. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a certificate to that effect.

12. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

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* *See* Apendix A.

13. The application of a *Candidate who is presenting himself for Examination for a Master's Certificate* must be made on Form Exn. 2*b*. Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any one of the colours used in the test, he will not be allowed to proceed with the examination

14. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will in such event be returned to him.

15. A candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If the fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

16. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form Exn. 2*a*.

17. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination for the Certificate of the higher grade.

18. Should he pass this examination, the following statement will be written on the face of the higher Certificate which may be granted to him, viz.—"This Officer has failed to pass the Examination in Colours."

19. Should be ultimately fail to pass the Examination, a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

20. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency as First Class Masters.

21. *Examination in Colours.*—All candidates for certificates of competency must first be examined in colours.*

22. A candidate for a certificate as first class master of inland steam-vessels must be not less than twenty-four years of age, and must have served as a second class master in charge of a steam-vessel for not less than three years, or he must be not less than twenty-two years of age, hold a certificate of competency as second mate granted under Act I of 1859 (for the amendment of the law relating to Merchant Seamen) or the Merchant Shipping Acts 1854 to 1883, or a certificate to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869, and have served as Mate of an inland steam vessel or master of a river flat for not less than one year.

23. Each candidate will be examined apart, and *vivâ voce*, in each and all of the following subjects:—

(1)—The rules of the road.
(2)—The management of river steamers under all contingencies.
(3)—The tide table.
(4)—Storm signals.
(5)—The provisions of Act VI of 1884, and the rules framed under sections 21, 29, 50 and 51 of the Act.

Qualifications for Certificates of Competency as Second Class Masters.

Examination in Colours.—All candidates for certificates of Competency must first be examined in colours.*

24. A candidate for a certificate as second class Master of an inland steam-vessel must not be less than twenty-one years of age and must produce satisfactory certificates of

* See Appendix A.

sobriety and intelligence, and that he has served three years as Mate of a small steam-vessel or as chief helmsman of a steam-vessel of over 80 horse power, and shall be examined *viva voce* as to his knowledge in the following subjects:—

(1)—The rules of the road.
(2)—The management of small river steamers.
(3)—Storm signals.

Failure.

Re-examination in case of failure.

25. If a candidate fails, he will not be re-examined *until after a lapse* of three months from the date of such failure.

Certificate of lower grade.

26. If a candidate has failed in his examination, but the subjects in which he has failed are not included in the subjects required for a certificate of a lower grade, he may, if he desires it, receive a certificate of such lower grade.

27. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled so to do, for re-examination for the higher grade of certificate he will be required to pay again the full fee.

Fees.

28. Candidates for examination, in making their application on Form Exn. 2*b*, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials as the case may be, they will be allowed to again present themselves for examination for a certificate of the same grade without paying any further fee.

Fees to be paid by applicants for examination.

29. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected and not allowed to be again examined for twelve months.

30. If a candidate fails in his examination, *no part of the fee will be returned to him.*

31. If the candidate satisfy the examiners as to his knowledge of the prescribed subjects, and generally as to his competency to command an inland river steamer, they shall certify the same to the Government, which will then grant a certificate to the candidate.

Form Exn. 16. Completion of examination.

32. The fees are as follows:—

	Rs.
First Class Master	16
Second Class Master	6
Renewal of a certificate	5

General.

33. Certificates of competency of first and second class masters shall be made and issued in the forms hereunto annexed.

34. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

INSTRUCTIONS TO EXAMINERS.

Examination in Colours.

Herewith are—

(*a*.) A lanthorn having in it a lamp in which kerosine is to be burnt.
(*b*.) A side having ground glass in it.

(*c.*) Nine slides, each having a coloured glass in it. The colours are as follows :—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1).
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

(*d.*) Cards, five of each as follow :—

1. White.
2. Black.
3. Red.
4. Pink.*
5. Green
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight the examiner should do it in three ways :—

1. The cards should be mixed up. The examiner should then hold up each card separately and ask the candidate to name the colour, and if the candidate does so without hesitation he is to be regarded as having passed the daylight test.
2. If the candidate hesitates in any of his answers so as to raise a doubt in the mind of the examiner as to his ability to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn ; and, at least, 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked it it appears to him to have any colour, and if so what colour?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star* is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c. ; or to name card No. 7 as red, green, or yellow ; or glass No. 2 as green, blue, or yellow ; or glass No. 5 as red, pink, salmon, &c. ; or glass No. 7 as bright red or bright green ; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black by daylight ; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown) the may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

FIRST CLASS MASTER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To

Mr. _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found, after examination, duly qualified to fulfil the duties of First-class Master of an Inland Steam-Vessel under Act VI of* 1884, *I do hereby grant you this CERTIFICATE OF COMPETENCY as such First-class Master.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ *day of* _____ 18____.

No. of Certificate

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

Any master who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

*Issued at Calcutta on the*_____*day of*_____18____.

Registered,

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

SECOND CLASS MASTER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To

Mr. _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found, after examination, duly qualified to fulfil the duties of Second-class Master of an Inland Steam-Vessel under Act VI of* 1884, *I do hereby grant you this CERTIFICATE OF COMPETENCY as such Second-class Master.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ *day of* _____ 18—.

No. of Certificate

Bearer _____ *son of* _____ *by caste* _____

Date and Place of Birth, showing Village, Thana and District* _____

Residence, showing Village, Thana and District _____

Height _____

Personal description, stating particularly any permanent marks or scars _____

No. of Register Ticket _____

Signature _____

Any master who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

Issued at Calcutta on the _____ *day of* _____ 18____.

Registered,

Port Officer of Calcutta.

* If not known exactly must be stated on the best information or evidence.

REGULATIONS

RELATING TO THE

EXAMINATION OF ENGINEERS AND ENGINE-DRIVERS OF INLAND STEAM-VESSELS.

Preliminary.

UNDER the provisions of the Inland Steam-Vessels Act, an inland steam-vessel having engines of eighty nominal horse-power or upwards cannot proceed on any voyage unless her engineer possesses an engineer's certificate granted under the Act or the Indian Steam Ships Act, 1884, or the Merchant Shipping Acts, 1854 to 1883, or to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869; and no such ship having engines of under eighty nominal horse-power can proceed on any voyage unless she has as her engineer a person possessing an engine-driver's certificate granted under the Act or the Indian Steam-Ships Act, 1884, or a certificate of the higher grade of the nature referred to above: Provided that a steam-vessel having engines of under eighty nominal horse-power shall be deemed to have complied with the law if she has as her master and engineer a person possessing both a second class master's certificate and an engine-driver's certificate granted under the Act.

Any person who has been engaged to serve as Engineer or engine-driver of an inland steam-vessel proceeds on any voyage in that steam-vessel as engineer or engine-driver, as the case may be, without being at the time entitled to, and possessed of, the certificate required under the Act, and any person who employs any person as engineer or engine-driver without ascertaining that he is at the time entitled to, and possessed of, the certificate required under the Act, is liable to be punished with fine which may extend to *five hundred rupees*.

No. 28 Marine, dated Calcutta, the 31st of January 1890.

NOTIFICATION—By the Govt. of Bengal, P. W. Dept.

UNDER the powers conferred upon him by section 29 of the Inland Steam-Vessels Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to engineers and engine-drivers of inland steam-vessels.

Certificates of competency granted to persons who pass requisite examinations.

1. Certificates of competency will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed and arrangements have been made for holding the examinations periodically at the port of Calcutta.

Examinations continued till all the candidates are examined.

2. The examinations will commence early in the forenoon and will be continued from day to day until all the candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Application how to be made.

3. Candidates for examination must make their application upon Form Exn. 3, which must be filled up at the Port Office. The Exn. 3 properly filled in, together with the candidate's testimonials, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct for at least the 12 months immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. If the service has been on shore, the testimonial must be signed by an employer; if at sea, by either the master, managing owner, chief or superintending engineer.

5. As such testimonials and discharges may have to be verified before the candidates can be examined, it is

desirable that they should be handed in, together with the Form Exn. 3, as early as possible.

Testimonials of Foreigners.

6. The testimonials of servitude of Foreigners and of British Seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificate as to age.

7. Should any doubt exist as to the age of a candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

8. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel.

Verification of services, &c., by Articles.

9. Services which cannot be verified by proper entries in the articles of the ships in which the candidates have served cannot be counted.

Qualifications for Certificates of Competency as Engineers.

Qualification of candidate for Inland Engineer's Certificate.

10. A candidate must be not less than twenty-two years of age:—

(*a*) He must have served an apprenticeship to an engineer, of three years in England or five years in India, and must prove that during the period of his apprenticeship he has been employed on the making and repairing of engines. Or, if he has not served an apprenticeship, he must prove that for not less than three years in England or five years in India he has been employed as a journeyman or master-hand in some factory or workshop on the making or repairing of engines. In either case he must also have served two years thereafter in the engine room of a steamer of over 80 horse power, or as a certificated engine-driver in a steamer of less than 80 horse power.

Or failing the above service he must have served as a certificated engine-driver in charge of a steamer for not less than four years.

(*b*) He must be able to give a description of boilers, and the methods of staying them, together with the use and management of the different valves, cocks, pipes, and connections.

(*c*) He must understand how to correct defects from accident, decay, or other causes and the means of repairing such defects.

(*d*) He must understand the use of the barometer, thermometer, and salinometer, and the principles on which they are constructed.

(*e*) He must state the causes, effects, and usual remedies for incrustation and corrosion.

(*f*) He must be able to state how a temporary or permanent repair could be effected in case of derangement of a part of the machinery, or total breakdown.

(*g*) He must write a legible hand, and understand the first five rules of arithmetic, and decimals, and their application to questions about consumption of stores, and full capacities of tanks and bunkers, the duty of pumps, and the direct strains in engines and boilers.

(*h*) He must be able to pass a creditable examination as to the various constructions of paddle and screw engines in general use; as to the details of the different working parts, external and internal, and the use of each part.

Qualifications for Certificates of Competency as Engine-drivers.

11. Candidates for examination must make their application upon the appropriate Form (Exn. 3*b*), which must be filled up at the Port Office.

12. A candidate for a certificate of competency as engine-driver must have attained the age of twenty-two years.

He must have served an apprenticeship of at least four years if in India or three years in the United Kingdom, and have served as assistant engineer for one year on a steamer of not less than 80 horse power.

Or he must have been three years principal serang or tindal in the engine-room of a steamer, or have been for three years in charge of the engine of a factory or mill under a European manager or engineer, as well as one year principal serang or tindal or assistant engineer in the engine-room of a steamer under a certificated engineer.

13. He must have the testimonial shown in Appendix B filled up by the engineer with whom he has last served, or his other testimonials must contain all the particulars therein required.

14. He must pass a *viva voce* examination before the Board of Examiners as to the working of an engine and the use of its different parts.

15. He must be able, if required, to show his practical qualifications by one week's trial in a steamer after fulfilling the other tests to which he will be subjected.

General Rules as to Examinations.

16. All books necessary for the use of candidates under examination will be provided by the Government, and applicants will not be permitted to take into the examination room any book, paper, document, or memoranda of any description whatever; and, subject to the provisions referred to hereafter, they will also not be allowed to work out their problems on a slate or on waste paper

Candidates not to take books, &c., into examination room.

17. Candidates will be allowed in the time allotted to cancel any part of their work, and when required additional papers will be supplied by the Examiners. These additional sheets must be attached to, and form part of, the examination papers.

18. In the event of any candidate being discovered copying from another, or affording any assistance or giving any information to another, or communicating in any way with another during the time of examination, he will be regarded as having failed in his examination, and will be turned back for three months, in the same manner as if he had failed in the practical part of the examination; and no part of the fees he may have paid for examination will be returned to him.

Punishment for breaking rules.

19. If a candidate leaves the room before answering any question which has been given to him, he cannot afterwards be permitted to answer it, but the examiners may substitute other data or another question.

Leaving examination room.

20. All applicants presenting themselves for examination for certificates of competency as engineers will be required to give written answers to eight out of a list of ten questions selected from Form Exn. 15*a*,* "Elementary Questions for the first examinations of Engineers for certificates of competency." These questions are intended to furnish a record to some extent of the candidate's knowledge at the time of his examination, and also to induce the candidates to pay more attention to their handwriting and spelling.

Questions from Form Exn. 15*a*.

21. The Form Exn. 15*b*., on which these answers will be written, contains also some questions as to the experience of the applicant, to be answered by him in writing.

22. Examiners may add to their *viva voce* questions on the practical management of steam engines and boilers any of those contained in Exn. 15*a*.

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* *See* Appendix A.

23. If at the expiration of the time allowed the candidate has worked out correctly the whole of the questions set to him, and given satisfactory answers in the *vivâ voce* examination, he will be declared to have passed.

24. If at the expiration of the time allowed he has not worked out the whole of the questions set to him, but if the result of the *vivâ voce* examination taken in connection with the answers to such of the questions as he has worked out is sufficient to satisfy the Examiner that the applicant is competent to take charge of engines, he will be declared to have passed.

25. In other cases he will be declared to have failed.

(Exn. 15) 26. A report of the examination, and the examination papers, will be forwarded to the Government on the Form (Exn. 15).

Notification of having passed will be given to successful candidates. (Exn 16) 27. If the candidate passes, he will receive the Form Exn. 16, upon which the Government will issue the certificate to the candidate, whose testimonials, &c., will be returned at the same time. It is therefore important that the port of destination of the certificate should be the same on both the Form Exn. 16 and the Form Exn. 2. If circumstances should make any alteration necessary, the examiners should see that it is made in both forms, otherwise delay in the issue of the certificate may be caused.

Fees.

Fees to be paid by applicants for examination. 28. Candidates for examination, in making their application on Form Exn. 3 or Exn. 3*b*, will be required to pay the examination fees before any step is taken, whether by inquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them, but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be.

29. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

30. If a candidate fails in his examinations, *no part of the fee he has paid will be returned to him.*

31. The fees are as follow :—

	Rs.
Engineers	12
Engine drivers	10
Renewal of a certificate	5

Failure.

32. If the applicant fails in the *vivâ voce* or practical part of the examination, he may not present himself for re-examination until he can produce proofs of THREE MONTHS' further service afloat. If he fails in arithmetic or drawing only, he may come up again at any time. Engine-drivers may be examined *de novo* after six months, if the past examination showed that they might reasonably be expected to qualify.

General.

33. Certificates of competency of engineers and engine-driver shall be made out and issued in the forms hereunto annexed.

34. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

Form Exn. 15a.

ELEMENTARY QUESTIONS FOR THE FIRST EXAMINATIONS OF ENGINEERS FOR CERTIFICATES OF COMPETENCY.

To Engineer Examiners.

Examiners will require all candidates to fill up a form, Exn. 15*b*., of which a copy is enclosed, and they will forward the same to the Government along with the report of the examination.

The arithmetical questions for Engineers and the *vivâ voce* examinations for all candidates will be continued as heretofore, and failure in the elementary questions will be treated as failure in arithmetic.

The numbers of the questions for each examination will be selected by the examiners, and they are not to be communicated to the candidate until his examination commences.

Exn. 15b.

Port	Class for which examined
Date	Candidate's name

A. Where and how long did you serve in works at the making or at the repairing of Engines, and in what capacities ?

B. How long have you served as fireman or trimmer ?

C. How long have you served in the Engine-room at sea, and in what capacities ?

D. With what descriptions of Engines have you served at sea—Paddle or Screw or both, Jet Condensing, Surface Condensing, or Non-condensing Engines, Compounds, Trunks, Inverted Cylinders, or Horizontal Engines ? What size were the Engines ?

E. With what descriptions of Boilers have you served at sea—Rectangular or Cylindrical, Wet-bottomed or Dry-bottomed, Multitubular, Sectional or Flue Boilers ?

F. What Engine defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

G. What Boiler defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

For the questions to be answered on the following pages, *See* the book of Elementary Questions. The questions need not be written: only the answers to them.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

ELEMENTARY QUESTIONS.

1.

What parts of an engine are generally made of wrought-iron?

2.

What parts of an engine are generally made of cast-iron?

3.

For what parts of an engine is steel sometimes used?

4.

What parts of an engine are generally made of brass or gun-metal?

5.

Where is "white metal" sometimes used? On account of what property possessed by it is it adopted? What objection is there to its more general use?

6.

For what parts is Muntz metal sometimes used? Is it malleable? For what properties is it valued?

7.

What difference is there in the composition of cast-iron, of wrought-iron, and of steel?

8.

How can cast-iron, wrought-iron, and steel be distinguished from each other?

9.

What are the different properties of cast-iron, of wrought-iron, and of steel.

10.

What is meant by the terms "breaking stress," "proof stress," "safe-working stress"?

11.

What is the cohesive strength or breaking stress of good ordinary wrought-iron?

12.

Tempering steel: how is it done, and in what order do the colours come?

13.

What is case-hardening?

14.

Which of the common metals or alloys can be forged, and which of them are brittle or "short"?

15.

What is meant by "welding"? Which of the common metals can be welded?

16.

The expansion of metals by heat: give examples of this in the engine and in the boiler.

17.

In the construction of cylindrical marine boilers, for what parts have the plates to be worked hot? When the material is steel, what precautionary treatment of these plates is afterwards necessary?

18.

What is double riveting? In what parts of cylindrical marine boilers is double riveting employed? In which of the shell seams is it most necessary?

19.

What is "caulking," and how are seams prepared for caulking?

20.

Describe the different ways of fastening the ends of the main stays of a boiler. What are the merits of, or objections to, the different plans?

21.

What strain per square inch is allowed on boiler stays?

22.

Describe a riveted stay, and state where such stays are commonly used.

23.

Where are thin plates to be looked for in a boiler as it wears, and how is the thinness to be detected?

24.

How are boiler tubes fixed? What are "stay tubes," and how are they secured?

25.

Where is it generally that boiler tubes leak? How is this defect repaired? What are the causes of this leaking?

26.

What are the causes of cracked tube plates? Where are the cracks situated? How are they repaired?

27.

What is the difference between a "dry uptake" and a "wet uptake"? Which requires most repair? Why? Where have you seen a wet uptake?

28.

What is a superheater? What is its construction? What valves are on it? There is sometimes a gauge glass on it; what is that for?

29.

What parts of a marine tubular boiler are first injured by shortness of water?

30.

Where are angle irons sometimes used in the construction of a boiler, and where are flanged plates used?

31.

Priming: to what causes is it attributed? What means are applied to prevent it? What evils may be produced by it?

32.

Funnel draught: what makes it? What checks it?

33.

Flame is sometimes seen at the top of the funnel: what causes this appearance? Is it beneficial or is it detrimental? Why so?

34.

A blast pipe: what is its construction? Where is it placed? For what is it used?

35.

How many bottom blow-off cocks are generally fitted to each boiler, and why are they so fitted?

36.

Blow-off cocks are sometimes fitted with a spanner guard: for what purpose is this? Describe how the guard is formed?

37.

Test cocks or water-gauge cocks: where are they placed? At what heights? Must the cocks themselves be at those heights? What provision is made for cleaning these cocks? Should they ever become choked? When there are no test cocks, how is the height of the water ascertained?

38.

What is a dead-weight safety valve? Of what are the rubbing surfaces formed? How is a lock-up valve arranged to admit of lifting it or of turning it round, and to prevent adding to the weight?

39.

About what area of safety valve is now required by the Board of Trade? What area was formerly required, and on what ground has that been altered? What is the effect of suddenly opening a safety valve when steam is up? To about what extent do safety valves rise when blowing off without being eased by hand?

40.

Spring-loaded safety valves: what advantages have they that are not possessed by dead-weight valves? What are the disadvantages as compared with dead-weight valves?

41.

Of what pieces does a glass water gauge mounting consist? How does it act? Where is it placed? At what height? Is it liable to derangement? How is its working tested?

42.

Glass water gauges have sometimes pipe connections top and bottom: what is the object of this arrangement? Should there be cocks at the extremities of these pipes?

43.

Describe a Bourdon's steam gauge. Some gauges have an inverted syphon pipe below them: what is its use?

44.

Why is a small cock sometimes put on the pipe leading to a steam gauge? Where should it be placed, and what error might be made by omitting to use it?

45.

Do steam gauges indicate the total pressure of the steam, or only a portion of that pressure? What is the pressure measured from?

46.

What is meant by the salting of the boiler? How is this prevented? What is the density of ordinary sea water? How is the density ascertained? What is the difference between the formation of scale and the salting of the boiler? What is the maximum density at which boilers should be worked at sea?

47.

Scum cocks and pipes: how are they arranged? Where are they placed? At what height in the boiler? When are they used? When must they be shut? Neglect of these cocks lead to what dangers?

48.

Scale: of what does it consist? Where is it most objectionable? How is it removed? How is its formation prevented? What evil effects are produced by it?

49.

What is a salinometer? Of what does it consist? How does it act? How is it graduated? Can it be used at any temperature indiscriminately?

50.

What harm may be done through the check valve of one of a set of boilers being defective while under way? How would you work to avoid this harm?

51.

How is the leak from a split tube stopped in a boiler at sea? Describe the operation.

52.

What is the use of dampers? Where are they fitted? When should they be used?

53.

When there are no dampers fitted, what is used instead? What evil to the boiler is sometimes attributed to this? When the heating surfaces are clean does this occur?

54.

Describe the piston of a steam cylinder, with its different rings and their uses. There are generally round pieces let in flush on one side of a piston: what are they? How are these pieces fixed?

55.

Cylinder drain cocks: what is their use? There is sometimes a valve upon each cock: what purpose does it serve?

56.

Cylinder escape valves: of what do they consist? How protected? How regulated? When are they most needed? To what danger do they expose the Engineer? What precaution is sometimes used to obviate this danger?

57.

What is a compound engine? What different kinds are there for screw steamers, in respect to the number and arrangement of their cranks and cylinders? What is a triple expansion engine?

58.

What is link motion? What are some of its advantages? In modern engines for the screw propeller when there is no link motion, what takes its place?

59.

What is a separate expansion valve? Why is it not fitted to all engines? What effect has an expansion valve upon the starting and upon the reversing of the engine?

60.

What arrangement is applied to reduce the friction of a slide valve? To what is the friction due?

61.

Describe a loose eccentric; how does it act? In what engines is the loose eccentric still employed?

62.

What is the travel of the eccentric rod? How is it measured on the eccentric? What is the travel of the slide valve when the link motion is in mid gear and the engine still moving?

63.

What are "double beat valves"? Why are they not generally used for safety valves? Are they ever used instead of the slide valve? What objections are there to their use?

64.

What is a circulating pump? Is it always worked by the main engine? Give an example from your last steamer of the three water temperatures generally noted by careful engineers.

65.

An air valve is sometimes fitted to a circulating reciprocating pump: what purpose does it serve?

66.

What is the difference between a bucket air-pump, a piston air-pump, and a plunger air-pump?

67.

Whether are double-acting air-pumps made with plungers, with pistons, or with buckets?

68.

What is an air-pump trunk? When is it necessary? How is it attached to the bucket?

69.

What class of air-pump requires both foot and delivery valves, and in what other class can either of these valves be in some cases dispensed with?

70.

When under way, when the air-pump bucket is at the top of its stroke, at what height is the water in the condenser?

71.

With a surface condensor and a single acting air-pump, what is the effect of a leaky foot valve, and what is the effect of a leaky bucket when there is also a foot valve?

72.

Air-pump pet cock or valve: where is it placed? How does it act? What is its object? Does it in every case reduce the effective capacity of the pump? Is it equally applicable to double acting pumps?

73.

At what temperature is the hot well worked? What is the effect of higher temperatures? What is the effect of lower temperatures? What limits the lowness of temperature? Has a very low temperature any disadvantages?

74.

Bilge injection with common condensers: what are the fittings required? When is it used? What precautions are necessary in using it?

75.

When surface condensers are used, what takes the place of the bilge injection? To what is the connection made? How is its valve formed? Why is this necessary?

76.

What are the practical guides to the proper amount of opening of the inlet valve for the circulating pump?

77.

Feed-pump pet cock or valve: where is it placed? What is its use? How does it act? Is it always a necessary fitting?

78.

What are some of the ways of fastening the ends of surface-condenser tubes? About what size and about what thickness are condenser tubes? What parts of a surface condenser are made of brass?

79.

What is a blow-through valve or cock? To what is it attached? There is sometimes a valve that when opened admits steam from the slide valve casing to the exhaust port: what is its use? To which cylinder is it fitted?

80.

What is a snifting valve? What is its use? Where is it placed? Can it be placed too high? Can it be placed too low? At what height should it be placed? Was there one in your last steamer; if so, where was it? Why are snifting valves generally omitted now?

81.

What connections are generally fitted to the donkey-pump, and to what services can it be applied?

82.

When the engines are stopped with steam up, what are to be shut and what are to be opened?

83.

How is an engine heated up before starting? What precautionary examinations are made before starting?

84.

What is an interceptor or catch-water? Where is it fixed; what is its construction; how does it act; and what attention does it require?

85.

Describe an air-pump bucket, with its valve or valves and its packing. Of what are the valves generally made?

86.

Of what materials are air-pump rods made? Why so?

87.

What is the racing of the engine? When does it occur? What danger attaches to it? What is done to prevent it?

88.

What are marine governors? What is their general construction? How do they act?

89.

What is meant by the "pitch" of a screw propeller? How is it measured?

90.

Explain the difference between a "right hand" and a "left hand" propeller, and state how each of them revolves.

91.

What is the slip of a screw propeller? How is its amount expressed in figures?

92.

Which of the valves about engines and boilers have to be worked by hand, which of them work self-actingly, and which are worked by the motion of the engine?

93.

Why is soda sometimes put into a boiler, and how is it put in which under way? What is the kind of soda used?

94.

Tallow cups for cylinders were sometimes made with two small cocks, or with only one small cock, or with one large hollow plug cock, or with one small cock and a valve; which of these is suitable for a high-pressure cylinder, and which for the cylinder of a condensing engine? Describe how the cup with only one small cock is used. What is now generally used instead of these? How has this change come about?

95.

Does a cylinder escape valve, self-acting, allow all the water to escape; if not, how much is left in the cylinder?

96.

What is a "Steam Lubricator" (sometimes called an Impermeator)? Explain its action; to what part of the engine is it connected; whether will throwing cold water over it make it work faster or slower? Describe the one used in your last steamer?

97.

A common paddle wheel: of what is the centre made? Of what are the arms formed? What is the form of the bolts which attach the floats to the arms? How are the arms attached to the centres?

98.

Why have some paddle wheels one or more cast-iron floats in each wheel? With what engines are these most required? At what part of the circumference are they placed?

are paddle wheel floats sometimes made of different breadths in the same wheel? With what description of engine is this most needed? Where are the broad floats placed, and where are the narrow floats placed in the circumference of the wheel?

100.

What difference is there between a radial paddle wheel and one with feathering floats? What is the object of feathering floats? Are all the eccentric rods attached in the same way, and are they all of the same form?

101.

Whereabout is the centre of the eccentric of a paddle wheel with feathering floats placed? In that case are the feathering levers on the striking face or on the back of the float? When the paddle shaft has an outer bearing, how is the eccentric made?

102.

Of what materials are the working surfaces of a paddle wheel with feathering floats? Are they all lubricated? With what?

103.

What is a "Disconnecting Paddle Engine"? At what place is the disconnecting effected? How is it accomplished? In which of the cranks of a disconnecting engine are the crank pins fixed?

104.

Whether is link motion valve gear or the loose eccentric generally used for disconnecting paddle engines? For what steamers are disconnecting paddle engines frequently employed?

105.

What are expansion joints? Where are they necessary? What attention do they require? Of what should the working surfaces be made?

106.

What omission in the construction of expansion joints may lead to a serious accident when steam is first applied? How is this prevented in the construction of a steam trunion pipe for an oscillating engine?

107.

Describe an oil cup with a syphon worsted. How is the worsted arranged? How is it cleaned? How far down the tube does it extend?

108.

Describe a thrust bearing; which of the surfaces wears? Why are there sometimes a number of oil tubes for one thrust bearing?

109.

What parts of a screw shaft are generally covered with brass? Why is this necessary? About what thickness is the brass?

110.

What is the stern tube or screw shaft pipe? Why is a pipe of such a length required? Of what is it made? How is it fixed at each end?

111.

What is a lignum vitæ bearing? How is the wood fitted? Where is such a bearing generally used?

112.

How is a screw propeller fixed on the shaft? What means are used to prevent its getting loose at sea?

113.

Where are sluice valves placed? What large sluice valve is there in almost all screw steamers? From what position should this valve be worked? Why so? What attention should it receive?

114.

With a condensing engine; what valves or cocks are on the skin of the ship in the engine-room and in the stokehole?

115.

What are the necessary fittings of a marine boiler?

116.

With a surface condensing engine what cocks or valves are open some time before the engine is started so as to be ready for starting whenever the order is given?

117.

What is a steam jacket? What cocks are on it? In what engines are jackets most generally used? Do they require to be felted?

118.

What parts of an engine or its fittings should be felted or otherwise protected from radiation?

119.

What are the small cylinders sometimes fitted on the slide valve casing cover of vertical engines? Explain their action. To what are they connected by a pipe? Why so?

120.

Name the principal pipes in connection with the engines and boilers of a steamer, and state to what the ends of these pipes are connected.

121.

Through what cocks or valves, pipes and chambers does the water pass on its way from the sea inlet rose plate to the water space of the boiler, with a jet condenser?

122.

Through what cocks or valves, pipes and chambers does the circulating water of a surface condenser pass?

123.

Through what cocks or valves, pipes and chambers does the steam pass from the boiler until it is in the form of water in the hot well?

124.

Name the pieces of the engine through which the pressure of the steam is transmitted from the piston to the screw propeller. Name them in the order in which they act.

125.

What is an air vessel? How does it act? At what parts of an engine or of its fittings are air vessels generally applied?

126.

What is the construction of a mud box? Where should mud boxes be placed? Why are they necessary? How should the space be divided by the rose plate, and why?

127.

What is a trunk engine? When used in a horizontal engine for a right-hand screw propeller at which side of the vessel should the cylinders be placed? Why so?

128.

What is an oscillating engine? For what steamers are oscillating engines generally adopted? Why? How is the steam conveyed to and from the slide valve casing?

129.

Of what parts does the valve motion gear of an oscillating engine consist?

130.

For what have geared engines sometimes been used? Of what were the cogs of the large wheel made?

131.

At what part of a screw steamer is the pressure that propels it applied to the hull?

132.

At what part of a paddle steamer is the pressure that propels it applied to the hull?

133.

About how much fuel per indicated horse power per hour is required by modern steam engines, common, compound and triple expansion?

134.

What is the explanation of the economy of the surface condenser?

135.

What is the construction of a surface condenser? Of what are its tubes made? How are they fixed? How are they kept tight? What is done with a split tube?

136.

Where do surface condensers foul? How are they cleaned?

137.

What non-conducting substances are employed to prevent radiation, and how are they applied?

138.

In the construction of smoke-box doors and of dry uptakes, what provision is made to lessen the amount of radiation?

139.

How can the formation of black smoke be prevented? Describe smoke preventing apparatus.

140.

What is meant by "circulation" in a boiler, and what are the results of defective circulation?

141.

What means are sometimes adopted to improve the circulation in a boiler?

142.

By what arrangement is the circulation promoted in a "hay-stack" boiler?

143.

Describe a ship's side air-pump discharge valve, in what respects does it sometimes differ from a common stop valve, and what attention does it require?

144.

What is the construction of a feed escape valve, to what is its discharge connected, and how is its loading regulated?

145.

When there is no feed escape valve, what is the arrangement of the feed valves or cocks?

146.

What is the measure of a horse-power? How is indicated horse power ascertained?

147.

Has "nominal horse power" a fixed meaning? What is the use of this expression? What is generally taken as the measure of one horse power nominal?

148.

What is "back pressure" in a cylinder? About how much is it in each of the cylinders in your last steamer? Is excessive cushioning ever a trouble under certain conditions in modern engines? Say when and why and in which cylinder this occurs.

149.

What is meant by "speed of piston"? About how much is the speed of piston in modern marine engines?

150.

What is "atmospheric pressure"? What is its average amount? What instrument tells this amount?

151.

What is "gross pressure" or "absolute pressure"? What pressure is it that is shown by the steam gauge?

152.

What is meant by "cutting off" steam? How is it done? What part of the valve regulates the cut off?

153.

What is a piston slide valve? Describe its construction. Why are such frequently employed in place of the common slide valve? What is a great drawback to the use of these valves?

154.

What fixes the time of closing the exhaust? After the exhaust is closed and before the port opens for steam, what becomes of the steam that is in the cylinder?

155.

What is the "lead" of the valve? What is its object? About what amount is it?

156.

What is the "cover" or "lap" of the valve? What is its object? About what proportion of the stroke of the valve is it made?

157.

What is the "exhaust cover" of a slide valve? What is its effect upon cushioning and upon exhaust?

158.

What is "minus cover" or "minus lap" on the exhaust? What is its effect upon the exhaust and upon cushioning?

159.

What is "cushioning" or "compression" in a steam cylinder? How is it affected by the amount of cover or of minus cover there may be upon the exhaust? How is it affected by the exhaust pressure?

160.

What is "mean effective pressure"? How is its amount ascertained?

161.

What is a dial vacuum gauge? What is its construction? For what is it used? About what amount should it show when the engine is working all right? What effect has the variations it indicates on the performance of the engine?

162.

Does the vacuum gauge enable you to tell what pressure there is in the condenser, or must you have recourse also to the barometer to arrive at that? How would you ascertain the actual amount of back pressure there is in the condenser?

163

What is a barometer? What is its construction? Is a barometer sometimes used instead of a vacuum gauge? In what respect does the weather barometer differ from the vacuum gauge barometer?

164.

The common vacuum gauge and the common steam gauge, in which of them are the graduations marked from atmospheric pressure? Does either of them tell what is the true actual pressure in the boiler or in the condenser?

165.

Do steam and vacuum gauges vary with the variations of the weather barometer? When the weather barometer varies from 29 to 31, how much will the vacuum gauge vary, and how will that affect the working of the engine? Why so?

166.

Vacuum is generally stated as so many inches. What is meant by, say, 20 inches vacuum? What does that tell us about the absolute pressure of the vapour then in the condenser?

167.

From what depth will a pump draw water? Is there any limit? Why?

168.

What is vacuum? Can vacuum move a piston? When the temperature of the water in the condenser is 212°, what is the greatest degree of vacuum there can then be in the condenser?

169.

What is a thermometer, its construction? What is the property of matter that is the principle of its construction? What temperatures are regularly noted by careful engineers?

170.

What is the temperature of (1) melting ice, (2) of boiling water, (3) of steam about 60 lbs. pressure by the steam gauge, (4) of steam about 100 lbs, and (5) of strain about 150 lbs, also (6) of smoke in the funnel, and (7) of water in the hot well?

171.

What is meant by the "conduction" of heat? Give examples of it in the boiler and in the engine.

172.

What is meant by the "convection" of heat? Give examples of it in the boiler and in the engine.

173.

What is meant by "radiation" of heat? Give examples of it in the boiler and in the engine.

174.

Which is convection, which is radiation, and which is conduction in the following cases: (1) Heat from the glowing fuel to the furnace crown. (2) Heat passing from one side of the furnace crown plate to the other. (3) Heat passing from the steam pipes in the engine-room. (4) The heat of evaporation?

175.

What are the effective heating surfaces of a marine boiler? What is an objection to vertical heating surfaces?

176.

What parts of a marine engine are exposed to danger when the temperature is below freezing point?

177.

What precautions are necessary in cold climates when the temperature is below freezing point ?

178.

State as many ways as you can by which a boiler might not get its full feed; that is, a boiler, or one of a set of boilers, get short of water, although the feed valve is open its proper amount; to what causes might this be due ?

179.

Of what are furnace bars generally made ? About what thickness are they at top ? About what space is between them ? Whether are the bars put further apart for Newcastle coal or for Welsh coal ?

180.

Which burns faster, Newcastle coal or Welsh coal ? Which is the flaming coal ? Which makes most smoke ?

181.

About how many tons of steam coal will be burnt per day in our furnaces, each 3′ 0″ wide, and of about the usual length ? On what grounds do you say so ?

182.

About how many tons of steam coal will be burnt per day with good compound engines to drive an ordinary steamer of 40 ft. beam 10 knots an hour by steam alone ? On what grounds do you say so ? What percentage more coal would be required to propel the same steamer one knot faster ?

183.

About how many tons of steam coal will be burnt per day with a good compound engine, surface condensers, the low pressure cylinder 70 inches diameter, doing average work ? On what grounds do you say so ?

184.

A pair of inverted cylinder direct acting engines, there is a liner half an inch thick between the ahead eccentric rod and the eccentric strap, in overhauling the engine this piece is lost and forgotten ; what difference will its omission make in the working of the engine, on the admission, on the cut off, and on the exhaust of the steam ? Which will take place earlier, and which later, distinguishing between the up stroke and the down stroke ?

185.

A pair of inverted cylinder direct acting engines driving a right-hand screw ; on which of the crosshead guide bars is the pressure greatest in the up stroke, and on which in the down stroke ?

186.

A screw propeller is getting loose, it has a little play on the shaft, sideways on the key or feather ; how will this show in the engine-room ?

187.

How would you prove whether the centre line of the trunions of an oscillating cylinder be fair with the centre line of the main shaft ?

188.

How can the fairness of a line of screw shafting be tested without lifting the shafts ?

APPENDIX B.

TESTIMONIAL.

I hereby certify that has served with me in the engine-room of as principal serang or tindal for a period of , during which time he has discharged his duties to my entire satisfaction

I consider that he fully understands the working of an engine, and has sufficient tact, presence of mind, and energy to look after and manage the working of the engines of a river steamer having engines not exceeding 80 *nominal horse-power.*

Date (*Signed.*)

No. and description of Certificate.

ANY Engineer giving a testimonial in this form should be very careful in doing so, as the document may materially influence the applican 's olligibility as a candidate.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

ENGINEER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To _____

Whereas *it has been reported to the Lieutenant-Governor of Bengal that you have been found duly qualified to fulfil the duties of Engineer of an Inland Steam-Vessel, I do hereby, in pursuance of Act VI of* 1884, *grant you this* ***CERTIFICATE OF COMPETENCY.***

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ 18____.

No. of Certificate of Competency

*Bearer*_____

*Date and Place of Birth*_____

*No. of Register Ticket*_____

*Signature*_____

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

*Issued at Calcutta on the*_____ *day of*_____ 18____.

Registered,

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Benga

Certificate of Competency

AS

ENGINE-DRIVER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To _____

Whereas *it has been reported to the Lieutenant-G* *Bengal that you have been found duly qualified to fulfil the duties of Engine-Driver on an Inland Steam-Vessel having engines of under* 80 *nominal horse-power, I do hereby, in pursuance of Act VI of* 1884, *grant you this CERTIFICATE OF COMPETENCY as Engine-Driver.*

Given *under my* Hand and Seal

By order of the Government of Bengal,

This _____ *day of* _____ _____ 18___. *Under-Secy. to the Govt. of Bengal.*

No. of Certificate

*Bearer*_____ *son of*_____ *by caste*_____

Date and Place of Birth showing Village, Thana and District*_____

*Residence showing Village, Thana and District*_____

*Height*_____

*Personal description, stating particularly any permanent marks or scars*_____

*No. of Register Ticket*_____

*Signature*_____

*Issued at Calcutta on the*_____ *day of*_____ 18____.

Any Engine-Driver who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

Registered,

Port Officer of Calcutta.

* If not known exactly must be stated on the best information or evidence.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 12, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 5th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Mr. E. Stewart, Sub-divisional Officer, to be the Chairman of the Madhubani Municipality in the district of Durbungah, *vice* Mr. W. Maude, C.S., transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 6th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Mr. C. A. White, Executive Engineer, to be a Commissioner of the Sewan Municipality in the district of Sarun, *vice* Mr. A. G. Tytler, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.—It is hereby notified that the members of the Rampore Hât Local Board, in the district of Beerbhoom, having at a meeting, under section 25 of Act III (B.C.) of 1885, requested the Lieutenant-Governor to appoint a Chairman, the Lieutenant-Governor is pleased, under the said section, to appoint Mr. C. J. Stevenson Moore, C.S., the Sub-divisional Officer of Rampore Hât, to be Chairman of that Local Board.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.—Whereas a notification, dated the 28th September 1889, was published at page 217, Part IB of the *Calcutta Gazette* of the 2nd October 1889, declaring the Lieutenant-Governor's intention to sanction, under section 86 of the Bengal Municipal Act III (B.C) of 1884, the levy by the Commissioners of the Motihari Municipality, in the district of Chumparun, of a fee, under section 143, on the registration, under section 142, of all carts kept or habitually used within the Municipality, and whereas no good reasons have been shown to the contrary, it is notified for general information that the Lieutenant-Governor hereby sanctions the levy, by the Commissioners of the Motihari Municipality, of the fee on the registration of carts at the rates not exceeding those mentioned in section 143.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.—Whereas a notification, dated the 17th November 1889, was published at page 248, Part IB of the *Calcutta Gazette* of the 20th idem, declaring the intention of the Lieutenant-Governor to extend the provisions of Part IX of Act III (B.C.) of 1884 to the Dinagepore Municipality, and whereas no objection has been raised to the proposal within one month from the date of the publication of the above notification within the Municipality, it is hereby notified for general information that, in the exercise of the power vested in the Local Government by section 221 of the Act, and in accordance with the recommendation of the Commissioners of the Dinagepore Municipality, made at a meeting, the Lieutenant-Governor sanctions the extension of Part IX of the Municipal Act to the said Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.—It is hereby notified that, under section 7, Act III (B.C.) of 1885, the following gentlemen have been elected to be members of the District Board of Beerbhoom :—

Local Boards by which elected.	Names of members.
Soory	Baboo Madan Gopal Sing. „ Kamalakshya Chatterjea. „ Rajat Sekhar Rai.
Rampore Hât	Baboo Surat Nath Mukerjea. „ Kedarnath Mittra. Munshi Abdus Sobhan.

2. The following gentlemen are appointed, under section 7 of the Act, to be members of the Board—

The Civil Surgeon of the district, *ex-officio.*
The Deputy Inspector of Schools, *ex-officio.*
The Road Cess Deputy Collector, *ex-officio.*
The Revd. A. McKenna.
Baboo Chandragati Mustafi.
„ Bunwari Lal Sen.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Soory Local Board, in the district of Beerbhoom, under section 25 of Act III (B.C.) of 1885, of Baboo Madan Gopal Singh to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Kedar Krishna Banerjea to be the Chairman of the Jhaldah Municipality, in the district of Manbhoom, *vice* Baboo Kedarnath Mittra, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 8th February 1890.—It is hereby notified that, under section 24 of the Bengal Local Self-Government Act III (B. C.) of 1885, the Lieutenant-Governor is pleased to re-appoint the Magistrate of Midnapore to be the Chairman of the Midnapore District Board, with effect from the 27th January 1890.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 11th February 1890.—It is hereby notified for general information that, under section 138 of the Bengal Local Self-Government Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to alter Rule 81, Part IV of the rules made under clauses (*b*), (*c*), (*d*), (*e*), (*f*), (*h*), (*j*), (*q*), (*s*) and (*t*) of the said section. The rule, as now amended, is as follows :—

"81. The latest day for the submission of the statement of the requirements and probable expenditure of the District Board for the ensuing financial year shall be the 15th of November."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 6th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Calcutta Municipality for a public purpose, viz., widening the bye-lane from premises Nos. 98 to 104, Upper Chitpore Road, it is hereby declared that for the above purpose pieces of land, Nos. 99 and 104, Upper Chitpore Road in the town of Calcutta, district 24-Pergunnahs, measuring, more or less, 3 chittacks and 24 square feet only, are required.

The boundaries of the lands are as follow :—

Portion marked A on plan.—On the North and West a public bye-lane; on the South portion of premises No. 99, Upper Chitpore Road; and on the East premises No. 100, Upper Chitpore Road.

Portion marked B on plan.—On the North and East portion of premises No. 104, Upper Chitpore Road; on the South a public bye-lane; and on the West Upper Chitpore Road.

Plans and specifications of the land are filed in the office of the Commissioners for public inspection.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 6th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Calcutta Municipality for a public purpose, viz, for widening the filled up drain connecting Williams' Lane with Old Bytakhana Bazar Road, it is hereby declared that for the above purpose pieces of land, Nos. 19 and 20 Scott's Lane, and No. 1, Williams' Lane in the town of Calcutta, district 24-Pergunnahs, measuring, more or less, 2 cottahs 12 chittacks and 22 square feet only, are required.

The boundaries of the lands are as follow :—

Portion marked A on plan.—On the North portion of No. 20, Scott's Lane; on the South a public filled up drain; on the East Old Bytakhana Bazar Road; and on the West a passage.

Portion marked B on plan.—On the North portions of No. 1, Williams' Lane and No. 19, Scott's Lane; on the South a public filled up drain; on the East portion of No. 19, Scott's Lane; and on the West Williams' Lane.

A plan and specifications of the lands are filed in the office of the Municipal Commissioners for public inspection.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 7th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Dacca Municipality for a public purpose, viz., for the improvement of the trench for the suction pipe for the use of the water works in the town of Dacca, station Lalbag, zillah Dacca, it is hereby declared that for the above purpose pieces of lands measuring, more or less, 12 cottahs and 8 dhoors of standard measurement, are required. The pieces of lands are bounded as follows :—

Plot No. I.—On the North by the main road; on the South by the foreshore of the river Boorigunga; on the East by the trench of the suction pipe; and on the West by the land of Baboo Manick Chand Saha and of Rahimuddi Meah.

Plot No. II.—On the North by the main road and the land of Basanta Lall and Hemanta Lall Dobe; on the South by the foreshore of the river; on the East by the land of Basanta Lall and Hemanta Lall Dobe; and on the West by the trench of the suction pipe.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 7th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Calcutta Municipality for a public purpose, viz., for a new road from Banerjee's Lane to Amherst Street, it is hereby declared that for the above purpose pieces of land Nos. 172, Bowbazar Street, 14-1, 5, 48-2, 53 and 54, Choonapooker Lane, 4, Nitaie Baboo's Lane, and 150, Amherst Street, in the town of Calcutta, district 24-Pergunnahs, measuring, more or less, 9 cottahs 1 chittack and 36 square feet only, are required.

The boundaries of the lands are as follows—

Portion marked A on plan.—On the North partly premises No. 53, Choonapooker Lane and partly Choonapooker Lane; on the South partly Choonapooker Lane and partly premises No. 55, Choonapooker Lane, portion of premises No. 54, Choonapooker Lane and portion of premises No. 172, Bowbazar Street; on the East Choonapooker Lane; and on the West partly portion of premises No. 54, Choonapooker Lane and partly Banerjee's Lane.

Portion marked B on plan.—On the North portion of premises No. 48-2, Choonapooker Lane; and on the South, East, and West Choonapooker Lane.

Portion marked C on plan.—On the North and East portion of premises No. 15, Choonapooker Lane; and on the South and West Choonapooker Lane.

Portion marked D on plan.—On the North and East public filled up drains; on the South No. 14-1, Choonapooker Lane; and on the West Choonapooker Lane.

Portion marked E on plan.—On the North portions of premises Nos. 5 and 4, Nitaie Baboo's Lane; on the East Nitaie Baboo's Lane; and on the West a public filled up drain.

Portion marked F on plan—On the North and South premises No. 150, Amherst Street; on the East Amherst Street; and on the West Nitaie Baboo's Lane.

A plan and estimates of the land to be required are in the office of the Commissioners for public inspection.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 7th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Calcutta Municipality for a public purpose, viz., for the construction of a dhobikhana, it is hereby declared that for the above purpose a piece of land No. 3, Woolfutbagan Road, Dihi Punchannogram, district 24-Pergunnahs, measuring, more or less, 5 bigahs and 14 cottahs only, are required.

The boundaries of the land are as follows :—

On the North a passage; on the South portion of No. 3, Woolfutbagan Road; on the East partly a public latrine and partly No. 283, Lower Circular Road; and on the West Woolfutbagan Road.

A plan and estimates of the land to be acquired are in the office of the Commissioners for public inspection.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 8th February 1890.—Mr. L. P. Shirres, Joint-Magistrate, is appointed to be Vice-Chairman of the District Road Committee of Lohardugga, *vice* Mr. G. W. Place, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 12, 1890.

PART II.

Advertisements.

[N. B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given that the undermentioned plots of the Nizamut lakhiraj State lands situated in the district of Nuddea will be put up to sale at the Collectorate of Nuddea on the 13th March 1890, corresponding with 1st Chyte 1296 B.S.

The purchasers of the plots will be subject to the following conditions :—

I.—The plots will be sold revenue free to the highest bidders above the upset price.

II.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the estates to be again put up for sale at the risk of the defaulting purchasers after issue of advertisement as in the case of original sale.

V.—The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mouzah.	Pergunnah.	Approximate area in bighas.	Annual assessment.	Upset price.	Boundaries.	REMARKS.
				B. K. CH.	Rs. A. P.	Rs. A. P.		
1	Anjongachi in Bartoil.	Bahaliapara in Bartoil.	Mohamedshahye.	31 7 14	12 0 0	313 5 0	North, east, and south of jote lands of Hingoorun Bol and others of Bartoil, west of the confines of mouzah Belgharia.	Mourashi jote of Banesh Chandra Sarkar of Belgachi and dwelling-house of Gopal Chandra Ghose of Bartoil.
2	Anjongachi ...	Anjongachi ...	Taragoonah	394 1 10	93 0 0	3,936 11 0	West of the dwelling-houses of Chuni Shosh and Nabin Mandal Ghose and others, ryots of the zemindars of Chitna; north of the nij-jote lands of the aforesaid zemindars; east of the confines of Khairpur; south of the nij-jote lands of the aforesaid zemindars.	Mourashi jote of Banesh Chandra Sarkar of Belgachi.
3	Dak Adda ...	Kulberia ...	Plassey ...	1 4 8	2 12 6	40 0 0	East and north of a public road, south and west of jote lands of Brojo Lal Rai.	Plot No. I, khas Nizamut.
							South of jote lands of Gurudoyal Sinha and Bhikoo Mandal; east and north of jote lands of Pancharan Rai; west of jote lands of Bani Mandal.	Plot No. II, khas Nizamut.

Nuddea Collectorate, the 14th January 1890.

N. K. BOSE, for Collector.

NOTICE is hereby given that the undermentioned plot of the Nizamut lakhraj State lands, situate in the distr ic of 24-Pergunnahs, will be put up to sale at the Collectorate of the 24-Pergunnahs on Friday, the 28th March 1890—

The purchaser of the plot will be subject to the following conditions :—

I.—The plot will be sold revenue-free to the highest bidder above the upset price.

II.—The sale to be subject to existing leases, and to the rights conferred by the settlement proceedings and by the laws in force, and purchaser to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the plot to be again put up for sale at the risk of the defaulting purchaser after issue of advertisement as in the case of original sale.

V.—The purchaser shall be put in possession on receipt of the orders of the Collector approving of the sale, but such possession shall be liable to be disturbed in case the final confirmaton of the Board of Revenue should not be accorded to the proceedings.

Name of estate.	Mouzah.	Pergunnah.	Approximate area.	Annual assessment.	Upset price.	Boundaries.	REMARKS.
			B. K. CH.	RS. A. P.	RS. A. P.		
Dak Adda	Chitpore ...	Amirabad...	0 3 6	16 14 0	506 4 0	South of the dwelling house of Jitu Dhobi, east of the tank belonging to Zebunnissa Begum, north of the dwelling house of Talemun Jemadar, and west of a public road and the sepoy post.	Dwelling-house of Kudroo Dhobi of Chitpore.

K. N. ROY, Deputy Collector, for Collector on tour.

NOTICE is hereby given, under section 6, Act XI of 1859, section 11, Act VII (B.C.) of 1868, and Act II (B.C.) of 1871, that the undermentioned dependent tenures in the Town Khas Mehal, in the district of Chittagong, will be put up to public and unreserved sale at the Collector's Office of that district on the 3rd day of March 1890, for arrears of rent and cesses remaining unpaid after the latest day of payment, the 26th day of December 1889.

Khas Tehsil Office, Town Circle.

Serial No.	No. of tenures in register No. I.	Names of tenures and their situation.	ANNUAL RENTAL.		THE AMOUNT OF ARREARS FOR WHICH THE TENURES TO BE SOLD.			REMARKS.
			Rent.	Cess.	Rent.	Cess.	Total.	
		Thana town mouzah Bakalya, mehal Noabad.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	
1	887	20134/559 Taluq Manindra Chandra Ghose and others.	3,373 6 0	226 9 0	843 0 0	56 11 0	899 11 0	The entire taluqs will be sold.
		Mouzah ditto, thana ditto.						
2	895A	20134/559(ক) Taluq Khetra Moni Dasi and others.	1,135 11 9	44 6 0	284 0 0	11 1 0	295 1 0	
		Thana Fatikchir, mouzah Jouzkhala, mehal Noabad.						
3	4818	23878/588 Taluq Obedar Rahaman Khan	2,344 0	102 9 0	693 0 0	5 5 9	698 5 9	

Chittagong, the 14th January 1890. C. H. ALLEN, for Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Khulna will be put up for sale at the Collector's Office of that district on the 26th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

1	2	3	4	5	6	7	8	9
No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		RS. A. P.				RS. A. P.	RS. A. P.	RS. A. P.
114-1	Kismut pergunnah Ba,,'pur.	2,124 4 7	.....	Share No.1, 3as. 3g. 2c. 16d.	Shital Nath Bhanga and others.	420 2 8	.....	22 8 0
127-1	Kismut pergunnah Bhaluka	14,943 15 8	.....	Share No. 1, 4g. 13-5-8-[illegible]	Grijanath Ray Chowdhury and others	224 13 5	... ..	31 10 5
159-4	Kismut Ramdanga, pergunnah Sarparajpur.	549 13 8	....	Share No. 4, 2as. ..	Haran Chandra Majumdar and others.	68 11 8	.....	13 3 2
170-2	Kismut pergunnah Silimabad.	5,784 6 6	...	Share No. 2, 2as. 9g.	Syamacharan Bosu and others.	885 11 9	.....,	310 15 6

Khulna Collectorate, the 8th February 1890. B. DE, Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Dacca will be put up for sale at the Collector's Office of that district on the 26th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realised in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
115	Pergunnah Patpashar, Banameh Mahadev Mukhopadhya.	10,768 0 1½	.....	Residue share ...	Hara Sundari Chaudhurani and others.	8,973 5 4½	... ..	3,624 7 4½
				Hisya 2a. 13g. 1kr. 1kt.	Monindra Nath Mukhopadhya and others.	1,794 10 9	.....	725 9 7
193	Pergunnah Rajnagar, tuppeh Hosainabad Jawar Hyderabad Khachak Pitrush market.	688 5 4½	Entire estate.	.....	Sukhmoy Chandra Das himself and manager for Gour Hari Das and others.	.....	69 12 2½	.....
194	Pergunnah Rajnagar, hisya Raj Krishna Sen, Chakla Nurpur Hurunnessa.	708 9 11½	.....	Residue share ...	Husni Khanam and others.	261 13 6½	.....	78 11 9
197	Pergunnah Rajnagar, Chakla Nurpur, Debi Prosad Sen.	632 10 5½	.....	Hisya 2g. 3kr. 3kt.	Durga Sunkor Sen ...	5 7 9	.....	2 8 1
272	Pergunnah Shahebabad May Peshkosh Dowani, Banameh Mirza Hyderali.	533 5 4	.....	Residue share ...	Rajendra Narain Bandapadhya.	133 5 1	.....	83 7 1
				Hisya 1a. 11½g. ...	Ditto ditto ...	52 1 4	.....	32 9 9
325	Tuppeh Mohesvardi, Banameh Saha Nowaj Khan, Elahi Newaj Khan.	14,133 5 4½	.....	Hisya 15g. 1kr. 1kt. 6t. Ananda Mohon, Hari Mohon and Krishna Mohon Das.	Ananda Mohon Das and others.	677 2 6	.....	192 3 9
392	Pergunnah Bikrampur, taluq Brindavan Chandra Radha Kishore Sen, hisya 8a. Radha Madhav.	1,452 9 1	.....	Residue share ...	Nanda Kumar Guha .	425 6 1½	.....	150 11 6
393	Pergunnah Bikrampur, taluq Brindavan Chandra Radha Kishore Sen, hisya 8a. Raj Kishore Sen.	1,452 9 1	.....	Ditto ...	Rup Lal Raghu Nath Das and others.	554 10 2½	.....	145 8 7
534	Pergunnah Bhawal Jawar Naltaket, taluq Sridhar Hari Rati, Krishna Ram Chakraverty.	544 0 0	....	Ditto ...	Joy Chandra Chaudhury and others.	74 15 9½	.....	43 12 2½
				Hisya 1a. Banga Chandra, Har Chan Chakraverty.	Banga Chandra Chakraverty and others.	34 0 0	.....	14 5 0½
				Hisya 2a. 2kr. 1kt. Brahmya Mayi Debya.	Brahmya Mayi Debya	16 4 8	.....	14 1 1
552	Pergunnah Mobarak Ujiau, taluq Jagir Abdulla.	961 1 0½	.....	Residue share ...	Showdamini Gupta and others.	384 6 9½	.....	74 13 2
562	Shahar Chandina May Peshkosh Chandina, Maulv Abdul Ali.	1,898 10 8	.....	Ditto ...	Protap Chandra Das and others.	664 8 2	.....	170 4 0
569	Pergunnah Bikrampur, taluq Ram Gunga Bosu	684 3 0	.....	Ditto ...	Sitamani and others ...	256 9 0	... ..	95 0 0
4349	Pergunnah Patpashar, taluq Golam Hosen Chaudhuri.	930 3 11½	... ..	Ditto ...	Amirannessa Khatoon, Manager for Maulvi Abdul Hye and others.	359 1 9	.....	86 15 11
				Hisya 1½a. Najbannessa and others.	Najbannessa and others.	87 3 5	.....	8 9 10
				Hisya 3a. 2g. 1kr. 1½kg. Hamidannessa and others.	Hamidannessa Khatoon and others.	181 12 2	.....	55 11 11
5849	Pergunnah Hashara Raja Ram Chaudhuri.	823 10 1	Entire estate.	.....	Gojendra Nath Shome and others.	... ..	1 12 0	.....
6551	Pergunnah Rajnagar, taluq Debi Prosad Ghosh.	642 2 1½	.....	Residue share .	Kala Chand Shaha and others.	535 1 8½	.....	40 1 5
8434	Char Buktabali	584 0 0	Entire estate.	.....	Pran Nath Pare and others.	.... .	153 0 0	. ....
8660	Tuppeh Amirabad Estate No. 234.	760 4 1½	Ditto ...	.....	Abhaya Charan Das and Brojendra Kumar Rai Chaudhuri.	.....	72 14 3	.....:
9069	Char Fukurhati within Char Krishnapura.	519 0 0	Ditto ...	.....	Kripa Mayi Debya and others.	.....	7 2 0	.....
9083	Mouzah Golara Baluchari within Char Jalua Kamta.	752 0 0	Ditto ..	.....	A. M. Bhoogy Shaheb, Receiver.	.....	149 0 0	.....
9101	Char Tilli within Char Mirzapur.	1,187 0 0	Ditto ...	.....	Kailash Bashini and Bindhu Bashini Chaudhurani and others.	.....	299 0 0	...
9762	Pergunnah Burdakhat Char Delwarpur.	4,196 0 0	Ditto ...	.....	Joharuddin Hyder and others.	.....	1,052 0 0	... ..

Dacca Collectorate, the 8th February 1890.

L. HARE, Offg. Collector.

NOTICE is hereby given that the proprietary right of Government, as specified in the conditions of sale below to the undermentioned estate, situate in the district of Maldah, will be put up to sale at the Maldah Collectorate on 26th March 1890, corresponding with 14th Chaitra 1296 B.S.

The purchasers will be subject to the following conditions of sale :—

Conditions of Sale.

1*st*.—The estate to be sold to the highest bidder above the upset price, which will be fixed by the Collector at the time of sale. The purchaser of this estate will be considered as the proprietor of the estate, and the entire proprietary right of Government in such estate will be transferred to him, subject to the revenue fixed in perpetuity.

2*nd*.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force ; and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3*rd*—If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid at once.

4*th*—If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the estate to be again put to sale at the risk of the defaulting purchaser, after issue of advertisement, as in the case of original sale.

Number on the district roll.	Name of estate and pergunnah.	Approximate area in acres.	Government revenue assessed
		A. R P	Rs.
98	Kismut Jot Kusturi, pergunnah Kotuali ...	62 0 12	5 0

Collector's Office, district Maldah, the 6th February 1890. POORNO CHANDRA CHATTERJEE, Dy. Collr in charge

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.		Number, mark and description.	Consignees.	Ships.
1890.				
Jan.	27	1 Case, 373 in a diamond, C B below	Order ...	S. S. "Electrician."
,,	27	10 Crates, G H by S	Ditto ...	Ditto.
,,	27	1 Case, J M S D in a diamond, G A & Co. outside...	Ditto ...	Ditto.
,,	27	1 Case, L O C K E	Ditto ...	Ditto.
,,	27	2 Cases, S by 208 in a diamond, J below ...	Ditto ...	Ditto.
,,	27	3 Casks, 751 in a diamond, T top	Ditto ...	Ditto.
,,	27	11 Packages, W in a double triangle, D below ...	Ditto ...	Ditto.
,,	27	1 Case, P Co. in a diamond	Ditto ...	Ditto.
,,	27	1 Parcel, Messrs. Arakie Brothers, 1, Clive Row ...	Ditto ...	Ditto.
,,	27	1 Bundle sheet iron, B and N W P S, A S S O below	Ditto ...	Ditto.
,,	27	4 Bundle nail rod iron, 1 stroke	Ditto ...	Ditto.
,,	27	30 Drums, C M D in a diamond, G A & Co. outside...	Ditto ...	Ditto.
,,	29	3 Cases, 200 in a diamond, C B & Co. outside ...	Ditto ...	S. S. "City of Canterbury."
,,	29	1 Case, B B in a diamond, J M R outside, Akyab below.	Ditto	Ditto.
,,	29	1 Case, 14 by 3797 in a diamond	Ditto ...	Ditto.
,,	29	1 Case, L O C K E	Ditto ...	Ditto.
,,	29	1 Case, 500 in a diamond, C B & Co. outside ...	Ditto ...	Ditto.
,,	29	5 Cases, M in a triangle, J S top	Ditto ...	Ditto.
,,	29	4 Casks, 272 in a diamond, N P and G outside ...	Ditto ...	Ditto.
,,	29	1 Keg, A B Rivers, or no mark	Ditto ...	Ditto.
,,	29	3 Kegs, no mark	Ditto ...	Ditto.
,,	29	20 Bales, P in diamond, C H outside	Ditto ...	Ditto.
,,	29	20 Casks, W L in a diamond, C below	Ditto ...	Ditto.
,,	29	11 Packages, W in a double triangle, D below ...	Ditto ...	Ditto.
,,	29	1 Case, 563 in a diamond, W below	Ditto ...	Ditto.
,,	29	2 Cases, W L	Ditto ...	Ditto.
,,	29	1 Case, H. S. Thomson, Esq., care of Messrs Octavius Steel & Co.	Addressed ...	Ditto.
,,	29	28 Packages, no mark	Order ...	Ditto.
,,	29	1 Bundle hoop iron, H M & Co. or no mark ...	Ditto ...	Ditto.
,,	29	4 Cases, H C in a triangle	Ditto ...	S. S. "Niobe."

Port Commrs.' Office, Calcutta, the 8th February 1890. (3527—1) G. H. SIMMONS, Vice-Chairman.

Statement of Government Promissory Notes enfaced for payment of Interest in London, under deduction of amount re-transferred to India, and outstanding in the Books of the Bank of Bengal on the 31st January 1890.

PARTICULARS.	3½ per cent. transfer loan of 1853-54.	4 PER CENT. LOANS							4½ PER CENT. LOANS				Transfer loan of 1879, seven shillings per cent. portion.	5 per cent. loan of 1856-57.	GRAND TOTAL.
		Of 1832-33.	Of 1835-36.	Of 1842-43.	Of 1854-55.	Transfer of 1865.	Reduced 4 per cent. loan of 1879.	Total.	Of 1870.	Of 1878.	Transfer loan of 1879. 4½ per cent. portion.	Total			
Balance of 15th January 1890 ...	54,700	11,29,387	25,24,900	2,48,63,200	1,05,20,900	3,95,47,000	1,99,33,900	9,85,19,287	39,500	71,48,000	11,08,75,600	11,80,63,100	1,33,800	32,200	21,68,03,087
ADD—															
Amount enfaced at Madras between 16th and 31st January 1890	.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amount enfaced at Bombay between 16th and 31st January 1890	.....	.....	.....	25,000	1,50,000	.....	.....	1,75,000	.....	.....	.....	.....	.....	.....	1,75,000
Amount enfaced at Calcutta between 16th and 31st January 1890	.....	.....	1,000	1,000	6,900	87.000	.....	95,900	.....	1,000	.....	1,000	.....	.....	96,900
	54,700	11,29,387	25,25,900	2,48,89,200	1,06,77,800	3,96,34,000	1,99,33,900	9,87,90,187	39,500	71,49,000	11,08,75,600	11,80,64,100	1,33,800	32,200	21,70,74,987
DEDUCT—															
Amount written off in the London registers	.....	.....	.....	43,200	6,000	1,61,500	57,200	2,67,900	.....	1,000	16,000	17,000	.....	.....	2,84,900
Balance on 31st January 1890 ...	54,700	11,29,387	25,25,900	2,48,46,000	1,06,71,800	3,94,72,500	1,98,76,700	9,85,22,287	39 500	71,48,000	11,08,59,600	11.80,47,100	1,33,800	32,200	21,67,90,087

NOTE.—From 9th June 1867 to 30th Nov. 1889—Enfaced from India 6,163 lakhs; re-transferred from London 5,325 lakhs.

,,	1st Dec. 1889	,,	15th Dec.	,,	,,	,,	,,	12	,,	,,	,,	,,	22	,,
,,	16th ,,	,,	31st ,,	,,	,,	,,	,,	9	,,	,,	,,	,,	11	,,
,,	1st Jan. 1890	,,	15th Jan. 1890	,,	,,	,,	,,	5	,,	,,	,,	,,	21	,,
,,	16th ,,	,,	,,	31st ,,	,,	,,	,,	3	,,	,,	,,	,,	3	,,
								6,192					5,382	
								5,382						
Balance against India ...								810 lakhs.						

E, BANK OF BENGAL,
Calcutta, the 5th February 1890.

(3321—1)

W. D. CRUICKSHANK,
Secretary and Treasurer.

District Charitable Society.

Statement of Receipts and Expenditure for the year ended 31st December 1889.

	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
Balance ... ... {Central Office	666 5 0		Overdraft in Bank of Bengal on 31st December 1888	... ...	9,972 1 7
{District and other offices	1,035 11 1	1,702 0 1			
			Relief afforded.		
Subscriptions ... ... {Government	14,400 0 0		**District Committees** ... {General Fund	14,512 12 9	
{Port Commissioners	2,400 0 0		{Trust Funds as per Statement A	4,300 5 4	18,813 2 1
{Calcutta Corporation	1,200 0 0				
{Public	12,273 0 0	30,273 0 0	**Native Committee** ... {General Fund	3,031 8 0	
			{Trust Funds as per Statement A	15,090 14 3	18,122 6 3
Donations ... ... **Public**	.....	4,827 12 0			
Allowance for Establishment ... ... {Government	3,000 0 0		**Central Office** ... ... {General Fund	133 0 0	
{Trust Fund	840 0 0		{Trust Funds as per Statement A	9,812 0 0	
		3,840 0 0	{Schooling fees	675 2 0	10,620 2 0
Alms House proceeds	.....	277 2 8	**Commissioner of Police** ... Casual relief	.....	4,074 1 0
Miscellaneous Account	.....	8 6 7			
Interest on Invested Funds	.....	680 0 0	**Alms House** ... {Establishment	4,524 0 0	
Interest, etc., on Trust Funds, as per Statement A	.....	41,474 12 4	{Dieting	11,601 4 0	
Deposits and Advances	.....	2,758 14 0	{Contingencies, taxes, &c.	2,980 4 3	19,085 8 3
Government Grant for Leper Asylum Medicines	.....	100 0 0	**Leper Asylum** ... {Establishment	1,856 0 0	
Government Grant for Leper Asylum Repairs	.....	345 2 6	{Dieting	5,107 8 0	
			{Contingencies, taxes, &c.	2,011 13 0	8,975 5 0
District Offices.*					
			Charges—General.		
Donations	1,030 1 5		**Central Office** ... {Establishment, auditing fees, &c.	6,336 15 2	
Congregational Collections	4,328 7 2		{Rent and contingencies	1,009 2 3	
		5,358 8 7	{Printing and advertising	960 3 9	8,306 5 2
Overdraft in Bank of Bengal on 31st December 1889	.....	13,027 6 3	**District and Native Committees** ... ... {Establishment	2,190 11 0	
			{Contingencies	459 0 6	2,649 11 6
			Trust Funds ... ... Charges as per Statement A	.....	1,131 6 1
			Interest on Overdraft	.....	504 2 9
			Deposits and Advances	.....	2,457 11 11
			Balance ... ... {Central Office	107 4 3	
			{District and other offices	1,348 13 11	1,456 2 2
Total ...	.....	1,05,168 1 9	**Total** ...	.....	1,05,168 1 9

* These sums were received direct and retained by the District Committee and were spent by them in local relief, together with the grants from the Central Office, under the rules of the Society.

Examined and found correct,

CALCUTTA, *The 24th January* 1890.

K. MALLIKA, *Accountant.*

A. F. SIMSON, C.A., *Auditor.*

PATRICK MCGUIRE, *Secretary.*

District Charitable Society.

STATEMENT A.

Abstract Accounts of the Trust Funds for the year ended 31st December 1889.

No.	Head of Account.	Opening balance.	Receipts.	Total.	Payments.					Closing balance.	Total.
					Through Central Office.	Through District Committees.	Through the Native Committee.	Transferred to the General Fund for general purposes.	Charges.		
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Lady William Bentinck's Fund	155 9 6	522 10 10	678 4 4	.....	538 5 4	.....	.....	1 4 10	138 10 2	678 4 4
2	Dwarkanath Tagore's Fund	.....	4,120 0 0	4,120 0 0	1,878 0 0	234 0 0	.....	2,008 0 0	.....	.....	4,120 0 0
3	Maria English's Charity	.....	2,868 0 0	2,868 0 0	848 0 0	.....	.....	1,789 5 2	230 10 10	.....	2,868 0 0
4	Lokenath Bose's Fund	30 14 2	120 0 0	150 14 2	122 0 0	.....	.....	.....	0 4 10	28 9 4	150 14 2
5	Prince Jamiruddin's Fund	2,246 11 1	10,737 14 0	12,984 9 1	.....	3,528 0 0	7,012 0 0	.....	286 13 4†	2,177 11 9	12,984 9 1
6	Radha Madhub Banerjee's Fund	267 9 4	441 15 1	709 8 5	.....	.....	434 0 0	.....	1 3 0	274 5 5	709 8 5
7	Rama Sundari Dasi's Fund	.....	20 0 0	20 0 0	26 0 0	.....	.....	.....	0 0 10	—6 0 10	20 0 0
8	Chumutkar Krishna Ghose's Fund	45 6 0	24 0 0	69 6 0	22 0 0	.....	.....	.....	0 1 0	47 5 0	69 6 0
9	Eshan Chundra Bose's Fund	.....	24 0 0	24 0 0	.....	.....	24 0 0	.....	0 1 0	—0 1 0	24 0 0
10	Massey Baba John's Estate	.....	3,600 4 11	3,600 4 11	.....	.....	.....	3,600 4 11	.....	.....	3,600 4 11
11	Rose Ann Greenway's Fund	.....	240 0 0	240 0 0	.....	.....	.....	237 9 6	2 6 6	.....	240 0 0
12	Sassoon Fund	.....	395 0 0	395 0 0	.....	.....	.....	394 0 2	0 15 10	.....	395 0 0
13	Prosono Coomar Tagore's Fund	.....	424 0 0	424 0 0	.....	.....	.....	422 15 0	1 1 0	.....	424 0 0
14	Gopal Lal Tagore's Fund	296 6 4	440 0 0	736 6 4	.....	.....	456 0 0	.....	1 1 8	279 4 8	736 6 4
15	Cheke Fund	782 3 4	460 0 0	1,242 3 4	372 0 0	.....	.....	.....	1 2 4	869 1 0	1,242 3 4
16	Komul Lochun Bysack's Bequest	382 13 5	422 1 6	804 14 11	.....	.....	408 0 0	.....	5 5 5	39 3 6	804 14 11
17	Famine Relief Fund	690 14 6	2,440 0 0	3,130 14 6	.....	.....	1,178 0 0	1,220 0 0	6 1 8	726 12 10	3,130 14 6
18	Bhogobutty Churn Law's Fund	57 14 4	200 0 0	257 14 4	.....	.....	132 0 0	96 10 8	0 8 0	58 11 8	257 14 4
19	Ram Gopal Ghose's Fund	237 1 6	244 0 0	481 1 6	.....	.....	240 0 0	.....	0 9 10	240 7 8	481 1 6
20	Schorn Fund	.....	120 0 0	120 0 0	.....	.....	.....	119 11 2	0 4 10	.....	120 0 0
21	Albert Fund	621 5 2	788 0 0	1,409 5 2	.....	.....	793 0 0	.....	1 15 6	614 5 8	1,409 5 2
22	Kali Kissen Tagore's Fund	165 13 8	400 0 0	565 13 8	.....	.....	361 0 0	.....	1 0 0	203 13 8	565 13 8
23	Romanath Tagore's Fund	177 12 0	60 0 0	237 12 0	60 0 0	.....	.....	.....	0 2 4	177 9 8	237 12 0
24	Wedding Commemoration Fund	.....	320 0 0	320 0 0	319 0 0	.....	.....	.....	0 12 10	0 3 2	320 0 0
25	Greece Chunder Dutt's Fund	.....	200 0 0	200 0 0	.....	.....	.....	199 8 0	0 8 0	.....	200 0 0
26	Nina Forster's Fund	.....	842 8 0	842 8 0	.....	.....	.....	840 6 2	2 1 10	.....	842 8 0
27	Isabella Hennessy's Fund	.....	396 0 0	396 0 0	.....	.....	.....	395 0 2	0 15 10	.....	396 0 0
28	Gourmoni Dasi's Fund	297 5 8	240 0 0	537 5 8	.....	.....	240 0 0	.....	0 9 8	286 12 0	537 5 8
29	Ram Kanai Sen's Fund	37 7 3	28 0 0	60 7 3	.....	.....	24 0 0	.....	0 1 2	36 6 1	60 7 3
30	Kristodas Pal's Fund	751 15 7	420 0 0	1,171 15 7	.....	.....	354 0 0	.....	1 0 10	816 14 9	1,171 15 7
31	Bagala Sundari Debi's Fund	27 3 2	24 0 0	51 3 2	.....	.....	24 0 0	.....	0 8 0	27 1 2	51 3 2
32	Shurnamoi Dasi's Fund	4 9 5	24 0 0	28 9 5	.....	.....	24 0 0	.....	0 0 10	4 8 7	28 9 5
33	Cones' Fund	33 14 9	600 0 0	633 14 9	549 0 0	.....	.....	.....	.....	84 14 9	633 14 9
34	Raja Doorga Churn Law's Fund	8 12 0	360 0 0	368 12 0	120 0 0	.....	240 0 0	.....	0 14 4	7 13 8	368 12 0
35	Daby Churn Law's Fund	.....	40 0 0	40 0 0	.....	.....	.....	39 14 4	0 1 8	.....	40 0 0
36	Woomesh Chunder Mitter's Fund	.....	48 0 0	48 0 0	.....	.....	48 0 0	.....	0 2 0	—0 2 0	48 0 0
37	Mrs. Mary Cook's Fund	.....	40 0 0	40 0 0	.....	.....	.....	39 14 4	0 1 8	.....	40 0 0
38	Maharaja Kumul Krishna's Charity	232 8 0	360 0 0	592 8 0	.....	.....	345 0 0	.....	.....	247 8 0	592 8 0
39	Maharaja Sir J. M. Tagore's Charity	23 0 0	500 0 0	523 0 0	.....	.....	492 0 0	.....	.....	31 0 0	523 0 0
40	Raja Rajendra Mullick's Charity	18 0 0	900 0 0	918 0 0	.....	.....	1,188 0 0	.....	.....	—270 0 0	918 0 0
41	Sm. Kumudini Dasi's Charity	221 9 0	300 0 0	521 0 0	.....	.....	303 0 0	.....	.....	218 0 0	521 0 0
42	Native Committee's Reserve Fund	240 11 9	620 0 0*	860 11 9	.....	.....	770 14 3	.....	6 4 10	89 8 8	860 11 9
43	Mutiny Relief Fund	19 1 0	6,100 0 0	6,119 1 0	5,496 0 0	.....	.....	.....	600 0 0‡	23 1 0	6,119 1 0
	Total	8,058 14 11	41,474 12 4	49,533 11 3	9,412 0 0	4,800 5 4	15,090 14 3	11,373 3 7	1,131 6 1	7,825 14 0	49,533 11 3

* Includes Rs. 500 transferred from "Donation" account.

† With allowance to District Charitable Society at Rs. 20 per month.
‡ Allowance to District Charitable Society at Rs. 50 per month.

Examined and found correct.

CALCUTTA,
The 24th January 1890.

K. MALLIKA,
Accountant.

A. F. SIMSON, C.A.,
Auditor.

PATRICK MCGUIRE,
Secretary.

District Charitable Society.

Abstract of the Accounts of the District and Native Committees for 1889.

District Agency.	Opening balance.	Received from Central Office	Congregational collections.	Donations and sums received direct.	Total.	Relief.			Establishment.	Contingencies.	Balances remitted to the Central Office, &c.	Closing balance.	Total.
						Pensions.	Casual relief.	Schooling fees.					
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
St. John's District	51 12 9	1,455 0 0	596 2 6	98 1 0	2,201 0 3	1,200 0 0	596 1 9	204 0 0	120 0 0	0 2 0	.....	80 12 6	2,201 0 3
St. James' ,, ...	153 2 7	3,306 0 0	390 13 8	386 14 10	4,236 15 1	2,424 0 0	1,149 8 10	352 4 0	140 0 0	.....	.....	171 2 3	4,236 15 1
St. Thomas' ,, ...	13 15 3	1,287 12 0	250 12 0	445 14 1	1,998 5 4	625 8 0	1,158 6 0	30 0 0	87 0 0	0 2 0	.....	97 5 4	1,998 5 4
Old Church ,, ...	129 11 2	6,686 13 0	1,653 1 3	.....	8,469 9 5	5,885 0 0	1,596 12 0	300 0 0	379 7 0	12 4 0	.....	296 2 5	8,467 9 5
St. Paul's Mission	3 0 0	1,020 0 0	300 0 0	.....	1,323 0 0	596 0 0	705 13 9	.....	20 0 0	.....	.....	1 2 3	1,323 0 0
St. Andrew's Committee	0 5 0	.....	531 11 5	10 0 0	542 0 6	432 0 0	110 0 6	.....	.....	.....	.....	.....	542 0 6
Howrah District	0 3 11	744 0 0	615 14 3	79 3 6	1,439 5 8	916 0 0	401 5 11	.....	29 0 0	29 0 0	.....	63 15 9	1,439 5 8
Commissioner of Police	193 0 0	2,700 0 0	.....	.....	2,893 0 0	.....	2,178 13 0	.....	600 0 0	75 0 0	.....	39 3 0	2,893 0 0
Native Committee	470 8 2	19,540 8 0	.....	.....	20,011 0 2	17,597 8 0	170 14 3	354 0 0	815 4 0	342 8 6	214 0 0	516 13 5	20,011 0 2
Total ...	1,015 10 10	36,740 1 0	4,328 7 2	1,030 1 5	43,114 4 5	29,676 0 0	8,067 12 0	1,240 4 0	2,190 11 0	459 0 6	214 0 0	1,286 8 11	43,114 4 5

District Committees.

	Rs. A. P.
Pensions	12,078 8 0
Casual relief	5,718 0 9
Schooling fees...	886 4 0
Total ...	18,682 12 9

Native Committee.

	Rs. A. P.
Pensions	17,597 8 0
Casual relief	170 14 3
Schooling fees..	354 0 0
Total ...	18,122 6 3

Commissioner of Police.

	Rs. A. P.
Pecuniary relief as above	2,178 13 0
Paid by Central Office for rations, railway passes, &c.	2,118 14 0
Total ...	4,297 11 0

N.B.—In addition to the above, the Chaplain of Barrackpore received and spent a sum of Rs. 130-5-4, making a total of Rs. 18,813-2-1, relief through District Committees.

CALCUTTA,
The 23rd January 1890.

K. MALLIKA,
Accountant.

PATRICK MCGUIRE,
Secretary.

LETTERS of Administration (with copy Will annexed) of the property and credits of Edward James Jones, late of Calcutta, Deputy Superintendent of the Geological Survey of India, deceased, have been granted by the High Court, Calcutta, to G. W. F. Buckland, Esq., of No. 1, Esplanade, West, Calcutta, as the Attorney of the Executor named in the Will of the deceased. All persons having claims against the deceased are requested to submit same to the Administrator before the 31st day of March next, after which date no claims will be admitted.

J. A. APCAR, Attorney.

Calcutta, 17th January 1890. (3461-3)

NOTICE is hereby given that Mary Stephen, who obtained a decree *nisi* on the 23rd January 1890 in the High Court for dissolution of marriage against her husband S. S. Stephen, has revoked and cancelled the power-of-attorney which she executed in his favour, and that the said S. S. Stephen has no authority to act as her attorney in any matter whatsoever. Any payment of money therefore to the said S. S. Stephen on account of the said Mary Stephen will not be recognised.

GONESH CHUNDER CHUNDER, Attorney for Mary Stephen.

Calcutta, the 27th January 1890. (3494-3)

Notice.

IN continuation of notice, dated the 9th October 1889 published at page 1656, Part II of the *Calcutta Gazette* of 30th October 1889, regarding the Barque *Grosvener*, it is further notified that the said vessel, with all her masts, sails, gear, and appurtenances which may be on board her on the 19th day of April 1890, will be sold by auction to the highest bidder on Saturday, the 19th of April 1890.

The sale will be held at the Port Office, Chittagong, and will commence at 3 P.M.

Terms 25 per cent on fall of the hammer if desired by Receiver of Wrecks: the balance within a week of sale and before taking delivery. If the purchaser fails to pay the balance within seven days from date of sale, the vessel will be re-sold at his risk and expense. The vessel can be inspected at Chittagong by application to the Receiver of Wrecks.

E. GOOD, Receiver of Wrecks.

(3498—4)

In the Court of Baboo Ram Gopal Chaki, Roy Bahadur, Subordinate Judge of Backergunge.

EXECUTION CASE No. 14 OF 1890

Kashi Mani Chaudhurani, decree-holder, *versus* Mozaheruddin Mohammed Chaudhuri and others, judgment-debtors.

TO be sold the right, title, and interests of the undermentioned mortgaged property at 12 A. M. on the 19th day of February 1890 by the District Judge's Nazir, in the sale-house of the District Judge of Backergunge—

Schedule of Property.

7*a* 17½*g.* 1*kt.* and 12*bits* share of taluq Mohomed Shafi Chaudhuri, entered in the Backergunge Collectorate towji in No. 1628, pergunnah Bazoorgannadpur, and situated in Joár Ramna Bamna within station Mathá'iá and sub-registry Bhandúrá. The annual sudder jumma of the above share is Rs. 9·597 10*a.* 9*p.* 15*kt.* and 4 *dimish*, belonging to judgment-debtors Hurannessa Khatun and Manatajuddin Mohomed Chaudhuri by virtue of hebanamah and contract.

R. G. CHAKI, Sub-Judge.

(3518-1)

Stolen.

THE Government Promissory Note No. 220972 of the 4 per cent of 1865 for Rs. 500, originally standing in the name of Modhu Sudhir Kowar, and last endorsed to Kedar Nath Majumdar, the proprietor, by whom it was never endorsed to any other person. Payment of the above note and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, and application is to be made for accrued interest and for issue of duplicates in favour of the proprietor after two years from date of last advertisement.

KEDAR NATH MAJUMDAR, Cooch Behar.

(3497-3)

Lost.

THE lower halves of the Government Promissory Notes Nos 236782 and 236783 of the 4 per cent. loan of 1865 for Rs. 500 each, originally standing in the name of the Bank of Bengal, and last endorsed to General Dumber Shum Shere Jung Bahadur Rana, the proprietor by whom it was never endorsed to any other person, having been lost, notice is hereby given that payment of the above notes and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, Calcutta, and that application is about to be made for the issue of a duplicate in favour of the proprietor. The public are cautioned against purchasing or otherwise dealing with the abovementioned securities.

RAKHAL CHUNDRA CHATTERJEE, Secretary to the Representative of the Government of Nepal.

78, Dhurumtola Street, the 6th February 1890.

(3520-3)

Currency Notes.

THE following Currency Note of the Calcutta Circle is stated to have been destroyed, and payment of its value has been claimed by the person whose name is placed against the number; any other person claiming a right to it is warned to communicate at once with the undersigned:—

Note wholly lost or destroyed.

Register number.	Number of Note.	Value.	Name of Claimant.
		Rs.	
HS of 1890	U/56 9·840	100	Bhagwandas Khatri, Kooncha Sanjagi Ram, Lahore Gate, Delhi.

H. KEENE, Assistant Comptroller-General, in charge Paper Currency.

Paper Currency Department, 11th February 1890.

Notification.

TO be peremptorily sold pursuant to a decree and order of the Calcutta High Court, Original Civil Jurisdiction, made in suit No 285 of 1886 (wherein Nobokristo Seal is plaintiff and Rojooni Loll Bysack *alias* Rajendro Loll Bysack is defendant), and dated, respectively, the 5th of August 1886 and the 13th of July 1888, by the Registrar of the said Court in his sale-room in the Court-house, on Saturday, the 15th of March next, at the hour of 12 o'clock noon, the following properties.

Lot No. 1.—All that undivided half part or share of and in the upper-roomed brick-built messuage, tenement or dwelling-house, together with the piece or parcel of rent-free land or ground thereunto belonging, and on part whereof the same is erected and built, containing by estimation eight cottahs, be the same a little more or less, situate, lying, and being No. 29, Churruckdangah Street, Sootanooty, in the town of Calcutta, and bounded on the north by Churruckdangah Street, and on the east, west, and south by the garden belonging to the estate of the late Prosono Coomar Tagore.

Lot No. 2.—All that undivided half part or share of and in the garden and piece or parcel of land No 99, Manicktollah Road, in zillah 24-Pergunnahs, sub-district Sealdah, thana Manicktollah, being holding No 381 in Grand Division 2, Sub-division 11, Dehi Punchanmogram, containing by estimation thirteen bighas, more or less, and in respect of which the yearly rent of Rs. 27-4 is payable to the Collector of 24-Pergunnahs, and bounded on the north by the garden belonging to Benudbehary Shaw, on the south by the Manicktollah Street, on the east by the tenanted land belonging to the estate of the late Sreekristo Mullick, and on the west by the garden belonging to Gungapersaud Gangooly.

The abstract of title and the conditions of sale may be seen at the Office of the undersigned, or at the Office of Baboo Sitanauth Doss, Attorney for the plaintiff, on any day before the sale, and will be produced at the sale.

R. BELCHAMBERS, Registrar.

Calcutta, High Court, Original Side, the 24th day of January 1890. (3526-1)

Notification.

TO be peremptorily sold by the Registrar of the High Court of Judicature at Fort William in Bengal, in its Ordinary Original Civil Jurisdiction, on Saturday, the 15th day of February 1890, at the hour of 12 o'clock at noon, pursuant to a decree dated the 25th of March 1887, and the orders dated, respectively, the 18th February 1888 and the 14th of January 1889, of the said Court, made in suit No 417 of 1885 (wherein Kumar Nilkrishna Deb and another are the plaintiffs and Sreemutty Unnopoorna Dabee is the defendant), the following property belonging to the said defendant Sreemutty Unnopoorna Dabee:—

All that brick-built messuage, tenement or dwelling-house, together with the piece or parcel of land thereunto belonging, and on part of which the same is erected and built, containing by estimation 6 cottahs, be the same a little more or less, situate at and being No. 32, Nimtollah Ghat Street, formerly No. 46, Nimtollah Ghat Street, in the town of Calcutta, and bounded on the north partly by the land of Gudadhur Gangooly and partly by Nimtollah Ghat Street; on the south by the land of Kally Bysack; on the east by a narrow lane leading out to Nimtollah Street which separates these premises from the house of Nilmony Banerjee; and on the west by the Government drain.

The abstract of title and conditions of sale may be seen at the Office of the Registrar, High Court, Original Jurisdiction, and at the Office of Messrs. Swinhoe and Chunder, Attorneys for the plaintiffs, any day before the sale and will be produced at the sale.

R. BELCHAMBERS, Registrar.

Swinhoe and Chunder, plaintiffs' Attorneys.

Calcutta, High Court, Original Jurisdiction, the 8th February 1890. (3530—1)

In the Court of Baboo Shamboo Chandra Nag, Subordinate Judge of Hooghly, Third Court.

RENT EXECUTION CASE No. 58 of 1889.

Nabo Kristo Mookerjee decree-holder, *versus* Dyal Nath Bhattacharjee and others, judgment-debtors.

THE advertised property of the above judgment-debtors will be put up to sale in the highest bid on the 10th day of March 1890, at 12 o'clock noon, by the Nazir of the District Judge's Court, Hooghly, in the sale-room of the Court-house:—

Schedule of Property to be sold.

Two annas thirteen gundas one cowree one krantee share of lot Bundeipore, bearing towji No 77 of the Collectorate of Hooghly, situated in pergunnah Bundeipore, zillah Hooghly, sudder jumma of the whole 16 annas being Rs. 14,782-4-2, the upset value given by the decree-holder is Rs. (5,000), five thousand.

SHAMBOO CHANDRA NAG, Subordinate Judge.

Hooghly, the 7th February 1890. (3529—3)

Notice.

In the First Court of the Subordinate Judge of Midnapur.

EXECUTION CASE No. 164 OF 1889.

Sashi Lall Kur, decree-holder, *versus* Broja Das Dutta, judgment-debtor.

THE undermentioned property will be sold by public auction at the Court-house of the District Judge of Midnapur on Saturday, the 15th February 1890, at 12 o'clock, in execution of the decree passed by the Subordinate Judge of Midnapur for the realization of Rs. 7,319-3-0 obtained by a mortgage decree due from the debtor to the decree-holder:—

Schedule of property to be sold.

Lot I. Ten annas thirteen gundas two cowris and two crantis share of Mahul Ramchunderpur with its mouzas, within the police station of Shobong and sub-registry office Pingla, pergunnah Moyna Chour, bearing towji No. 1307, present towji No. 1280, and A Register No. 2466; Government revenue payable is Rs. 1,300-13-9, and the Government revenue of which ten annas thirteen gundas two cowris and two crantis share is Rs. 867-3-6.

DWARKANATH BHUTTACHARJEA, Subordinate Judge, First Court.

(3533—1)

Notice.

In the First Court of the Subordinate Judge of Midnapur.

EXECUTION CASE No. 10 OF 1890.

Bhuban Chandra Banerjea and Srimati Sukhoda Debi, decree-holders, *versus* Sridhar Charan Nandi, judgment-debtor.

THE undermentioned properties of the judgment-debtor will be sold in the above case by the Nazir of the District Judge's Court of Midnapur, in his sale office on Saturday, the 15th March 1890, at the hour of 12 A.M., for the realization of mortgage decree amounting to Rs. 5 357-1-3 by sale of properties Nos. 1 and 2, and Rs. 5,085-1-3 by sale of property No. 3.

Schedule of properties to be sold.

Lot II.—Two annas share out of six annas share of mehal Khirai, situate in pergunnah Moyna within the police station of Shobong and sub-registry office of Raj Ballabh, the present towji No. of which is 889 and A. Registry No. 1684, and the annual sudder jama of which two annas is Rs. 7 14 5*a* 6*g*. 2*c* 2*cr*.

Lot III.—Four annas share out of six annas share of mehal Khirai, situate in pergunnah Moyna within the police station of Shobong and sub-registry office of Raj Ballabh, the present towji No. of which is 889 and A Registry No. 1684, and the Government revenue of which four annas is Rs. 1,489-4.

DWARKANATH BHUTTACHARJEA, Subordinate Judge, First Court. (3534—1)

Notice.

WANTED three Peshkars or Inspectors, on salaries of Rs. 30 per mensem, for settlement work in the Sonthal Pergunnahs. None need apply who have not a knowledge of plane-table, of compass-surveying and experience in settlement work. Applications with copies of certificates to be sent to the undersigned at once.

J. A. CRAVEN, Settlement Officer.

Damp Camp Deoghur, the 10th February 1890.

Notice.

WANTED a Record-keeper for the Maldah Collectorate on a salary of Rs. 40 rising to Rs. 60 by biennial increments of Rs. 2.

No one need apply who has not had previous experience in a similar post. The selected candidate is to furnish security to the extent of Rs. 500, either in Government Promissory Notes or in cash.

Applications will be received up to 25th February next.

POORNO CHUNDRA CHATTERJEE, Deputy Collector in charge

Ramghur Tea Company, Limited.

THE Ordinary General Meeting of the Shareholders of this Company will be held in the Company's Registered Office, No. 16, Strand, on Friday, the 14th February, at noon.

MACKINNON, MACKENZIE & Co., Agents.

(3517—1)

Goosery Cotton Mills Company, "Limited"

THE Fifty-third Half-yearly General Meeting of Shareholders will be held at the Company's Registered Office, No. 101, Clive Street, on Monday, the 17th instant, at 12 noon, to receive the Directors' Report and Accounts for the half-year ended 31st December 1889, the declaration of the half yearly dividend, and for such other business as may be brought forward.

The Share Register will be closed from this date to the 17th instant.

By order of the Directors,

D. McL. MORRISON, Secretary.

Calcutta, the 5th February 1890. (3516—1)

Dehra-Doon Tea Company, Limited.

NOTICE is hereby given that the Fifty-third Half-yearly Ordinary General Meeting of the Shareholders will be held at the Mussoorie Bank, Dehra North-Western Provinces, on the 28th February 1890, at noon.

A. J. C. SEYMOUR, Offg. Secretary.

Dehra Doon, the 7th February 1890. (3528—1)

Statement of the Affairs of the Bank of Bengal for the week ending 4th February 1890.

LIABILITIES.	Rs.	A.	P.	ASSETS.	Rs	A.	P.
Capital paid up	2,00,00,000	0	0	Government Securities	15,24,485	0	0
Reserve Fund	58,00,000	0	0	Other authorized Investments	76,59,946	0	0
Public Deposits at Head Office ... .. Rs. 92,71,700 8 1				Loans on Government and other authorized Securities	1,54 62,515	1	8
Ditto ditto at Branches ,, 97,80,004 9 10	1,90 51,705	1	11	Accounts of credit on ditto ditto	1 06 39,650	14	9
Other Deposits at Head Office and Branches	3,01,01,522	12	11	Bills discounted and purchased	2,03 13,013	8	5
Bank Post Bills, &c.	4,80,332	11	9	Balances with other Banks	10,00,378	15	4
Sundries	9,63,627	5	4	Bullion	2,43,492	4	0
				Dead Stock	12,28 371	9	2
				Stamps	13 692	1	0
				Sundries	3,09,305	11	6
					5,83,23,851	1	10
				Cash and Currency Notes at Head Office Rs. 62,69,320 4 8			
				Cash and Currency Notes at Branches ... . ,, 1,17,34,016 9 5	1,80,03,336 14	1	
Rupees ...	7 63 97,187	15	11	Rupees ..	7,63,97,187	15	11

BANK OF BENGAL
Calcutta, 6th February 1890.

R. L. BIRD, Chief Accty.
Rate for Demand Loans 9 per cent.
Percentage 35·5.

By order of the Directors.
W. D. CRUICKSHANK,
Secy. and Treasurer
(3519—1)

Notices of deaths sent to the Administrator-General of Bengal under Section 64 of Act II of 1874.

Name of deceased.	Place of death	Date of death	By whom and when death reported.	REMARKS.
J. Rogers	Giuliea Hospital of the Bengal Nagpore Railway.	10th Dec. 1889 ...	Deputy Commissioner of Singbhoom, on the 20th December 1889.	Intestate. Assets not known. No application for administration.
Mrs. Sarah Valentine Chapman.	Kuma n	30th ,, ,, ..	Assistant Commissioner, Naini Tal, on the 11th January 1890.	Intestate. No property left Next-of-kin Mrs. Harris and other children
J. H. Young, Engineer, S S. *Marwari*.	On the river in Assam was drowned.	18th Nov. ,, ..	Officiating Judge, Assam Valley District, on the 9th January 1890.	Intestate. Assets about Rs. 70-14. Next-of-kin father, in Glasgow.
Epphan Seistan	Rui Ghate, district Saharunpur.	3rd Sept. ,, .	District Judge of Agra, on the 5th January 1890.	Will left. F. Seistan, nephew and adopted son, has applied for letters of administration to the Court of the District Judge, Agra. Citation issued. Assets Rs. 14,490.
Henry LeMesurier	Darjeeling	28th Dec. ,, ..	Officiating District Judge of Dinagepore, on the 22nd January 1890.	Intestate. Assets about Rs. 264-13-6. Father in Canada. Nearest relative in India Mr. G. G. LeMesurier, Poomong, Darjeeling.
Dr. J. B. Briscbe	Ditto	12th Jan. 1890 ...	Officiating District Judge of Dinagepore, on the 23rd January 1890.	Will left. Assets about Rs. 9,000. Widow sole executrix under the will has applied for probate to the Court of the Deputy Commissioner of Darjeeling.
T. Gordon Stoker, late Manager of the Badderpore Tea Estate, achar.	Kingston, Ireland ...	7th Dec. 1889 ...	Deputy Commissioner of Cachar, on the 21st January 1890.	Will left in England. Property of small value in the possession of Mr. W. L. Clark, Cachar. No application for administration
Arthur Arnel, Driver, North-Western Railway.	Sibi	13th ,, ,, ...	Political Agent, Thal Chotiah, on the 27th January 1890.	Intestate. Property not known. No application for administration.

L. P. D. BROUGHTON,
Administrator-General of Bengal.

1, COUNCIL HOUSE STREET; CALCUTTA, *The 7th February* 1890.

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sál beams and scantlings supplied from this depôt will be as follows:—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
23 ,, ,, 2-12 ,,
23 ,, ,, 2-14 ,,
24 ,, ,, 3 ,,

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 ,, 2-4 ,,
Under 7 feet ,, 2 ,,

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates:—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates: per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

Treasure Trove.

IT is hereby notified, under section 5 of the Indian Treasure Trove Act (VI of 1878), that on or about the 20th April 1889, the undermentioned articles, valued in the aggregate at Rs. 100, were found by Parai Suppan, son of Kasumadan, and Parai Karuppan, son of Suppan, buried in a wet field No. 110C, belonging to one Kuppusami Aiyar of Bramadesam village in Ambasamudram taluq, Tinnevelly district, in the Presidency of Madras :—

Description of articles.	Approximate value.
	Rs.
Four copper idols	100

All persons claiming the said treasure or any part thereof are hereby required to appear personally or by duly authorized agents before the Collector of Tinnevelly, at his office at Tinnevelly, on the 16th day of June 1890, in order to the matter being enquired into and determined in accordance with the provisions of the Act.

J. H. A. TREMENHEERE, Acting Collector.

Road Cess Notification.

DISTRICT BALASORE.

IT is hereby notified for general information that, under section 46 of Act III (B.C.) of 1885, the District Board of Balasore have, by a resolution of their meeting held on the 1st February 1890, determined to levy road cess for the ensuing cess year 1890-91 at the maximum rate of six pies in the rupee on the annual value of lands.

R. CORNISH, Chairman, District Board, Balasore.

Road Cess Notifiction.

DISTRICT CHITTAGONG.

IT is hereby notified for general information that, under section 46 of Act III (B.C.) of 1885, the District Board of Chittagong have determined that the road cess for the next year 1890-91 should be levied at the maximum rate, viz., one-half anna on each rupee of the annual value of lands.

C. P. CASPERSZ, Chairman.

Chittagong District Board's Office, the 31st January 1890.

Road Cess Notification.

IT is hereby notified for general information that, under section 46 of the Bengal Local Self-Government Act, No. III (B.C.) of 1885, the District Board of Purneah, by a resolution of their meeting of the 3rd February 1890, have determined to levy road cess for the year 1890-91 at the full rate, *i.e.*, 2 pice per rupee on the annual value of land, &c.

SURENDRA NATH MOZUMDAR, Vice-Chairman, District Board.

Purneah District Board's Office, the 5th February 1890.

Notice.

IT is hereby notified for general information that the District Board of Mymensingh has, at a Special Meeting held on the 8th ultimo, determined, under section 46 of the Bengal Local Self-Government Act III of 1885, the road cess in the district to be levied during the ensuing year 1890-91 at the maximum rate of one-half anna per rupee, on the annual value of lands and on the annual net profits from the mines, quarries, tramways, railways and other immoveable property.

R. C. DUTT, Chairman.

Mymensingh District Board's Office, the 8th February 1890.

Notification.

THE Zemindari Dâk Tax in the district of Sarun, for the year 1890-91, is fixed at the rate of 12 annas per cent. per annum on the sudder jumma of estates paying a revenue amounting to Rs. 50 and over.

The amount due for each estate is payable in two instalments—the first being due on the 28th March 1890, and the second on the 28th September 1890.

B. G. GEIDT, For Magistrate.

Notice.

MR. R. L. BISS, Chief Accountant and Deputy Secretary, having retired from the Bank's service, the Directors have been pleased to make the following change in the establishment :—

Mr. F. T. Lewis, Superintendent, Public Debt Office, to officiate as Chief Accountant and Deputy Secretary.

By order of the Directors,

W. D. CRUICKSHANK,
(3535—1) Secretary and Treasurer.

Administrator-General's Office.

NOTICE.

ADMITTED claims against the undermentioned estates are payable on Tuesday and Friday as usual—

ESTATES.	Claims or dividends.	Rate of dividend per rupee.
* Egerton, W. H., late Assistant-Comptroller of Burma.	Claims in full.	
Gilbanks, J. C., late of Rangoon in Burmah, Barrister-at-Law.	1st dividend at 6 annas 5·85 pie.	
Taylor, John, late an Insurance Agent, carrying on business at No. 19, Radha Bazar.	1st dividend at 3 annas 10·25 pie.	

N. B.—The surplus of the estate marked * is carried over to the account for the persons interested, and no other claims against the estate can be admitted. Persons presenting receipts for payment are requested at the same time to produce the registry certificates which have been granted to them from this office.

L. P. D. BROUGHTON, Administrator-General.
Calcutta, the 10th February 1890. (3531—1)

SEALED tenders will be received by the undersigned for the undermentioned works up to 3 P.M., on Saturday, the 15th February 1890 —

Description of works or supplies of materials.	Value of works or materials to be supplied.	Names of roads.	Date of commencement of works or deliveries of materials.	Date of completion of works or deliveries of materials.	Amount of earnest money to accompany each tender in currency notes.	Deposit money required to be paid by successful tenderers.
	Rs.		1890.	1890.	Rs.	Rs.
90,000 c. ft. metal of half vitrified brick jhama.	8,850	Kishnaghur and Buggoola road.	20th February.	31st May	200	885
40,000 c. ft. metal of half vitrified brick jhama.	3,800	Ranaghat and Santipore road.	Ditto ..	Ditto ...	100	380
20,000 c. ft. metal of half vitrified brick jhama.	2,100	Khoksa Railway station to Khoksa Bazar road.	Ditto ...	Ditto ...	100	210

1. Prices of materials to be supplied will be payable after the expiration of the current year.

2. The undersigned does not bind himself to accept the lowest or any tender.

3. Thirty thousand cubic feet of the metal required for the Kishnaghur and Buggoola road to be of pugged clay.

4. All metal to be broken and stacked on the roads in accordance with the standard specification for local works, Presidency Division.

5. For further particulars apply to the office of the undersigned.

DWARKA NATH SARKAR, District Engineer, Nuddea.

Kishnaghur, District Engineer's Office, the 3rd February 1890. (3523—1)

NOTICE is hereby given that Mr. George Aitken Ormiston has been admitted a partner in our firm as from 1st January last.

MACKNIGHT, ANDERSON & Co.

Calcutta, 10th February 1890. (3524—1)

TARA PRASANNA GUHA, B.L., intends to apply for enrolment as a Vakeel of the High Court.

(3496—4)

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

In the matter of BHUGWANJEE CURSONJEE, an insolvent.

On Thursday, the 2nd day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

Insolvent in person. (3504—2)

In the matter of SOORENDRO NATH SEN, an insolvent.

On Thursday, the 2nd day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

E. J. Fink, Attorney. (3505—2)

In the matter of GOPEE KANTO SEN, an insolvent.

On Friday, the 10th day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

M. M. Chatterjee, Attorney. (3506—2)

In the matter of LEONTIUS BRIDGNELL NYSS, an insolvent.

On Monday, the 6th day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday, the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

Insolvent in person. (3507—2)

In the matter of LEOZANDER and RAOUL QUILLET, insolvents.

On Saturday, the 11th day of January last, it was ordered that the matters of the petition of the said insolvents be heard on Saturday, the 1st day of March next, and that the said insolvents do then attend to be examined before the said Court.

Dignam, Robinson and Sparkes, Attorneys. (3508-2)

In the matter of THOMAS RICHARDSON FRENCH, an insolvent.

On Wednesday, the 29th day of January last, it was ordered that the matters of the petition of the said insolvent be heard on Saturday the 1st day of March next, and that the said insolvent do then attend to be examined before the said Court.

C. G. Lewis, Attorney. (3509—2)

Chief Clerk's Office, the 4th February 1890.

In the matter of BHUGUN CHUNDER COONDOO, an insolvent.

On Saturday, the 2nd day of March last, by an order of this Court, the said insolvent was adjudged entitled to his personal discharge under the Act XI Vic., Chapter XXI as to all persons named in his schedule as creditors or claiming to be creditors respectively.

Insolvent in person. (3536—1)

In the matter of MADHOOSOODUN SHAW, an insolvent.

On Saturday, the 11th day of January, last by an order of this Court, the said insolvent was adjudged entitled to his personal discharge under the Act XI Vic., Chapter XXI as to all persons named in his schedule as creditors or claiming to be creditors respectively.

K. K. Goho, Attorney. (3537—1)

In the matter of BUNSIDHUR SINGHANIA, lately carrying on business as piece-goods dealer and commission agent at No. 68, Cotton Street, in the town of Calcutta, under the name, style and firm of KRIPARAM SOOKDYAL, an insolvent.

On Wednesday, the 15th day of January last, it was, on the petition of Jumna Dhur, Joogulkissore, creditors of the said insolvent, adjudged that the said Bunsidhur Singhania hath committed an act of insolvency, under the provisions of the Act XI Vic., Chapter XXI, and by another order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

E. J. Fink, Attorney. (3538—2)

In the matter of SUJUN COOMAR AND BUNGSEEDHUR of No 90, Cross Street, in the Town of Calcutta, lately trading in co-partnership as merchants and agents, under the style and firm of Himutram Sujun Coomar, insolvents.

On Monday, the 27th day of January last, it was, on the petition of Luchme Chand, a creditor of the said insolvents, adjudged that the said Sujun Coomar and Bungseedhur have committed an act of insolvency under the provisions of the Act XI Vic., Chapter XXI, and by another order of the same date the estate and effects of the said insolvents were vested in the Official Assignee.

C. F. Pittar, Attorney. (3539—2)

In the matter of THOMAS BROWNING COOKSON, an insolvent.

On Saturday, the 1st day of February instant, an account of the receipts and disbursements of the Official Assignee, from the 10th day of February 1888 to the 29th day of January last, was filed in the office of the Chief Clerk, and it was ordered that Saturday, the 1st day of March next, be appointed for the further hearing of this matter for the purpose of making a dividend.

☞ Any creditor or other person interested who may intend to establish or oppose any claim upon the estate of the said insolvent may attend and be heard, having given notice to the Chief Clerk three clear days before the day of hearing.

A. B. Miller, Official Assignee. (3540—1)

In the matter of EDWARD JOAKIM GRACIES, an insolvent.

On Saturday, the 1st day of February instant, it was ordered that the Assignee do pay and divide the sum of Rs. 252-13-5 to and amongst all the creditors upon the estate of the said insolvent as a dividend at the rate of Rs. 43 per cent. upon such of the debts as are admitted in the schedule of the said insolvent, and such claims as shall be proved or substantiated to the satisfaction of the said Assignee in proportion to their several debts, with leave to the Official Assignee to apply to this Court from time to time for directions respecting any debts or any other matter or thing relating thereto.

A. B. Miller, Official Assignee. (3541—1)

In the matter of CARAPIET MARTYROSE ARATHOON, an insolvent.

On Saturday, the 1st day of February instant, it was ordered that the Assignee do pay and divide the sum of Rs. 422-2-8 to and amongst all the creditors upon the estate of the said insolvent as a dividend at the rate of 10 annas per cent. upon such of the debts as are admitted in the schedule of the said insolvent, and such claims as shall be proved or substantiated to the satisfaction of the said Assignee in proportion to their several debts, with leave to the Official Assignee to apply to this Court from time to time for directions respecting any debts or any other matter or thing relating thereto.

A. B. Miller, Official Assignee. (3542—1)

Chief Clerk's Office, the 11th day of February 1890.

In the Court of the District Judge at Patna.

In the matter of the petition of Sheo Din Sahu, insolvent.

NOTICE is hereby given that Sheo Din Sahu of Dinapore Shahzadpore, pergunnah Phulwari, district Patna, has been declared insolvent, and that the Nazir of this Court has been appointed Receiver of his property under the order of this Court, dated the 2nd August 1889. Persons having claims against the insolvent are required to prove them in this Court on the 28th February 1890, which is fixed for framing the schedule.

J. TWEEDIE, Offg District Judge.

Bankipore, the 31st January 1890. (3499—1)

POSTAL NOTICES.

Unclaimed Letters held in the Calcutta General Post Office on 11th February 1890.

Ainslie, J. H.	Kustermann, S. & Co.
Ashmore, W, C.	McNutty, J. H.
Butler, Darley & Co.	Simpson, G. T.
Cohen, A. M.	Watson, W.
Glyn, C.	

Letters marked Care of "Post Office."

Ardesher, C,
Babonau, E. Hugh,
Baldwin, W. H.
Baragerey, L.
Barker, F. W.
Baxter, Mrs.
Belitski, R.
Berkeley, C. M.
Boland, J.
Brown, W.
Bery, Adolph.
Broomsgrove, F.
Brunton, Mrs. J.
Carbery, Lady.
Chatterton, J.
Close, H.
Comar, Mrs. A.
Cooper, W.
Courage, R.
Davis, Mrs. G.
DePalma, Urbans.
Dickson, Mrs. E.
Douglas, G. P. H.
Drakeford, A.
Duclere, G. P.
Dunlo, Viscount.
Dymond, G. F.
Elliott, K.
Filleul Revd., S. E. V.
Fisk, F. M.
Francis, E. S. L.
Flack, F. F.
Flaherty, O. H.
Fletcher, Neil.
Forshaw, H.
Fraiser, H. C.
Fraiser, Miss F.
Francis, A. M.
Gallwey, C. H.
Gellett, Cecil S.
Glover, W. E.
Godwin, George.
Green, W. W.
Gantzman, Charles.
Hamilton, C. J.
Hamilton, J. R.
Handcock, J. G.
Hunter, H. C.
Hardy, Mrs. M.
Hawksworth, Mrs.
Henderson, W. H.
Hewett, F. J.
Hilton, R. W.
Horus, Miss M. L.
Jackson, T.
Johannessen, O. C.
Keane, J. J.
Kennard, F.
Keogh, Mrs. M. A.
Klaymer, Mr.
Lach, R.
Lamb, E. G.
Langer, J. O.
Lindeman, L. K.
Linton, C. E.
Livesey, Thomas.
Livewright, R.
Lloyd, Willis.
Long, W.
MacMaster, Donald.
Mackenzie, J.
Mann, E. H.
Major, A.
Manual, A. M.
Matthews, J. R.
Mathewson, F.
Maxwell, Sir, J. S.
May, J. J.
Mayes, W. H.
McAdoo, Mr.
McKenzie, Mrs. D.
McNair, Miss.
McSmith, D.
Mifsud George.
Morshead, L.
Murphy, John.
Newby, C. R. A.
Ogden, J.
O'Mealy, Capt. D'Oyly.
Penn, Mrs.
Platts, Mrs. S. K.
Powell, F.
Prenter, Miss.
Reunrick, F. B. M.
Rennard, J. R.
Robinson, G.
Rosenstern, Otto.
Roskell, Richard.
Rubie, Phil C.
Sano, T.
Searle, F. W.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sisam, Rev. W. B.
Skinner, R. H.
Smith, M. O.
Smith, W.
Smith, Mrs. Thomas.
Taylor, C.
Thomas, G. T.
Thomson, Captain W. A.
Thompson and Co.
Thompson, G.
Uphill, T.
Ursitc, Johan.
Waddell, Alex.
Walter, F.
Walter, Amherst.
Webster, Mrs.

Registered Letters.

Broomsgrove, F.
Edwards, C.
Guiseppe, Celestini.
James, L. E.
MacLeod, D. J.
Marsland, W.
Smith, M. Oswald.

Unclaimed Letters held in the Barrackpore Post Office on the 10th February 1890.

Baker, E.
Balfour, H. T.
Burst, G. H.
Bruce, A.
Chutterberg, Col. T.
Chadburn, Mrs. J. E.
Dubery, E.
Ferguson, H. F.
Harding, H. R.
Lloyd, W.
Mertan, C. W.
Palore, L.
Thompson, Jas.

E. HUTTON,
Presidency Postmaster, Calcutta.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	18th Feb. ...	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets).	17th „ ...	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	24th „ ...	Ditto.
Australia, New Zealand, and Tasmania.	24th „ ...	Ditto.
Madras, Pondicherry, Ceylon, Batavia, Singapore and China.	20th „ ...	Per French steamer *Niemen*.
Madras and Colombo ...	19th „ ...	Per P. & O. steamer *Peshawur*.
Straits, China and Japan ...	18th „ ...	Per str. *A. Apcar*.
Rangoon and Moulmein ...	12th „ ...	Ditto *Madura*.
Ditto ditto ...	14th „ ...	Ditto *Bhundara*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	12th „ ...	Ditto *Kistna*.
Mauritius	13th „ ...	Ditto *Wardha*.

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

On the day of despatch of the Mail for Europe, the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 8-30 P.M., and late letters and papers will be received up to 9 P.M. On other days the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 7 P.M., and foreign letters and papers fully prepaid, bearing an extra stamp of four annas, will be received up to 7-30 P.M. for despatch by any Foreign Mails despatched the same night.

E. HUTTON, Presidency Postmaster.
General Post Office, the 11th February 1890.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 7th February 1890.

Name of river.	Reach of river.	Least depth of water soundings.	Remarks.
		Ft. In.	
Bhagirati.	Entrance from Ganges ...	0 6	At mouth entrance practically closed.
	Thence to Nurpur	0 9	Dhopipara.
	From Nurpur to Jungipur ...	1 0	Bangabari.
	„ Jungipur to Berhampur	1 0	Kesadanga.
	„ Berhampur to Cutwa ...	1 6	Harinathpore.
	„ Cutwa to Nuddea ...	2 3	Nidoy.
Bhyrub-Jelinghi.	Entrance from Ganges ...	6 0	
	Thence to Akriganj	5 6	
	Akriganj to junction of the Bhyrub and Jelinghi ...	4 0	Chukjama.
	Thence to Patkabari	5 0	Amtola.
	Patkabari to Nuddea	3 9	Kalinagur.
Matabanga.	Entrance from Ganges ...	1 6	
	Thence to Chnypara ...	0 10	Sircarpara.
	From Chnypara to Shikarpur	0 6	Pragpore.
	„ Shikarpur to Boalia ...	0 6	Shampore.
	„ Boalia to Chuadanga ...	2 6	Simlmari.
	„ Chuadanga to Kissenganj and Hanskhali...	2 3	Bastupore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A. M.	Feet.	Feet.	
Ganges.	Sahebganj ...	8-2-90	6	1·33	66·07	Below zero.
	Rampore Boalia	8-2-90	12	0·84	42·84	
	Entrance of Bhagirati ...	8-2-90	7	2·00	47·31	
	Entrance of Bhyrub-Jelinghi ..	8-2-90	...	7·08	45·44	
	Entrance of Matabanga ...	8-2-90	...	2·50	.....	
Bhagirati...	Berhampur ...	10-2-90	12	2·20	35·99	
Jelinghi ...	Kishnaghur ...	7-2-90	...	3·50	12·39	
	Saroopgunge ...	8-2-90	6	3·16	7·46	
Matabanga	Hanskhali ...	7-2-90	...	2·50	13·35	

PURNA CHANDRA BOSE,
For Exe. Engr., Nuddea Rivers Division.
Berhampore, the 10th February 1890.

AT the Meteorological Office, No. 5, Russell Street, the following official publications:—

Meteorological Report of		1867	...	Rs. 0	12	per copy.
Ditto	ditto	1868	...	„ 1	8	„
Ditto	ditto	1869	...	„ 2	4	„
Ditto	ditto	1870	...	„ 2	6	„
Ditto	ditto	1871	...	„ 2	8	„
Ditto	ditto	1872	...	„ 3	0	„
Ditto	ditto	1873	...	„ 3	0	„
Ditto	ditto	1874	...	„ 3	0	„
Administration Report of		1870-71	...	„ 0	4	„
Ditto	ditto	1871-72	...	„ 0	4	„
Ditto	ditto	1872-73	...	„ 0	4	„
Ditto	ditto	1873-74	...	„ 0	4	„
Ditto	ditto	1874-75	...	„ 0	4	„
A table of the average monthly and annual rainfall at 98 Stations in Northern India			...	„ 0	4	„
Report of the Midnapore and Burdwan cyclone of the 15th and 16th October 1874			...	„ 2	8	„

The above are also to be obtained at the same prices at Messrs. Thacker, Spink & Co., No. 5, Government Place.

JOHN ELIOT, M.A., *Meteorological Reporter to the Govt. of Bengal.*

CALCUTTA, the 26th August 1875.

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ALEX. PEDLER,
Offg. Meteorological Reporter to the Govt. of Bengal.
Meteorological Office, Bengal, the 17th March 1886.

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H. A. D. PHILLIPS,
Under-Secy. to the Govt. of Bengal.
The 24th November 1886.

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R. H. WILSON,
Offg. Secy. to the Govt. of Bengal.

The 24th February 1886.

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[REGISTERED No. 29.]

No. 7 of 1890.

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, FEBRUARY 12, 1890.

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ANNUAL AWARD OF A MEDAL TO THE MOZUFFERPORE ZILLAH SCHOOL.

GENERAL DEPARTMENT—EDUCATION.

Calcutta, the 5th February, 1890.

RESOLUTION.

READ—

A letter from the Commissioner of Patna, No. 180G, dated the 22nd March, 1889.

Read also—

A letter from the Director of Public Instruction, No. 2023, dated the 5th April, 1889.

IN commemoration of the visit of the Lieutenant-Governor to Sursund in the district of Mozufferpore, Mussamut Dulhin Golab Kuer and her son-in-law, Babu Damodar Deb Narain Singh, have paid into the Mozufferpore Treasury the sum of Rs. 900 for investment in Government securities as an endowment for the annual award of a medal, to be designated the "Bayley Medal," to the student of the Mozufferpore Zillah School obtaining the highest marks in Sanskrit at the University Entrance Examination of each year. The Lieutenant-Governor is pleased to accept the donation, and tenders his thanks to the donors for their liberality. The Magistrate of Mozufferpore will be the administrator of the fund.

ORDER.—Ordered, that a copy of this Resolution be forwarded to the Commissioner of Patna for information and for communication to the donors, and to the Director of Public Instruction for information.

Ordered also, that a copy of this Resolution be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Government of Bengal.

INCIDENCE OF TOLLS IN THE CIRCULAR AND EASTERN CANALS.

PUBLIC WORKS DEPARTMENT, BENGAL,--IRRIGATION.

RESOLUTION.

No. 238 *I.A.*

Dated Calcutta, the 11th February 1890.

READ—

(1) Memorial from the Bengal National Chamber of Commerce, dated 17th November 1887.
(2) Letter No. 2455T., from Agent, Bengal Central Railway, dated 24th November 1887.
(3) Bengal Government Notifications Nos. 349-350, dated 17th September 1889.
(4) Letter from Manager, Eastern Bengal Railway, No. 821, dated 19th October 1889.
(5) Bengal Government Notification No. 382, dated 21st October 1889.
(6) Letter from Secretary, Young Men's Association, Senhati, dated 6th November 1889.
(7) Letter from Messrs. Hoare, Miller and Company, No. 904, dated 10th December 1889.
(8) Bengal Government Notification No. 455, dated 17th December 1889.

In regard to the complaints which have been made against the tolls charged on boats using the channels included in the "Circular Canal Route," the Lieutenant-Governor has arrived at the conclusion that it is advisable to enquire into the system of measurements and incidence of tolls charged under the rules and notifications now in force.

2. *It is resolved* therefore to appoint, for the above purpose, a Commission consisting of—

Major McArthur, R.E. ... ... *President.*
Mr. W. C. Boyce, District Traffic Superintendent, Eastern Bengal Railway ... ... } *Members.*
Baboo Sitanath Roy, Honorary Secretary, Bengal National Chamber of Commerce ... ... } *Members.*

3. The enquiry will embrace the following points—

1. Present system of boat measurement, and whether it can be improved in the direction of (*a*) greater accuracy of gross tonnage or (*b*) ascertaining net tonnage.
2. The incidence of existing rates on the goods carried in the Canals; whether the rates should be revised; and whether differential rates should be introduced or not.
3. The boundaries within which the tolls are levied.
4. The practicability of levying tolls on the basis of "challans" of the merchants or others whose goods are carried.

ORDER.—Ordered that copies of this Resolution be sent to the President and members named to serve on the Commission for information and guidance, and to the Revenue, Appointment and Financial Departments of this Government, the Board of Revenue, the Commissioner of the Presidency Division, and the Examiner of Public Works Accounts, Bengal, for information.

By order of the Lieutenant-Governor of Bengal,

J. M. McNEILE, *Col.*, R.E.,
Secretary to the Government of Bengal,
P. W. Dept.

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PUBLIC WORKS DEPARTMENT, BENGAL,—IRRIGATION.

RESOLUTION.

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By order of the Lieutenant-Governor of Bengal,

J. M. McNEILE, *Col.*, R.E.,
Secretary to the Government of Bengal,
P. W. Dept.

RESOLUTION ON THE REPORT OF THE COMMITTEE APPOINTED TO ENQUIRE INTO THE ADMINISTRATION OF THE SONE CANALS.

No. 2061.

Government of Bengal.

PUBLIC WORKS DEPARTMENT.

Dated Calcutta, the 4th February 1890.

RESOLUTION.

READ—

1. Resolution No. 1884I., dated Calcutta, the 11th of November 1887, by the Government of Bengal, Public Works Department, appointing a Committee to enquire into the Administration of the Sone Canals.
2. Report, dated the 13th March 1888, of the Committee appointed to enquire into the Administration of the Sone Canals.
3. Note, dated the 14th of January 1890, by Colonel C. W. I. Harrison, R.E., Chief Engineer, Bengal, on the above-mentioned report.
4. Minute, dated the 15th June 1888, by the Hon'ble F. M. Halliday.
5. Letter, dated the 25th June 1888, from the Board of Revenue, Lower Provinces.
6. Letter, dated the 30th June 1888, from Mr. L. H. Mylne, of Behoea, Shahabad.
7. Note, dated the 10th July 1888, by the Hon'ble Mr. Nolan, on the report of the Committee appointed to enquire into the Administration of the Sone Canals.
8. Letter No. 849I., of date the 31st August 1888, from Mr. A. B. Power, Collector of Shahabad.
9. Note, dated the 14th of December 1888, by Mr. C. W. Odling, Superintending Engineer, Sone Circle, on irrigation operations from the Sone Canals during the *kharif* season of 1888-89.
10. Note, dated the 4th of February 1889, by Mr. H. Luson, C.S., upon crop experiments in canal-irrigated *dhan* taken in the Sone Circle during the *kharif* season of 1888-89.
11. Report, dated the 20th of March 1889, by Mr. H. Luson, C.S., upon certain points connected with the administration of the Sone Canals.
12. Pamphlet by Baboo Kandhji Sahai, B.A., B.L., on certain aspects of the Sone irrigation question, Dinapore, 1889, received with a letter, dated 26th June 1889.
13. Revenue report, dated the 18th September 1889, by the Superintending Engineer, on the Sone Canals for the year 1888-89.
14. Note, dated the 12th of January 1890, by Mr. C. W. Odling, Superintending Engineer, Sone Circle, on irrigation operations from the Sone Canals during the *kharif* season 1889-90.
15. Note, dated the 14th January 1890, by Mr. C. W. Odling, Superintending Engineer, on Drainage Works carried out and still required in connection with the Sone Canals.

The Lieutenant-Governor, when on tour in Behar in November 1887, received a memorial, signed by certain leading residents of the Shahabad and Patna districts, complaining of the system under which lands irrigated by the Sone Canals were assessed and the water-rates collected. Sir Steuart Bayley travelled by road through the part of the area irrigated in which complaints were most numerous and by steamer down the Buxar Canal. On a full consideration of the allegations made in the memorial and those contained in separate letters received from influential landholders, His Honour came to the conclusion that it was desirable to appoint a Committee to examine into the working of the entire system, with a view to provide remedies, where possible, for admitted defects, and to improve the rules and, if necessary, the law under which the system was administered.

2. The Committee, which was composed of Mr. H. J. S. Cotton, C.S., as President, with Mr. C. W. Odling, M.E, M.I.C.E., and Rai Jai Prokash Lall, Bahadur, as Members, met at Arrah on the 1st of December 1887, and, after local investigations extending over those parts of the Shahabad, Patna and Gya districts traversed by the canals, submitted a report, dated the 13th March 1888, signed by all the Members of the Committee, but accompanied by

dissents by Mr. C. W. Odling and Rai Jai Prokash Lall, Bahadur, on material points. The report may be taken to be in the main that of Mr. Cotton, the President, who is, however, in regard to most of the recommendations supported by the Departmental member of the Committee.

3. The report of the Committee is clear and well arranged and accompanied by a series of appendices containing a record of the evidence, written or oral, on which the conclusions drawn and recommendations made are based. Very considerable delay has occurred in dealing with the report. The recommendations made were submitted to the criticism of various local officers, but important action was taken at once to carry out some of the Committee's proposals concerning which there was no room for doubt. A series of practical experiments touching on the question of yield of crops and indirectly on that of profit obtainable from irrigation were carried out under the superintendence of Mr. Luson. The Chief Engineer has paid two extended visits to Shahabad to watch the working of the system at different seasons, and he has now recorded the note quoted at the head of the Resolution. In that note he has explained the origin of the system pursued, and has noticed* the changes which have been introduced since the Committee was appointed—changes which suffice to justify the appointment of the Committee, and which show how beneficial their principal recommendations have been. The note brings together on various points the facts and considerations justifying the action of the Department where it has been impugned, and after explaining the important effect which the use of canal water has had in substituting paddy cultivation for that of *rabi* crops over a large area, and the bearing of this fact on the main questions at issue, it discusses the proposed alterations and explains how far, in the opinion of the Chief Engineer, the recommendations of the Committee are in themselves feasible and desirable as the law now stands.

* Paragraphs 17, 24, 56, 64, 69, 72 and 116.

4. The area irrigable by the Sone Canals, in the *kharif* season at least, is practically measured by the water supply procurable. Some 1,300,000 acres are commanded, of which it would be possible, with the supply of water ordinarily available in the river Sone, to irrigate 300,000 acres in the *kharif* and probably the same area in the *rabi* season. When the canals were in course of construction it was found that the lands commanded were about equally divided between *kharif* and *rabi* crops, and it was not anticipated that any change in the nature of the crop would follow the advent of irrigation with canal water. It was, in fact, assumed that of the area irrigated half would be cultivated with *kharif* and half with *rabi* crops. Indeed, the fear expressed by Sir G. Campbell in 1871 was that there would not be a sufficient supply of water available for the irrigation of the winter crops, and he urged that the canal should be designed with reference to the minimum supply procurable from the river Sone in that season in the driest of years. It was expected that a higher water-rate would be obtainable from *rabi* than from *kharif* cultivation.

5. The canals and distributaries were ordinarily run on the ridges, the lands bordering which, being high, were usually cultivated with winter or *rabi* crops. So soon as irrigation from the canals was commenced, there was a rapid change in the character of the cultivation. Wherever canal water is regularly available *rabi* crops have disappeared, and rice has taken their place. In the opinion of a landholder peculiarly well qualified to judge on the point, nothing but the absolute refusal of canal water for paddy would compel the ryots now to forego the cultivation of that crop. This change, which in the earlier years of canal irrigation was in process of development, added much to the difficulties necessarily experienced by canal officers in introducing a satisfactory system of irrigation.

6. An endeavour was in the first instance made to follow, as far as the law admitted, the system adopted in the Upper Provinces. There no written application for water is necessary, but, an outlet once fixed, cultivators are, subject to a system of rotation as regards supply, permitted to take water much as they please. The discharge of the outlets of a village are fixed and ordinarily do not admit of more than one-seventh of the cultivated area being under *kharif* crops requiring canal water. If a greater proportion is so cultivated it is at the risk of the villagers, who are consequently careful to limit the cultiva-

tion within the area for which the supply allowed is in dry years, with the utmost economy, sufficient.

In Bengal no attempt was made to limit the area to be irrigated in any village, and whilst written applications were required, but little care was taken to restrict the supply of water to the areas included therein. The departmental arrangements failed to provide against waste and against the water finding its way to the lands of other persons than those who had applied for it. The cultivators themselves took little thought in the matter, but relied on the supply which was enough for rice transplantation being equally sufficient for maturing the crops originally watered, irrespective of rainfall. If no rain fell in the *hatiya*, not only was more water required for crops already irrigated, but there was a further demand for rice sown on low lands, which then also looked to the canals for a supply sufficient to save the crop.

Whenever the supply of the outlet did not suffice for the entire area requiring irrigation, the complaint was of 'deficiency and irregularity of supply.' If rain fell whilst the crops were being or had lately been watered for the first time, disputes arose as to whether water-rates were leviable. The objection was emphasized when the fields assessed were not included in a written application since the case then became one of 'unauthorized irrigation.'

7. The recommendations made by the Committee involve not only changes in the system of administration followed, but reductions on various grounds in the sums charged as water-rates. It is argued in the report that the experiments yearly made as to the yield of crops irrigated by the canals and other means cannot be relied on, that the productive powers of certain descriptions of soil deteriorated after canal water had been used for a few years, that crops produced by the aid of canal water are inferior compared to those yielded on lands irrigated from *aharas*, and that the natural irrigation facilities formerly available had been destroyed or injured by the canals. Those were points which could only be satisfactorily investigated by an officer who could devote his whole time to the detailed investigations necessary and under whose directions a complete series of crop experiments could be carried out.

8. The services of a covenanted civilian, Mr. Luson, were made available. That officer had previously acted as Joint-Magistrate of Shahabad, and was at the time of his deputation Officiating Collector of Gya: so that he already possessed some knowledge of the districts traversed by the canals, and was therefore at once, when relieved on the 21st October 1889, able to commence the detailed work required. His report is dated the 29th March 1889. There was a total failure of the *hatiya* and *chitra* rains in 1888—in fact there was practically no rain from the 7th of September to the 29th of November, so that the strain on the canals was as great as it is possible that it can ever be in future, affording an excellent opportunity for determining the area they can satisfactorily irrigate under the most unfavourable circumstances. There has again in 1889 been a partial failure in the autumn rains, so that the result of two years' irrigation operations, in which the most prominent errors originally committed had been corrected, can be considered. Colonel Harrison spent October 1888 and May 1889 in studying the subject on the spot.

9. There were, however, certain defects brought to light by the Committee which admitted of reform at once. The chief of these were the failure of canal officers to exercise sufficient control over the supply of water through the outlet, and to take effective measures to prevent irrigation without permit. With the approval of the Chief Engineer, the Superintending Engineer, on the 21st of March 1888, issued circular orders pointing out in what respects an alteration in practice was required, and also in what points sufficiently minute attention had not been paid to the law and the rules. Canal officers were directed, when at head-quarters, to receive complaints daily and to register each complaint separately, though several might be received on the same day from the same village and raising objection to the demand for identical causes. Instructions were given that five-year leases were not to be granted unless proper village channels actually existed when the lease was sanctioned, and that even the deposit of funds for their construction would not be accepted as a sufficient compliance with the rule, since from various reasons there might be delay in completing them. Directions were given

that the position and size of the outlets from which water was to be supplied should be endorsed on the permit. No alteration was to be made in the capacity of any outlet during the currency of the lease. The orders regarding unauthorized irrigation were of a nature to almost entirely stop assessments under that head. It was required that 'benefit' should be established, and also that the person by whose act or neglect the unauthorized irrigation occurred could not be identified. Assessment was prohibited where canal servants were at fault, or where unauthorized irrigation was effected from aharas filled or partly filled with canal water. The responsibility of the Canal officer for the supply through the outlet was affirmed, and permits were directed to be refused where the blocks proposed to be leased were so situated that unauthorized irrigation was probable. It was directed that a discharge through the outlet sufficient only for the area to be irrigated should be arranged for. Attention was invited to the desirability of obtaining the signature of the *lambardar* to the shudkar or register of irrigation when the first watering was completed.

These orders were sufficient to rectify the chief defects pointed out by the Committee, and their enforcement has almost put a stop to complaints regarding 'unauthorized irrigation,' in respect of which most feeling had been shown. They suffice to justify the work of the Committee and the utility of most of its recommendations. Moreover, though the rainfall during the two following seasons was scanty, the supply of water was, with few exceptions, admittedly sufficient. Thus the causes of the complaints made before the Committee regarding the proceedings of assessing officers were completely or nearly completely removed. The Collectors concerned took similar precautions to prevent the continuance of abuses on the part of the collecting staff.

10. The point in which the greatest interest was manifested is the rate to be charged for rice irrigation. The present charge for annual leases is Re. 1-14, while for leases for five years the charge is Re. 1-4 per bigha or Rs. 2 per acre, and it is recommended by the Committee that this latter rate shall be reduced to Re. 1 per bigha and that of the annual lease shall also be modified. In a pamphlet on the subject, written by the Secretary of the Landholders Committee, lately issued, this reduction is described as being "the most important, and without which, in the words of the Commission, no improvement will be accepted as an adequate outcome of the results of the Commission." The grounds on which the reduction is advocated are those described in paragraph 7 of this Resolution, and are thus summarized in paragraph 276 of the Report:—

> In deciding this question, all the circumstances of the Sone irrigation must be considered. It must be remembered that canal irrigation is unpopular. It is alleged that Sone water is injurious to the soil, to man and beast. It must never be forgotten that an old system of irrigating from aharas and pynes prevailed before its introduction, which the ryots declare was more beneficial to them than the present system which has superseded it. It is admitted that well irrigation is more beneficial to the crops than canal water. The country is said to be water-logged; the health of the people is said to have suffered. The vigorous and often injudicious assessment of water, combined with the energetic realization of the existing rates has embittered both zemindars and ryots.

11. It is probable that the Committee were right in supposing that, at the time when they made their enquiry, there was considerable bitterness of feeling both in regard to the assessment of unauthorized irrigation (which has since for practical purposes been abandoned), and in regard to the rigour with which, owing to arrears having been allowed previously to accumulate to a most injudicious extent, collections had recently been enforced. This bitterness has, owing to the reforms recently introduced, now subsided, and a careful consideration of all the circumstances in the light of Mr. Luson's enquiry of subsequent experience, and of the opinions of the local officers, convinces the Lieutenant-Governor that in the paragraph above quoted the Committee were to some extent misled upon questions of fact, and that the recommendations which followed are consequently not such as the Government should accept.

So far from canal irrigation being unpopular, the area irrigated in the *kharif* season of 1888-89 was only circumscribed by the quantity of water available. During the current year, 1889-90, the demand has been practically of the same character. Despite the lapse of five-year leases for 65,500 acres, the area so leased has increased. The area for which leases have been cancelled, though no single application has been refused, is altogether insignificant. In the face

of these facts it is difficult to see how canal irrigation can still be considered to be unpopular.

The experiments in regard to *good* crops conducted by Mr. Luson, by Messrs. Burrows, Thomson and Mylne, and the Canal officers, show that crops exceeding 30 maunds of paddy per acre are produced from all varieties of soil, including *kewal*, which was stated to be injured by canal water. These crops were produced on lands which had been under irrigation almost since water from the canals was available. The estimate by an independent officer of the *average* crop of paddy on the irrigated land in 1888-89, when at the most critical time there was no rain to assist the canals, was $18\frac{7}{10}$ maunds, or two maunds per acre of paddy in excess of the results arrived at by the annual series of experiments carried out by Canal officers, and affords strong corroborative proof of their substantial accuracy. It is at least doubtful whether well irrigation is more beneficial than canal irrigation except for opium and barley; and the consideration has no weight in regard to *kharif* crops, which form two-thirds of those irrigated from the canals: *kharif* crops are not irrigated from wells.

12. In the preceding paragraph reference has been made to facts and figures which conclusively show that canal irrigation is not unpopular and that it is not injurious to the soil. Its advantages compared with irrigation from *aharas* will now be briefly adverted to. There are doubtless places where irrigation from *aharas* cannot be so conveniently effected since the canals came into operation, but there are also others, far more numerous, where, provided the *ahara* is kept in repair, the cultivator can still exercise a real choice in the matter. As stated in the quotation contained in paragraph 43 of the Chief Engineer's note, the constant and ample supply of water available from the end of June to October presented advantages over the uncertain supply from *aharas*, which failed either in the beginning or close of the season. The facility offered for early sowings should not be lost sight of. Even where, as in the exceptional case of Belgaon, an efficient *ahara* provided with masonry escapes existed, the cultivators, who are themselves the contractors and who have used canal water since the beginning, have hitherto preferred to subject themselves to a heavy yearly tax for the convenience and regularity of canal irrigation. There are in the three districts few *aharas* so efficient as the one at Belgaon, and the records of the criminal courts and the experience of former Civil officers show that there was no more frequent cause for riots and affrays than quarrels over *aharas* and *pynes*. If, on the whole, it is advantageous for cultivators occupying lands commanded by such an *ahara* as that at Belgaon to take canal water, how much greater must be the benefit where, as in the majority of cases, the *ahara* has a small gathering ground and is commonly inefficient because it is not kept in repair owing to the expense which must be incurred.

The water contained in the *aharas* is stagnant, and therefore like canal water, practically pure. It does not, even for barley and opium crops, possess the superior qualities which, it is not denied, for these crops only can be claimed for well water, especially where the well is old.

The *aharas* certainly impound water, which should not be the case with properly aligned canals, and must have considerable influence on the water-logging of which complaint is made. Malarious fever is as rife in the unirrigated portions of Gya and Shahabad, more especially Baboonah, as in those irrigated, and the canals are certainly of use in supplying man and beast with pure drinking water for which no charge is made.

13. Of the reasons alleged by the Committee for reducing the water-rate, many have little real bearing on the point. If the system is at fault, it should be altered where defective; if individuals are to blame, they can be punished; but, even if true, the allegations made are not relevant to the point at issue. The public health is a matter of the highest importance, and it is right that such remedial measures as are practicable should be taken, but it does not follow that special advantages should be given to that portion of the community who use canal water and pay water-rates. It is certain that, except in a few cases, the fact of canal water being available more than compensates for injury which occasionally may have accrued to individual land-holders owing to *aharas* on their property being rendered less efficient, and in probably more numerous cases the extra supply of water poured over

the country has increased the efficiency of *aharas* belonging to the same or other proprietors.

14. In the pamphlet, written by Baboo Kandhji Sahai, it is even alleged that, compared with 1874, the import of piece-goods into Shahabad has fallen off, and that this fact indicates a deterioration in the material condition of the people, the result, it is implied, of canal irrigation. The assertion is made on the strength of statistics extending over four months only. A reference to the table, contained in paragraph 138 of the Chief Engineer's note, giving complete figures for 13 years, shows that within this period the imports have doubled. The increase has been very steady throughout this period with two exceptions only: about the year 1882 there was a slight falling off, and in 1886-87 an abnormal bound upwards.

15. The considerations enumerated in the quotation from the Committee's report in paragraph 10 above might have weight in determining the question whether a system of canal irrigation should be introduced for the first time or not, but they have little bearing on the question of what price should be charged for water when such a system has for years been in full operation. The water-rate to be charged should clearly be fixed as nearly as possible at the sum which, taking one year with another, the cultivator finds it profitable to pay. The experience gained, which is fully set forth in the Chief Engineer's note, shows conclusively that existing rates, so far as *kharif* crops are concerned, are not too high, and that it would be an injustice to the general tax-payers to burden them with the deficiency in the public revenue which would result from any lowering of the rates mentioned.

16. It is at the same time recognised that any increase in rate which might possibly be justified by the increasing demand for canal water would at the present time be unwise as calculated to lead to undesirable friction with the cultivators who have become habituated to its use. His Honour has, therefore, determined to keep the rate for *kharif* irrigation on long leases at its present figure, Re. 1-4 per *bi ha* or Rs. 2 per acre, but to extend the term of the leases from five to seven years and to give an undertaking that no increase shall be made in this rate in respect to leases entered into before the close of the year 1895-96. This favourable rate will, however, only apply where the channels are in good order and the waste of water small. For annual leases the rate will be Re. 1-14 per *bigha* or Rs. 3 per acre, as at present. There will be cases where the cultivators will be unable, for some time, to comply with the conditions which it is necessary should be fulfilled if Government is to be bound to supply water for so long a term as seven years, and to meet these it is contemplated, though the Lieutenant-Governor is not in favour of differential rates, to charge Re. 1-9 per *bigha*, but not to give leases for more than three years.

17. Modifications all in favour of the cultivator will be made in the case of *rabi* leases, involving a reduction of from 20 to 40 per cent., in the hope that the supply of water now running to waste in that season will be more generally utilized. The arrangements under which water is given for sugarcane will be revised with the view of more precisely defining the conditions under which water is supplied for that crop, and where the consolidated yearly rate is paid remissions will be allowed if the crop fails, whether such failure was due to the deficiency of canal water or not. Provision will be made for the supply of water by volume in October to unleased areas should a surplus be available after all leased areas have been fully watered. Under certain conditions, canal water will be supplied to *aharas* between November and March.

18. The rules will be amended providing that in the *kharif* season water will only be supplied to associations of ryots cultivating blocks of land to which water can be supplied without the probability of unauthorized irrigation occurring. The selection of the block, under certain restrictions, will, as recommended by the Committee, be left to the canal officer, who will be allowed to exclude land not commanded by the canal without special arrangements or not irrigable by flow. The canal officer will be required to specify in detail, in the permit, the size of the outlet and the approximate discharge, and to be responsible for the supply through the outlet. The discharge through the outlet will be mainly determined with reference to actual experience in 1888, when there were no autumn rains. The *tatil* will be limited to five days after ten days' consecutive supply.

The assessment of lands irrigated beyond the boundaries of the leased area will be absolutely and entirely prohibited, though power will be reserved to cancel leases, on the joint authority of the Superintending Engineer and Collector, where water is habitually wasted or misused. Where unauthorized irrigation occurs, not by water being abstracted from leased areas, but through a village channel being cut or a criminal offence committed, the Canal officer will be permitted, with the previous sanction of the Collector, to impose water-rates under section 79 of the Act. In this case, and in this case only, where the facts will be placed before an independent tribunal before any measurement is made, will any assessment for unauthorized irrigation be allowed in the *kharif* season.

The Committee recommend that no change shall be made in respect to the present method of assessing *rabi* irrigation, regarding which complaints were not received. This recommendation is accepted.

19. The non-assessment of unauthorized irrigation materially affects the subject of objections to demand. The cases in which most exception is taken to canal officers dealing in the first instance with complaints are those in regard to unauthorized irrigation. In no others are appeals ordinarily preferred. The remainder relate to errors in demand, and the decision arrived at is usually at once acquiesced in by the complainant. Many of them refer to changes in occupiers disposed of by alteration statements, the preparation of which will in future be entrusted to the Deputy Collector. Nearly half the complaints made are at once decided in favour of the complainant, and the demand statement is now generally corrected before it is sent to the Collector for realization. It would obviously be a hardship in these cases to require the complainant to prefer his objection at a different office from that in which the demand statement is prepared. But it is only in the sense of giving the sub-divisional canal officer an opportunity of correcting his assessment that the Lieutenant-Governor proposes to leave the disposal of objections with canal officers. The appeal will be direct from the sub-divisional canal officer to the Collector. It will, however, be required that reasonable expedition shall be used in preferring the complaint in time to admit of a satisfactory investigation being made. The *lambardar* and subordinate canal officers will further be required to bring to notice cases in which objections are likely to be taken, so that such may be enquired into before the crop is cut or the demand statement prepared.

20. In regard to minor matters the recommendations of the Chief Engineer are accepted. The cost of road crossings for village channels will in future be borne by Government. Minor distributaries will be provided in lieu of long village channels, and leases for land at too great a distance from the distributaries will not be accepted. The Superintending Engineer will be required to specifically define the areas within which water is available for irrigation in various seasons. He will also be required to advise the Collector in the case of appeals regarding village channels, or when a permit is refused owing to the unsuitability of a block. The joint and separate liability clause in long-term leases—an arrangement to which great objection was taken by the Committee—will be abolished. Selected landholders will be supplied every year with a copy of the Revenue Report, and invited to submit any suggestions they may desire to make for the improvement of the administration for the consideration of Government. The magisterial powers already conferred on canal officers will not be withdrawn, but in future all Engineers will be required to pass an examination before being so vested. The desirability of prompt orders being passed in cases where extraordinary remissions appear to be called for is recognized, and the Superintending Engineer in this respect will be vested with limited powers to be exercised without previous reference to Government. Water will, as already indicated, be supplied during certain months of the year to *aharas* on payment. The dates for the payment of water-rates have been fixed so as to be convenient to the cultivators, and payment by instalments in certain cases allowed.

21. The measures narrated in the two preceding paragraphs have as their main object the protection of the cultivator. But whilst desirous of securing to the ryot a full supply of water at proper times and on reasonable considerations, it is necessary that means shall be taken to secure payment of water-rates justly due. There are cases of villages where realizations are never made with-

out coercive processes of one kind or other, and power will be taken to shut off the supply of water to such villages altogether until all arrears are paid up, and in extreme cases to prohibit further supplies unless half the amount which will become due as water-rates is paid in advance. These extreme measures will be adopted only with the joint approval of the Collector and the Superintending Engineer.

22. On the important question of transferring the execution of certificates from the Special Deputy Collector to the regular Revenue establishment, the Lieutenant-Governor finds a great difference of opinion between the Collector and the Board on this subject. He has no doubt that the Board's view is in accordance with the intention of the law and should be carried out. The Board will be asked what changes in establishment are necessary for giving effect to the decision, and how the delay, &c., anticipated by Mr. Power can best be obviated.

23. The changes noted above will not be introduced without some loss to Government. The charge for water under long leases is much less than that charged under annual leases, and the growing popularity of the former has already had a marked effect in diminishing the supply of water available for the latter, and thus reducing the assessments. The lower rates for *rabi* will probably in the end be recouped by the increased area regularly irrigated; but for two or three years at least there will on this account be a diminution in the receipts.

The Lieutenant-Governor accepts the opinion expressed by all the local officers that in some shape or other fees must be paid for the duties performed by the *lambardars*, and also the recommendation contained in the Chief Engineer's note as to their amount and the duties for which they are to be payable.

Circle officers will be replaced by zilladars permanently appointed, provided no increase in the expenditure hitherto incurred on collecting establishment is thereby caused. It appears to His Honour that, despite the extra work thrown on the collecting establishment by the powers it is proposed to vest in the Deputy Collector to sanction alterations, and, in certain cases, remissions in demand, the spread of five-year leases involving to a large extent fixity of demand should admit of some reduction in the establishment formerly necessary. Some saving will result by the substitution of fixed fees for a percentage in cases where putwaris are called on to render assistance in the matter of assessments.

Drainage works, estimated to cost Rs. 2,82,271, have been sanctioned from 1884-85 to date, and investigations in regard to works still reported to be required are in progress. A statement showing all cases in which it is possible that drainage may have been interfered with is contained in Appendix I to the Chief Engineer's note; in but few of the instances mentioned have remedial works not been carried out, and in these cases investigations are in progress.

The magisterial powers vested in some of the canal officers have admittedly been but sparingly exercised; and though the Lieutenant-Governor is, on general principles, opposed to permitting canal cases to be dealt with except by the ordinary tribunals, he is unwilling to weaken the hands of canal officers in times of great demand for water.

24. The rules under Act III (B C.) of 1876 at present in force will be amended in the sense indicated in this Resolution and forwarded to selected officers for opinion. The replies received will be considered and draft rules published in the *Calcutta Gazette* for general criticism before being enacted under section 99 of the Act.

25. The Committee make certain proposals for changes in the law. These are mainly that an application for water by a large majority of interests in a given block should bind the minority; that the law should bind the zemindar in *bhaoli* tenures to share, either directly or indirectly, the burden of irrigation charges; that the water-rate should be declared an encumbrance on land of the same character as rent: in other words, that it should be binding on the applicant's successor in interest. These three recommendations have the Lieutenant-Governor's concurrence, but legislation to give effect to them requires the approval of the Government of India, and the question of revising the law on these as well as on other minor points will be separately dealt with.

26. It will be seen that the great bulk of the Committee's recommendations have been accepted either wholly or in part; that in some the object

aimed at has been secured by a modification of the proposed methods, and only in regard to the rates charged for *kharif* irrigation has the Lieutenant-Governor been obliged altogether to reject their recommendation. The work of the Committee has not been unfruitful; it has, on the contrary, been of the highest value, and the thanks of the Lieutenant-Governor are due to Mr. H. J. S. Cotton, C.S., the President of the Committee, and to Mr. C. W. Odling, M.E., M.I.C.E., and Rai Jai Prakash Lall, Bahadur, Members, for the care with which they have carried out their investigations, and especially to the President for the very lucid report submitted. The Lieutenant-Governor also desires to record his thanks to Colonel Harrison, late Chief Engineer, for the valuable note submitted by him on the report.

His Honour further recognises the assistance rendered by the Maharaja of Doomraon in providing the Committee with facilities for carrying out their enquiries.

Special thanks are due to the firm of Messrs. Burrows, Thomson and Mylne for their co-operation in the crop experiments carried out, and for a long course of assistance to the Irrigation Department, in no way interrupted by the criticisms they considered it their duty, in the public interest, to make on the system of administration pursued.

Sir Steuart Bayley notices with pleasure the very thorough manner in which Mr. H. Luson, C.S., carried out the enquiries committed to him.

27. The Chief Engineer has selected from amongst the names mentioned by the Committee those of Mr. L. H. Mylne, Baboo Kandhji Sahai, B.A., B.L., Mr. W. A. Inglis, and Baboo Sharoda Prosad Chatterjee as having, both during and subsequent to the Committee's proceedings, rendered valuable assistance in arriving at a satisfactory solution of the difficulties which led to the appointment of the Committee. To the gentlemen mentioned above and in the Committee's report, and to all others who, though not specially named, aided in the enquiry, the acknowledgments of Government are due.

ORDER.—Ordered—

1. That a copy of the Resolution and the Chief Engineer's note and Appendix I be published in the *Calcutta Gazette*.

2. That a copy of this Resolution, of the Committee's report and of the Chief Engineer's note thereon, and all attached papers, be submitted to the Government of India in the Public Works Department for information.

3. That a copy of this Resolution and the documents referred to therein be forwarded to the Appointment, Judicial, Financial, Revenue and General Departments of this Government; to the Board of Revenue, Lower Provinces; to the Commissioners of the Burdwan and Orissa Divisions; to the Superintending Engineers of the South-Western and Orissa Circles, and to the Director of Land Records and Agriculture for information.

4. That a copy of this Resolution and the documents referred to therein be forwarded to the Commissioner of Patna; the Superintending Engineer, Sone Circle, and the Collectors of Shahabad, Patna, and Gya, for information and guidance.

5. That a copy of this Resolution and the Chief Engineer's note be sent to Mr. H. J. S. Cotton, C.S., to Lieutenant-Colonel C. W. I. Harrison, R.E., to Mr. C. W. Odling, to the Maharajah of Doomraon, to Rai Jai Prokash Lall, Bahadur, to Messrs. Burrows, Thomson, and Mylne, and to Mr. H. Luson, C.S., with reference to paragraph 26 of the Resolution.

6. That a copy of this Resolution and the Chief Engineer's note be sent to Mr. L. H. Mylne, to Baboo Kandhji Sahai, B.A., B.L., to Mr. W. A. Inglis, and to Baboo Sharoda Prosad Chatterjee, with reference to paragraph 27 of the Resolution.

By order of the Lieutenant-Governor of Bengal,

J. M. McNEILE, *Col.*, R.E.,

Secy. to the Govt. of Bengal,

P. W. Dept

NOTE BY LIEUT.-COL. C. W. I. HARRISON, R.E., CHIEF ENGINEER, BENGAL, ON THE REPORT OF THE COMMITTEE APPOINTED TO ENQUIRE INTO THE ADMINISTRATION OF THE SONE CANALS, DATED 14TH JANUARY 1890.

Appointment of Committee and Report.

Vol. II, page 5.

(1). In a Resolution No. 1884*I.*, of date the 11th November 1887, issued by the Public Works Department (Irrigation Branch) of this Government, a Committee was appointed to enquire into the allegations contained in a memorial numerously signed by many of the leading residents and landholders of the Shahabad district, complaining of imperfections in the system of assessing lands irrigated by the Sone Canals, as well as of oppression in collecting the water-rates charged. It was also alleged that injury had been caused to the general health of the district by obstructions to drainage caused by the canals and distributaries, and other causes of complaint were mentioned. A copy of the Resolution was forwarded to the members of the Committee—Mr. H. J. S. Cotton, C.S., President, and Mr. C. W. Odling, C.E., and Rai Joy Prokash Lal Bahadoor, members—with a letter No. 1886*I.*, dated the 11th November 1887, in which the complaints made in the memorial were detailed, as well as probable faults of system which had been brought forward by officials, and the remedies suggested.

Vol. II, pages 5 to 10.

The Committee was instructed to report on the points noted below—

I.—All classes of complaints and erroneous procedure which are brought to notice either in the memorials or in the various memoranda and reports submitted to them.

II.—The following points on which questions have arisen in the course of working the Act:—

(*a*)—The definition of a village channel.

(*b*)—The liability to water-rate as affected by the use of the words "supplied through a village channel" in sections 79 and 80 of the Irrigation Act.

(*c*)—The alteration of section 74 of the Irrigation Act.

(*d*)—The necessity for legislating for a more summary mode of realizing water-rates than is permissible by the Certificate Act.

III.—The great difficulty experienced in arranging for a proper distribution of water and assessments on irrigation in the absence of village channels and the mode of overcoming this.

IV.—The advisability of making any changes in the existing system of assessments and collection, and of the distribution of duties regarding the assessments and supply of water between the Engineer and Revenue officers. In connection with this, it should be considered whether, since the professional establishment would still have to be maintained at about its present strength for the work, it would not be a waste of strength to abstain from utilizing their services as far as this is possible in the interests of the public for other branches of canal work. Moreover, the gradual and steady progress which is brought out by the reports and notes of the Canal officers should have its due weight in determining whether such progress does not point to its being preferable to build up and improve the existing system, with its gradual growth of ten years, rather than to aim at an entire change.

V.—Changes in the rules to remedy the defects brought to light by the various complaints.

VI.—The necessity for further provision for drainage, and in connection with this the effect of the altered conditions under which the "aharas" now hold water all the year round, instead of as formerly for only a few months, to which reference is made in paragraph 10, clause (18) of the observations; and whether any practical remedy can be found for the difficulties connected with the "aharas."

It was stated that the Lieutenant-Governor hoped that three months would suffice for the completion of the enquiry and submission of the report.

(2). The enquiry was as directed carried out as expeditiously as possible, and the report is dated the 13th March 1888. It is signed by all the members of the Committee, subject, however, in the case of Mr. C. W. Odling, to a dissent, dated the 31st March 1888, and in that of Rai Joy Prokash Lal Bahadoor to a dissent, dated the 4th April 1888. In both cases the reservations embodied in the dissent are material, and the report may be taken to be that of the President, Mr. H. J. S. Cotton, C.S., supported, however, in many respects, chiefly as regards the recommendations for the future, by the departmental member of the Committee.

(3). The report was forwarded to the officers mentioned in the margin for criticism. The date of their replies is noted. The Revenue Secretary, the Hon'ble Mr. Nolan, who had been Collector of Shahabad from 10th May 1880 to 3rd March 1885, was, by order of the Lieutenant-Governor, specially asked to comment on the report, and has furnished a most valuable note, dated the 10th of July 1888. Mr. L. H. Mylne of Behea was also good enough to forward for consideration a number of remarks on the report, dated the 30th June 1888. As the firm of Messrs. Burrows, Thomson and Mylne have had much experience in the matter of canal irrigation, and have invariably endeavoured to co-operate with the canal officers in regard to improved arrangements for distributing water and in other matters, the opinions expressed by Mr. Mylne are specially valuable.

Board of Revenue, Lower Provinces, 25th June 1888.
Collector of Shahabad, 31st August 1888.
Baboo Saroda Prosad Chatterjee, Special Deputy Collector, 25th May 1888.
Mr. W. A. Inglis, Executive Engineer, 21st June 1888.
Mr. D. B. Horn, Executive Engineer, 2nd July 1888.
Mr. H. B. Frost, Executive Engineer, 16th July 1888.
Mr. C. A. White, Assistant Engineer, 6th July 1888.
Baboo K. C. Banerjee, Subdivisional Officer, 3rd July 1888.
Mr. K. H. Stephen, Executive Engineer, 20th June 1888.
Mr. H. Barlow, Assistant Engineer, 4th July 1888.
Mr. M. H. Arnott, Assistant Engineer, 2nd July 1888.

The notes of the Engineers were mainly replies to statements made by various witnesses.

(4). As might have been expected, the proceedings of the Committee and their report not only brought vividly to the notice of the canal officers the grievances it was alleged that the irrigating cultivators had suffered at their hands, but also threw light on weak points in the system pursued, more especially those in which the exact provisions of the law had not been observed. The season 1888-89 proved to be one in which the rainfall, though abundant, was not, as regards the rice crop, well distributed, and the Superintending Engineer, Sone Circle, who, in Bengal Government orders No. 1821*I.* of the 19th November 1887, had been informed, in reply to a suggestion to that effect that the services of a civil officer would, should circumstances render it desirable, be placed at his disposal, asked that a junior civilian might be appointed to report on the state of the irrigated crops and on certain other points. The officer selected, Mr. H. Luson, C.S., who had previously acted as Joint-Magistrate of Shahabad, and who was at the time Officiating Collector of Gya, commenced his enquiries on the 24th of October 1888, on the termination of his acting appointment.

Mr. Luson submitted a preliminary report on the 5th of ember 1888, which was published in the *Calcutta Gazette* the 9th of January 1889, as an appendix to a note by the erintending Engineer, Sone Circle, dated the 14th of ember 1888.

Mr. Luson himself carried out a large number of experi- ats as to the yield of the irrigated crops, and a note by , dated 4th February 1889, on the subject was published in *Calcutta Gazette* for the 3rd of April 1889.

This note embodied not only the results of the experiments ried out by Mr. Luson himself, but those carried out by al officials and by Messrs. Burrows, Thomson and Mylne, had, with their usual public spirit, rendered all the assist- e in their power.

5). Considerable public interest was evinced in the pro- lings of the Committee, and the landholders and others rested associated themselves together to render such istance as they were able in bringing forward evidence of grievances complained of, and suggesting remedies for the e. The Secretary of this Co-operating Committee has e published a pamphlet, of which I received a copy on the h of June 1889. The pamphlet mentioned above may, in junction with the dissent of Rai Joy Prokash Lal Baha- r, be taken as the statement of the case which commends lf to the landholding portion of the community.

6). The report on the revenue administration of the Sone cle for the year 1888-89 was received on the 14th of tember, and contains statistics and general information arding the progress of irrigation during the year. In the antime, another *kharif* season, 1889-90, in which the late s, so essential for the proper maturing of the rice crops, e failed, has passed away; and before this note is concluded s probable that the Superintending Engineer, Sone Circle, l be able to furnish a report giving the main facts con- ted with this season's *kharif* irrigation. The weekly gation notes received from Canal Divisional and Sub- isional Officers have already in a somewhat diffuse form ced on record the chief characteristics of the season.

7). I was travelling about the Sone Canals during the ght of the demand for canal water in 1888-89, 17th tober to 2nd November 1888, in company with the erintending Engineer and Mr. Power, the Collector of ahabad, and I spent a month (May) last year in the circle lecting further information.

8). The delay in considering the Committee's report ugh in some respects possibly unfortunate, unquestionably nits of its being dealt with in a more comprehensive man- than would have been possible if it had been disposed at an earlier date.

ain heads of report, Vol. ages 1 to 4.

(9). The report of the Committee is divided into four parts, as noted low—

Part I—Historical and descriptive.
Part II—Complaints against the canal system.
Part III—Complaints against administrative procedure.
Part IV—Recommendations of the Commission.

It will be convenient, after considering Part I of the ort, to briefly refer to the provisions of the law and the es passed under it and the actual administrative system rsued. Such an examination will show that the difficulties d complaints to a large extent arose from an endeavour to graft rules and a system of procedure, in accordance with ich the Northern India Irrigation Act was drafted and sed, on an Act differing from it in many respects and ntaining at least one section distinctly hostile to a very portant feature in the rules and system taken as a guide. e system followed, it will subsequently be made clear, was opted with no view of enhancing the revenue derived from e canals, but simply with the object of levying water-rates those cases only where irrigation with water taken from the canals had actually been practised, and where benefit had been reaped.

PART I.—HISTORICAL AND DESCRIPTIVE.

(10). It is unnecessary to follow the historical and descriptive account of the canals contained in the report except from two special points of view—(I) anticipated revenue, (II) crops to be irrigated.

Part I, Historical and descriptive, Vol. I, pages 1 to 11.

As to the former, it must be admitted that the forecasts of revenue submitted by the Engineers who designed and carried out the works have not been realized, and that the anticipations of commercial success, which were founded on facts regarded by the Government of India as incontrovertible and accepted by the Secretary of State, have been falsified. The fact is to be regretted, but there are no grounds for believing that these mistaken estimates have had any practical effect on the canal administration.

Vol. I, page 4, and note, page 5.

The responsible local manager, the Superintending Engineer, has not, for many years, encouraged Government to expect more than a modest surplus over working expenses. An extra charge for establishment, imposed as a matter of arrangement between the General and Irrigation Branches of the Public Works Department, has to a certain extent vitiated his calculations, and allowance must be made for the effect of the sittings of the Committee: if this be done it will be found that his estimate has been substantially not far from correct, both as regards net revenue and area likely to be irrigated.

The latest forecast which is specially referred to above is that contained in the Superintending Engineer's letter No. 2432 of the 13th July 1886, the figures included in which were relied on in arranging the financial contract between the Bengal and Supreme Governments for the five years commencing with 1887-88. The letter was written long previous to Sir Steuart Bayley's visit to Arrah in August 1887, and before there were any signs of the agitation which culminated in the memorial leading to the appointment of the Committee. Reference will be made to the forecast later on; here it is sufficient to say that Government deliberately accepted a moderate estimate of revenue for the five years ending with 1892-93, and that it is this estimate,* and not the more sanguine ones framed before any actual experience on the working of the canals had been obtained, which must be taken as the financial results that were expected.

Vol. II, page 245.

* Estimated area to be irrigated—	acres.
1887-88 ...	325,000
1892-93 ...	375,000
Actuals—	
1887-88 ...	315,880
1888-89 ...	355,909

The second point mentioned in the preceding paragraph—crops to be irrigated—will now be considered.

(11). The connection between the revenue derived from the canals and the substitution of *kharif* for *rabi* crops may not at first sight appear to be close; but in the course of this note will be made clear, and the spread of rice cultivation on lands formerly devoted to *rabi* crops will therefore be now briefly referred to.

Vol. I, pages 24 to 31.

When the canals were projected, it was assumed that, as was then approximately the case, half the area commanded would be cultivated with *rabi* and half with *kharif* crops, the former mostly filling the high lands in the immediate vicinity of the canals and distributaries, and the latter those lying at a lower level. The change in the character of the crops raised on the land—generally high—on which the canals run is remarkable. *Rabi* crops have practically disappeared. The character of the soil and the presence or absence of wells seems to have had little or no effect on this result, which was due to one cause and to one cause only—the possibility of getting a full and regular supply of water. On this point there can be no possible doub,

as will be evident from the subjoined extract from a letter from Mr. L. Mylne, dated the 3rd June 1884, commenting on the report with particular reference to its applicability to the Jugdispore estate, italics are mine.

Note on page 30, paragraph 86 of report.

"For the irrigation of the jungle portion* there were no *aharas*, but we constructed between 500 and 600 masonry wells which, till the advent of canals, sufficed for all the requirements of the cultivators. *There was hardly any paddy cultivation.* * * * The adoption of canal irrigation was rapid and general all over the jungle mehal, resulting after a few years in an almost entire change from dry weather to wet weather crops which *could not*† *be raised by well irrigation.* The transformation has been so complete and thorough that only the absolute refusal of canal water for paddy would compel the ryots now to forego the cultivation of that crop."

* About 13,000 beegahs.

† Worthy of note, as in the complaints it was frequently asserted that rice had been irrigated by wells.

(12). As stated in the report, it may be that the change has been "not altogether in the best interests of the people." I am myself of opinion that restrictions—which would not have been popular—in the quantity of water supplied in each distributary in the *kharif* season should have been applied, and Mr. Mylne, senior, has‡ expressed a similar view; but there surely must be decided financial advantages, or so overwhelming a change would never have been made by a people notoriously conservative in their methods of agriculture. There was no necessity for the alteration, as ample means for irrigating *rabi* crops with well water, if there were objections to canal water existed in the Behea estate.

‡ Vol. II, page 195.

(13). Sir G. Campbell, who was by no means sanguine of the success of the canals, was apparently just as much mistaken as the Engineers: his fear§ was that there would not be sufficient water in the river to supply the canals with the water required for the winter crops. As a fact, there has hitherto been always enough to spare in that season; and with the view of inducing the people to take advantage of it, the Committee propose to reduce the rates for *rabi* irrigation. The exact bearing of the change in the character of the crops on the revenue derived from the canals has been that the higher sandy lands near the canals, which the projectors of the scheme anticipated would be cultivated with *rabi* crops, have been covered with rice, and the *rabi* water rates which it was expected would be realised have been lost. The water utilized in the manner described is not available for the lower lands further from the canals and more suitable in themselves for rice crops besides requiring less water. The attached map will show how concentrated the irrigation is, and how much *kharif* irrigation could be developed if the water-supply was sufficient during that season.

§ Vol. I, page 5. Latter part of quotation.

It is also an open question—and something more on this head will be said later on—whether the canals by increasing the quantity of drainage water have not, so far from injuring existing *aharas* used for the irrigation of rice lands, improved their supply.

(14). An extra 100,000 acres of *rabi* irrigation would make all the difference in the financial prospects of the scheme, and if in one estate 13,000 acres of *rabi* cultivation, a large part of which might reasonably have been expected to take water for that crop, have disappeared, it scarcely seems extravagant to suppose that this area alone has not only been lost, but absorbed a supply of water which could have been more profitably disposed of in irrigating lands naturally better adapted for rice crops.

From what has been said above, it will be seen that the change from *rabi* to *kharif* cultivation, which dates from after 1877-78, when *rabi* crops irrigated by canal water mostly failed, was neither contemplated nor welcomed by canal officers. It is right to distinctly traverse the statement made in the report—

Vol. I, page 10, section 26.

"The conviction which impressed itself on Colonel Rundall's mind that the canals must be maintained from rice cultivation and not from *rabi* has moulded the whole subsequent policy of the department."

The action of canal officers has been limited to accepting such changes as the cultivators have in their own interests carried out; and as a matter of fact the water-rate on rice crops was raised by about 20 per cent. on the 1st of April 1881 in the case of annual leases.

Part IA.—Actual Administrative System pursued.

(15). Turning now to the actual administrative procedure followed, the Act, section 74 (page 188 I.M.), provides that "every person desiring that water *shall be supplied* to his land from a canal shall present a written application to that effect to the Canal officer in the form given in Schedule B hereto annexed, or in a similar form, binding himself by the rules made by the Lieutenant-Governor under the powers vested in him by this Act."

Actual administrative system followed.

The words *shall be supplied** are of doubtful meaning, and will be adverted to further on. Schedule B (page 192 I.M.), is obviously intended to be filled in and presented to the Canal officer by individual cultivators. This will be evident on inspection. The name of the applicant is to be put at its head, and there are columns below in which the number of the fields in the revenue survey maps, the acreage of each field, and the crop to be grown, are specified. Leases for compact areas by the occupiers of the various fields included in the block are not contemplated, though in practice it is only to such blocks that water can be delivered. The permit Schedule C (page 193 I.M.) is also in a form obviously intended for issue to individual cultivators only. Sections, 74 and 75 of the Act (page 188 I.M.), in which the forms comprising these schedules are prescribed, fortunately give some latitude in the matter to the Lieutenant-Governor, allowing similar forms to be enacted as part of the rules. The discretion thus given was taken advantage of, and the application form prescribed in the rules (page 212 I.M.) which, under section 99 of the Act (page 192 I.M.), have the force of law, is for a convenient block including usually the fields of several cultivators.

* *Vide* Vol. II, page 251.

The signature or mark of each cultivator is required, and the area, more or less, he proposes to irrigate, but the application must be presented through a *lambardar* appointed by the applicants (in the manner provided in Rule 8, page 208 I.M.) to act on their behalf, and the permit is issued in his name. There is nothing illegal in the procedure above detailed, though dealing with associations of cultivators instead of individual ryots, is not expressly authorized in the Act itself.

(16). It has already been stated that practically water can only be delivered to blocks more or less compact, and that the application, instead of being for specified fields, is for areas more or less, in the occupation of cultivators who have signed the application. The statement of water-rates due is except in the case of five years' leases, prepared after the fields have been irrigated, and the manner in which the measurement is to be effected, the demand statement prepared and published, and objections thereto decided, is elaborately provided for in Rules 38 to 48 (pages 210-11 I.M.). This procedure is to some extent justified by section 78 of the Act which states that "the rates to be charged for canal water supplied for purposes of irrigation shall be determined by the Lieutenant-Governor, and all persons *accepting* the water shall pay for it accordingly."

Paragraph 2 of Instructions for Canal Officers (page 223 I.M.) states that the "application constitutes an acceptance of water within the meaning of section 78 of the Act."

In practice, however, the actual area irrigated is measured, lands applied for but not irrigated have not been charged. This procedure was approved of in Colonel Harrison's letter No. 1334I of the 9th August 1881, contrary orders having been given by Colonel Haig, but seldom, if ever, acted on.

7). The Rules, pages 207-215 I.M., and Instructions Canal Officers and Subordinates, pages 223-228 I.M., very much on the lines of those issued in the North-tern Provinces under the Northern India Canal and inage Act, in which no written application for water required. Persons entitled to use a village channel in those provinces the right to take water whenever they se, and an endeavour was made to, as far as was legally ible, assimilate the procedure in Bengal to that which had eeded in the Upper Provinces. It is stated in paragraph the instructions for Canal Officers (page 223 I.M.) that basis of all demands is the application form, but as a ter of fact water-rates are (paragraph 3) to be levied in rdance with the *khasra* prepared by the ameen under e 38 (page 210 I.M.). A permit is not issued, nor are any ngements made to supply the cultivators with water il a written application has been filed. Once, however, a nit was issued, the cultivators were permitted to take er pretty much as they liked, and the actual area irrigated measured and charged.

The past tense is used in the paragraph preceding, as erly, more especially since the Committee at, the ply of water has as far as practicable been limited to required for the area to be irrigated, and active measures n to prevent lands outside those mentioned in the applica- continuing to receive water. It was in previous years held either the area irrigated was covered by the written lication, or the cultivators were liable to be charged, under ion 79 of the Act (page 189 I.M.), the water having been l in an unauthorized manner. It is a question what is the e of the words in section 74 of the Act (page 188 I.M.) pplied to his land with the permission of the Canal Officer." active aid was given to admit of lands, not covered by a nit, being irrigated, and unless water was taken from an et which it was necessary to keep open to supply leased s, the outlet was closed so soon as it was reported to the al Officer that unauthorized irrigation was in progress. the other hand, if the definite was properly and necessarily n, but little care was taken to prevent irrigation extending ond the boundaries of the land for which a permit had n issued.

8. As the application is required to be in writing, it has n suggested that the permission must also be in writing, at any rate definite (vol. II, page 251). The applica- was *de facto* treated more as a notice that water was ired in a certain locality than as actually giving the to be watered, though considerable regard was paid to latter in fixing the size of the pipes when a temporary let was required. The applications were nearly invariably an area considerably less than the cultivators intended rrigate.

The instructions for Canal Sectional Officers, paragraph 5, e 224 I.M., which distinctly forbade them to close an let once irregularly opened without the sanction of the -divisional Canal Officer, show clearly that it was sidered more important that the supply of canal water uld not be stopped than that unauthorized irrigation should prevented.

The Canal Officer usually, before closing the outlet, gave cultivators a further opportunity of filing an application.

9. It is here that the question of supply comes in. In definition of village channel, section 3 of the Act (page I.M.), the sluice or outlet through which the channel is plied is expressly excluded; it follows that the owner of channel or the *lambardar* is not responsible for the open- and closing of the outlet, though it has been the practice most cases to permit the cultivators to regulate the supply vater as they pleased. In fact, until permanent outlets ld be constructed, no other course was practicable, as the pipe let was stopped with a wisp of straw which could at once pulled out without difficulty. It was not possible to fix position of permanent outlets until it was known not only re they would be required, but the average area to be irrigated by each, so that the size of the opening required could be ascertained.

The Act throughout—sections 74 and 78 may be taken as examples—contemplates the supply of water being regulated by the canal officer, and Mr. Mylne* has right on his side when he objects to this burden being thrown on the lessees. At the same time the cultivators prefer to have the power to open and shut the outlet at their discretion without having to seek for the canal subordinate entrusted with the key.

* Vol. II, page 182, paragraphs 5 and 6.

10. In the case of unauthorized irrigation, there is no question that the first point for decision is—Was the supply passing through the outlet required for leased areas and improperly diverted to lands not covered by a permit? It will be gathered from what has previously been said that until this point was brought forward in connection with the memorial, it was seldom or ever considered. It sufficed if it could be shown that the land had been irrigated through a village channel, and that the crop had derived benefit therefrom; benefit was usually assumed if the crop were a fairly good one, and it may here be mentioned that we have lately been advised that temporary benefit is sufficient to justify an assessment. The fact is that under the system of measurement prescribed in rule 38 (page 210, I. M.), the objection would only occur in cases where liability to water-rates rather than the fact of irrigation or benefit was disputed, and such cases were not common, though perhaps those in which most feeling was shown.

The blots in the system described above, viz. (I) the transfer of responsibility for the supply through the outlet from the Canal Officer, to whom it legally appertained, to the *lambardar*, and (II) the failure, in cases of unauthorized irrigation, to take into account the *lachés* of the Canal Officer in permitting a supply of water through the outlet in excess of the legitimate requirements of the leased area, though less strongly commented on in the report than other aspects of the case, are in fact the most serious faults established in the system of canal administration pursued. They are strongly animadverted on by Mr. L. Mylne, who is, I think, justified to the extent already admitted in saying that "Canal Officers shirk all responsibility in the matter of preventing 'waste' and 'unauthorized' irrigation." The word *all* should be omitted, as endeavours were always made to prevent an outlet being opened until a lease was executed, and the tendency to check and restrain irrigation without permit was each year becoming more and more fully developed. It is possible that the *lambardar* might, even with the law as it stands, be required to close an outlet when water is no longer legitimately required for the irrigation of *leased* areas.

Vol. II, page 181, paragraphs 5 and 6.

It was indeed becoming clear that, despite the obvious advantages of permitting cultivators to take water, as in the North-Western Provinces, when they liked, and then measuring the area irrigated, the practice led to undesirable disputes when the lands were assessed. One element of success in any such system was from the first wanting, inasmuch as an endeavour was made to supply all the irrigable lands in a village with water even in the *kharif* season if required, whilst in the North-Western Provinces not more than 40 per cent. of the culturable lands of a village is supposed to be provided with irrigation in the *kharif* and *rabi* seasons together. If the supply of water had been thus strictly limited the following advantages would probably have been gained. In the first place the control of the outlet could have been given to the cultivators who would most likely have taken it willingly; secondly, having this control and knowing that the supply was limited, they would have had every inducement to make it go as far as possible; and, thirdly, the limited supply would have rendered it obligatory on them to confine the irrigation within well defined limits, and thus disputes regarding assessment would have been very rare.

It is doubtful whether, unless the area to be irrigated in each village was limited, any system not involving restricting the supply in accordance with the area applied for, could continue to have been permanently followed with financial advantage to the canals or contentment to the cultivators.

The chief benefit Government reaped by the system actually pursued was that irrigation spread more rapidly than it would have done had a strict system of written applications for definite areas of lands previously measured been insisted on, and the quantity of water rigidly limited to what was required for these. The financial disadvantages to Government of the system followed were in no wise evaded. As has previously been stated, no attempt was made to measure lands for which applications had been filed, but for which water was not required.

21. The system followed was practically that led up to by the rules and instructions which had been approved by Government; and, as will be shown later on, the administration was in the main considerate, almost beyond the limits of the authority confided in the officers to whom it was committed.

These remarks apply wholly to *kharif* irrigation. It is expressly stated in the report that there were no complaints of unauthorized irrigation in regard to *rabi* crops.

Vol. I, page 67, section 209.

It is perhaps as well to describe as succinctly as possible the duty which devolves on the Canal Officer under a strict construction of the Act. He is practically by the Act and rules, though not so specifically stated therein, required to supply a definite area of land with just so much water as is necessary to ensure the crop being brought to perfection, and at the same time to ensure that the supply shall be so restricted that water shall not be available for the irrigation of lands beyond the boundaries of the area leased. The quantity of water required will vary each year in proportion to the rainfall, and not only the quantity, but the time when wanted. The problem is a difficult one even in the initial stage of laying down rules, which will admit of the Canal Officer, on the one hand, as far as practicable, protecting the public interests by preventing canal water being used without payment being legally enforceable, and, on the other hand, conforming to the standard above laid down that leased areas shall receive such a full and timely supply of canal water as is required for the crops.

PART II. COMPLAINTS AGAINST THE CANAL SYSTEM.

22. This part of the Committee's report will now be considered. The Sone Canals scheme on the 1st of April 1889 consisted of 218 miles of navigable canals, 149 miles of canals for irrigation only, and 1,167 miles of distributaries. It is obvious that in constructing such a network of channels injury to private rights could not be avoided, and that inconvenience, and in some cases actual loss, would be suffered by individuals, which would not be adequately recompensed by any pecuniary compensation admissible under the law, however considerately and even liberally administered. Generally compensation beyond the actual value of the land acquired was not claimed. Whatever benefits might accrue would in the course of a few years be taken as a matter of course, whilst the injuries suffered by individuals or their ancestors would by no means be forgotten, especially in those cases where the inconvenience was still felt, such as a canal running through a village. So far as the points above mentioned are involved, and parts of the administrative system are concerned, to which detailed reference will presently be made, but which may here be stated to include, amongst other matters, 'unauthorized irrigation' and its consequence 'deficiency of supply' and the collection in a short time of heavy arrears, it may be admitted that the agitation was to a large extent real.

Volume I, page 12, section 29.

The complaints brought forward included both classes, cases, those where individuals had suffered injustice, balance by others where the only real grievance was that water w not supplied at the valuation of the lessee.

23 Mistakes could not fail to be made by officers who h no previous experience of work of the kind, and no experien in other parts of India would have enabled either reven officers or engineers to deal successfully with conditions pec liar to the districts served. Frequently, as in the case of t substitution of *kharif* for *rabi* crops, the conditions were then selves an effect of canal irrigation—only gradually developing the effect of which was not at once realized either by the cult vator or the engineer. That these difficulties were not at on fully met can be no matter for surprise. That efforts n wholly unsuccessful were made to meet them is unreserved admitted by the Committee in paragraph 96 of their repor It must not be forgotten that, except in the case of one miner firm, the canal authorities could count on no active aid fro either landholder or cultivator in preventing or detecting th misappropriation of the water which had cost Governmen much and which the cultivator never forgot might, if timel rain fell, be dispensed with. The article was in fact looked o as one which in the *kharif* season of the year at least was common that payment was in every case more or less of a hard ship to be evaded if practicable.

24. From paragraphs 15 to 21 of this note it will be see that the rules and instructions adopted for the guidance canal officers, though admirably adapted to the circumstance of other provinces, have not been found to be altogether suite to irrigation as practised from the Sone Canals. Difficultie had been experienced which could not be adequately cope with by canal officers, and for which a thorough investigatio whether by a committee or a single qualified officer, was necessity.

So far from complaining of the conduct of the gentleme who interested themselves in th memorial presented to the Lieute ant-Governor, I am free to admit that the time for such a enquiry was opportune, and that it was desirable that a landholders they should take the opportunity of which the availed themselves of putting their views on the questio before His Honour. The advantages which have resulte from the enquiry, from one point of view, can scarcely h overrated. It has placed prominently before canal officer the popular view of alleged grievances, and enabled them t remove causes of complaint which they were perhaps no disposed to consider of any great importance till so strongl animadverted on. The reforms have been effective, and car will be taken that the improvements already made are main tained.

Volume 1, page 12, section 30.

25. It is only fair to the superior canal officers—th Superintending Engineer and Collector—to say that th grievances so much complained of were never fairly brought t their notice. A communication from gentlemen in the positio of Messrs. Burrows, Thomson and Mylne could neither hav been lightly dealt with nor ignored. The matter is not o practical importance; it is admitted that a systematic enquir was necessary, and the redress of particular grievances coul but have postponed it.

26. The manner in which the enquiry was conducte may now perhaps be noticed. Bot the Collector of Shahabad and th Hon'ble Mr. Nolan have taken strong exception to the Com mittee's proceedings in not having verified the statement made by properly sifting the evidence on which they were based. There is much force in the objection if the statement are to be taken as embodying anything more than th popular view of the grievances suffered. There are, however other aspects of this question apart from the limited time fixed for the completion of the enquiry. It was absolutel necessary that the Committee should rigorously abstain fro any appearance of exercising appellate or other authority ove canal officers, and investigations into individual cases coul

Volume 1, page 2.

scarcely have failed to have led to the expectation that actual orders would be passed on complaints brought forward.

27. As it was, the proceedings of the Committee interfered not only with the collection of the demands then due, which could be realized subsequently, but also with the measurements and assessments which could not be postponed. Investigations requiring the personal attendance of canal officers would have seriously interfered with these pressing duties. They were called on for reports on the more important cases, some of which, with all or nearly all the replies by the Deputy Collector and his subordinates, are printed in Volume II of the report, whilst others were received after it was submitted, and will, when necessary, be referred to in this note.

For the purposes of the Committee the method adopted was, under the circumstances, suitable, and except that possibly in a few of the more important cases it would have been well to have dealt more completely with both the complaint and reply, I do not take exception to it, further than that at times it seems to have been forgotten, in commenting on alleged individual grievances, that it was possible that the account given of them might not be accurate and that it was certainly unsafe to treat them as undisputed facts. It is stated in the report that replies to some of the complaints have been printed in juxtaposition with the complaints, but they are seldom or ever alluded to therein, an omission which has since been to a certain extent supplied by the reports enumerated in paragraph 4 of this note.

Vol. 1, page 2, paragraph 3.

28. The first point taken up is "CANAL *versus* AHARA IRRIGATION FOR RICE."

Volume I, page 13.

It is stated by the Committee that the one aspect of the canals which forces itself upon the people more than another is—

"That irrigation from the canals has superseded and rendered impossible within the area commanded by the canals the old system of irrigation by ahurs and pynes. The zemindars complain that the ahurs constructed by them have been destroyed and rendered useless without the payment to them of compensation. * * * The cultivators complain that they have now to use canal water and pay for it, whereas formerly they had the ahur water for nothing. They have now to pay an annual tribute of, say, eight lakhs of rupees for water-rates, whereas formerly they were supplied with the old means of irrigation without any payment. It is true that in some cases a small ahur rent of one, two, three or even four annas a bigha was charged by the zemindars, but in many cases nothing at all was charged. * * * These are simple facts. The question is whether they are sufficiently met by the allegation that by the use of canal water the yield of paddy is larger than when the land is irrigated by other means. This answer would be a satisfactory one, if it were true that the increased yield was sufficient to enable the cultivator to pay the additional water-rate. The canal officers assert that this is so, and departmental experiments are made every year to show the increased yield per acre of land."

It will perhaps be convenient to take up the question of the yield of irrigated crops, and then to pass on to the alleged interference with the old system of irrigation by aharas, which it may be remarked were generally inefficient and frequently useless. Such as they were they cost a great deal of labour, usually unpaid, to maintain. The Hon'ble Mr. Halliday remarks* that the administration of the *ahara* system of irrigation by the people themselves was not a success.

* Minute, dated the 15th June 1888.

29. Before discussing the subject, it is right to remark that crops were not selected for experiments with a view to establish any particular result. It was expected by canal officers at least that any set of experiments would show that the yield of rice crops regularly irrigated would exceed those which depended on the rainfall or an *ahara* also practically so dependent as being supplied from a catchment basin of a limited extent.

30. The result of the experiments made by canal officers in each year up to 1886-87 is shown in a table in the Sone Canals Committee's report. In 1887-88 the results were as shown in the table below—

Volume I, page 13, Section 32.

IRRIGATED WITH CANAL WATER.			IRRIGATED FROM OTHER SOURCES.		
Number of experiments.	AVERAGE YIELD PER ACRE.		Number of experiments.	AVERAGE YIELD PER ACRE.	
	Grain.	Straw.		Grain.	Straw.
168	Mds. s. 17 27	Mds. s. 39 18	165	Mds. s. 10 30	Mds. s. 23 27

The results from the year 1880-81 to 1887-88 are as follows, taking grain only into account :—

I.—Canal irrigated dhan—1,227 experiments, average yield per acre of unhusked dhan—$16\frac{5}{20}$ maunds.

II.—Irrigated from other sources—1,030 experiments average yield per acre of unhusked dhan—$12\frac{9}{40}$ maunds.

These experiments, it must be noted, were both as regards canal irrigated dhan and dhan otherwise irrigated intended to show the yield of *average* crops.

31. Whilst not claiming that every experiment was conducted with such precautions as would ensure absolute accuracy, the Superintending Engineer maintains that taken together the experiments made represent "very fairly the actual state of things." It should be noted that in 1880-82 the advantage in favour of canal irrigation was very trifling in other years it was more considerable, and the Superintending Engineer's contention is that these results are substantially correct.

Volume I, page 98.

32. In 1888-89 there was a general failure of the rain throughout Behar, and the good result of canal irrigation is thus described by the Commissioner of Patna :—

No. 597G. of the 26th September 1889.

"The Sone Canals have been a great boon during the year to the districts irrigated by them. But for them there would have been distress and scarcity, the inevitable result of the failure of the rain in September and October. The crops generally, where canal water reached them, were good, but they failed almost entirely elsewhere."

Such is the opinion of the chief Civil Officer in the Patna Division, based on reports from district officers, which were necessarily more than ordinarily carefully observant of this point to which the scarcity in Behar had drawn public attention.

33. The above is an opinion. There are, however, solid facts to go on. It was felt, in view of the hesitation expressed by the Committee in accepting the results of experiments carried out by canal officers, that it was desirable, for one year at least, to have experiments carried out by an officer independent of the Irrigation Department. Mr. H. Luson, C.S. was the officer selected to report on this and other matters connected with the advantages or disadvantages resulting from irrigation. The Superintending Engineer asked for the co-operation of Messrs. Burrows, Thomson, and Mylne, and canal officers were instructed to invite zemindars, ryots, and others interested to attend the experiments carried out by canal officers, and, as a matter of fact, they did so, the Sub divisional Magistrates being also frequently present. The instructions issued were that *good crops* should be selected and that ordinarily the crops should be weighed on the field.

34. The results of the experiments are shown in the table following:—

Crop.	Name of officer conducting experiments.	Number of experiments.	Average yield, dhan	Number of experiments.	Average yield, straw.
			Mds. s.		Mds. s.
Transplanted Aghani dhan	Mr. H. Luson, C.S. ...	25	33 39½	25	47 17½
	Messrs. Burrows, Thomson, and Mylne ..	26	31 6½	26	52 22⅝
	Canal Sub-divisional Officers	33	35 5½	31	68 11⅞
	Canal subordinates ...	138	31 30 1/16	134	53 38½
Kartika dhan	Mr. H. Luson, C.S. ...	3	35 1½	3	46 36⅞
	Messrs. Burrows, Thomson, and Mylne ...	20	26 37 7/16	25	46 6½
	Mr. G. C. Macconchy, C.E.	2	31 4½	2	56 29½
	Subordinate, Agaon ...	1	14 10½	1	33 0
Broadcast dhan	Mr. H. Luson, C.S. ...	2	22 25	2	31 22⅝
	Messrs. Burrows, Thomson and Mylne ...	1	23 14	1	36 32
	Canal Sub-divisional Officers	3	37 11⅝	1	54 0
	Canal subordinates ...	2	33 7½	2	39 13½
	Average ...	261	31 3 5/16	253	51 32½

The above table is abstracted from a note by Mr. H. Luson, dated the 4th February 1889, which was published in the *Calcutta Gazette* for the 3rd April 1889, in which the whole of the experiments, whether made by himself or others, were analysed.

Of the 261 experiments made on the yield of dhan, 30 were carried out by Mr. H. Luson and 52 by Messrs. Burrows, Thomson, and Mylne. The remainder were carried out by canal officers and subordinates.

35. The evidence recorded by the Committee is wholly to the effect that the yield of dhan is less—considerably less*—half what it was under the old system, Mr. Mylne alone† stating that he refrained from giving an opinion on the question because he had no data to enable him to speak positively on the subject, but adding:—

* Volume I, page 15, complaint 37.

† Volume II, page 203.

"I may state, however, that the general opinion of our tenants is that since the introduction of canal irrigation the produce of all crops has been considerably reduced."

The statements made were not infrequently emphasized by the declaration that the witness would be glad to cancel his five-year lease.

Volume I, pages 15, 16, and 17.

The evidence recorded by the Committee is, as a matter of course, to some extent at least influenced by the consideration that the witnesses were mainly the buyers of the commodity sold by the canal officers. They naturally desired to purchase at a low rate and on conditions favourable to themselves, and the unanimity of the testimony which is commented on by the Committee is, from this point of view, not remarkable. In other matters it is not infrequently found that would-be purchasers are not undesirous of obtaining what they require as cheaply as possible, and that it is not their habit to extol the merits of the contemplated purchase.

Volume I, page 17, paragraph 38.

36. It may be that there is a prejudice against the use of Sone water for irrigation which has been handed down from generation to generation, but the prejudice did not, as is expressly stated by Dr. Buchanan Hamilton 80 years ago, prevent "industrious persons watering their lands from the Sone with the most success, though the land is poor," and it has equally little practical effect now.

Volume I, page 17, section 36

The Committee remark that—

"The impression entertained by the cultivators is apparently due to their involuntary comparison of it with other fertilizing agencies of superior quality. The only way to test the correctness of the impression is by systematic experiments scientifically conducted by independent agency."

Volume I, page 17, section

The fertilizing agencies mentioned are the river Ganges and old wells; the former is inaccessible for kharif lands commanded by the Sone Canals, and the latter are not used, to any extent, if at all, for rice irrigation.

37. An attempt has been made to satisfy the demand for experiments carefully conducted by independent agency with the results already shown.

The assertions made before the Committee were to the effect—

Complaints 37, 79, 92, 110, 112, 113, 136, Volume I, pages 15 and 16.

I. That abundant crops could not and never were produced by land irrigated by canal water.

Complaints 53, 90.

II. That the producing power of the land had deteriorated owing to the use of canal water.

Complaints 43, 53, 109, 111, 113, 117, Volume I, pages 16 and 17.

III. That certain descriptions of soil, especially *kewal*, are not suited for irrigation by canal water.

These allegations will now be considered in some detail in the light afforded by the experiments carried out in 1888-89.

38. The first assertion is, it is considered, sufficiently disposed of by the table already given. An average yield of 31 maunds 32 9/16 seers per acre over all descriptions of dhan, all kinds of soil, and all methods of cultivation can scarcely be taken as other than positive proof that good crops can and are, under certain circumstances, produced by canal water. In the case of superior cultivation, *i.e.* transplanted *aghani* dhan, the average yield was within a fraction of 34 maunds in the case of the experiments carried out by Mr. Luson, and 35 3/20 maunds on those carried out by Canal Sub-divisional Officers, evidently, Mr. Luson remarks, "because, taking a very small number of experiments each, they were mostly able to choose the very best crops." Instances of lands yielding crops producing a yield of 39 maunds and upwards per acre were not rare, the greatest yield being 44 maunds 8 seers. It must not be forgotten that these experiments were avowedly on *good* crops. The question of *average* yield will be considered in connection with rate. Here it may be mentioned that Mr. Luson estimates the average yield of canal irrigated crops for 1888-89 at 18 7/10 maunds, which is two maunds in excess of the result of canal officers' experiments to date.

Mr. Luson's note, dated 4th February 1889, paragraph 6.

39. *II.*—The experiments referred to in the paragraph above were on lands under long lease. In 23 out of 25 of the experiments carried out by Mr. Luson on the yield of *aghani* dhan, "canal water had been continuously taken for nine years or more. Of the remaining two, in one canal water had been used for three years and in the other never before. The results of these two are slightly below the average of the 25."

In the great majority of the remaining experiments water had been used for seven years and upwards, Mr. Luson concluding his remarks* on this subject by observing that—

* Note, dated 4th February 1889, paragraph 12.

"In fact the experiments upon transplanted *aghani* dhan have been generally upon lands continuously irrigated by canal water for a number of years, and it is therefore impossible from the returns to compare the results of the continued use of canal water with those for lands to which it has not before been applied."

The only possible conclusion seems to be that the benefits produced by using canal water have been so great that when once they have been experienced the cultivator is unwilling to forego them.

40. *III.*—Turning to the third allegation, the unsuitability of certain descriptions of soil for canal irrigation, the fault—if there really has been a falling off in the yield of fields belonging to particular cultivators—appears to be more with the cultivator than with the canal water. In the case of 16 experiments carried out by either Mr. Luson, Messrs. Burrows, Thomson, and Mylne, or Canal Sub-divisional Officers, the average yield of *aghani dhan* grown on *kewal* soil was 34 maunds 15 3/16 seers per acre. It is true that a yield better by about 10 per cent. was obtained from 30 experiments on the soil

Mr. Luson's note, paragraph 11.

wn as *baimat*, but there is nothing to justify the allegation the *kewal* soil had ceased to be productive. The fact is no bt as stated by Mr. Luson—

From these tables it is clear that sandy soils are somewhat better the cultivation of dhan than clayey soils: they would seem also e better than loamy soils. The results are in accordance with general opinion throughout these districts. They prove also that good dhan can be grown upon clayey soils."

41. It was very generally stated by the witnesses whose evidence is alluded to in* paragraphs 35 to 37 of the Committee's report they were desirous of cancelling their five-year leases llowed to do so. The Superintending Engineer has been ed with powers to cancel these leases provided all the natories apply to that effect. From the revenue report the Sone Circle for the current year, it appears that nine es only, covering 1,456 acres, had been cancelled up to the April 1889, and five for 529 acres have since been cancelled. single application has been refused, nor, provided it is ferred by the 25th June, before the season has commenced, would it ordinarily be declined in future. An offer† by the Superinding Engineer on the 15th October 1888, to cancel a e for 512 acres at the end of the Kurmuri distributary, to ich water could not be supplied owing to the criminal duct of adjoining villages, was indignantly refused, as it olved the loss of canal water in the year following.

* Volume I, pages 15 16.

† *Calcutta Gazette*, 9th January 1889.

42. Specific replies to the complaints quoted at pages 15, and 17, Volume I, will be found in the Engineer's reports. regards Nos. 34 and 35, a subordinate of the Department imprisoned in 1888 for being concerned in illicitly ing water to these villages, which consequently could not assessed, and in nearly every one of the remaining cases ther five-year leases have been applied for. Adverting to ness No. 136, the following extract from a report by . Stephen, dated the 20th June 1888, deserves attention :—

As regards the evidence quoted by the Commission in support of general opinion as to the deterioration of crops by canal water, desire to call particular attention to the evidence of witness 136, Shah Mahomed Wahidudin (page 16 of report), who has n described as a respectable Mahomedan zemindar of good ily. At the very time this witness gave his evidence before the mmission, he had applied to the Executive Engineer, Eastern e Division, under section 50 of Act III (B.C.) of 1876, to acquire d and construct a village channel for him at an approximate cost Rs. 400, to irrigate about 400 bighas of land, which at present not be irrigated from the canal. The water-rates on the 400 has will be at least Rs. 500 a year. It seems to me passing strange t, if Shah Mahomed Wahidudin derives no benefit from canal ter, he should be desirous of introducing canal irrigation into his age, when he might construct an "ahra" with the cost of the posed village channel, and save the yearly tribute of Rs. 500 ich he will have to pay as water-rates.

43. In connection with this subject, the only further point which it appears necessary to bring forward is the extension of rice ltivation. That this change is in some respects not bene- ial may be admitted, but, as remarked by the Committee, fact is unquestionable, and there must have been some y strong reason to induce so conservative a class as the har cultivator to so radically diverge from his previous stoms. The cause of the alteration is thus explained by r. L. Mylne in a letter, dated the 30th June 1888 :—

Volume I, page 31, Section

It is necessary to explain here why canal water has been appreciated by the cultivators on the Jugdispore estate, and for this purpose attach to these remarks a tracing of this estate. It will be seen at the area is divided into two portions—

(1) That coloured green which, under forest 27 years ago, was rapidly cleared and brought under cultivation within a few years subsequently.

(2) The former settled portion coloured crimson.

For the irrigation of the jungle portion there were no ahurs, but were constructed between 500 and 600 masonry wells, which, till the event of canals, sufficed for all the requirements of the cultivators. There was then hardly any paddy cultivation.

In the second or village portion we put into thorough repair and extended existing ahurs, which had become well nigh useless, besides constructing entirely new ones.

The adoption of canal irrigation was rapid and general all over the jungle mehal, resulting, after a few years, in an almost entire change from dry weather to wet weather crops, which could not be raised by well irrigation. The transformation has been so complete and thorough that only the absolute refusal of canal water for paddy would compel the ryots now to forego the cultivation of that crop. In the settled villages surrounding the jungle mehal canal irrigation was not extended or developed so rapidly because of ahur irrigation. But when, in seasons of deficient and uncertain rainfall, ahurs failed, the cultivators of these villages made a general and persistent demand for canal water, and we were compelled to extend our system of channels to meet their wants

The fact that an efficient canal, such as the Behea Branch, was constructed through the entire length of the Judispore estate, so compact as it is, was a potent factor in the development of canal irrigation and the disuse of ahurs. "Here is a constant and ampel supply of water," thought the ryots, "available from the end of June to the end of October: let us give up the uncertain irrigation from ahurs, which fail us either at the beginning or the end of the season, and take canal water." It frequently happened that these villages would not apply for canal water till the ahur failed in respect of one watering. They were then supplied with canal water, and, finding that they had to pay as much for one watering as if they had irrigated throughout the season, they naturally decided to depend entirely upon canal water and forget their ahurs. The question arises—would ahur irrigation have been put aside if a small charge had been levied for one watering or for refilling the ahurs?

The case in this estate at any rate appears to lie in a nutshell. Is it credible that *rbai* cultivation would have been exterminated and *ahara* irrigation abandoned unless the yield of canal irrigated rice was satisfactory—in fact, unless the alteration involved a profit to the cultivator at least, and indirectly to the zemindar?

44. So far the yield of canal irrigated rice has chiefly been considered. The main head "Canal *versus* Ahur irrigation" will now be examined. A continuation of the extracts from Mr. L. Mylne's remarks will show the grounds on which canal irrigation is preferred :—

For some years past a number of these villages have managed without canal water, but the bulk of them, for various reasons, cannot. Our policy as regards these villages has been to co-operate with the ryots, by strengthening and improving the ahurs when and where they can, with confidence, forego canal irrigation, and revert to their former methods.

One of the advantages of canal irrigation has not been anywhere mentioned, that is, the comparative certainty of the supply, in most places easily accessible to canal water, for raising paddy seedlings and their subsequent transplantation. With the aid of canal water the ryot may do this work whenever it suits him and whenever the time is seasonable and auspicious, whereas formerly he was dependent upon uncertain rainfall.

45. There is a further special case quoted by the Committee which appears to go to the root of the matter, and is accordingly quoted with the Committee's remarks at length—

* Page lxvii, Appendix III.

"And in regard to a particular village, he writes* :—

"I may mention here that when visiting mouzah Belgaon, one of our villages, the other day, the ryots asked me to thoroughly repair the village ahur so as to relieve them of the necessity of paying Rs. 6,000 yearly in water-rates. They have no complaint against either the assessing or collecting departments, for they have always had a full supply of water, and they pay rates without difficulty. They have entered into a five-year lease among themselves, as contractors, for nearly the whole cultivated area held by them. We are not parties to the contract. The area of the village is nearly 7,000 local bighas, and the gross yearly collections, including Government cesses and putwaries' *neg*, is Rs. 19,000. It would seem that they have begun to doubt whether, if the ahur is thoroughly repaired by us, it would be necessary for them to purchase Rs. 6,000 worth of canal water every year. The village ahur was exceedingly efficient and reliable, but fell into disrepair owing to the adoption of canal irrigation. It is probable, however, that in order to save to the village the large sum of Rs. 6,000 annually, we will put the *ahur* into thorough order. Our only fear is that the ryots may miss the regularity and convenience of the water-supply given by the canal to this village.

"We invite particular attention to this evidence. The village of Belgaon is one to which the Canal authorities have always pointed as a specimen illustration of the benefits conferred on the country by the canals. The outturn of rice is ample, the supply of water sufficient, and there is no friction with the Collection Department,

Here, if anywhere, it may be supposed that the ryots are contented with the present arrangement. But we now learn that in their own opinion and in the opinion of the zemindars of the village it is a matter for consideration whether the advantages of canal irrigation are not purchased at too high a price. To avoid the water-rates it is proposed to recur to the system of irrigation which prevailed before the canals were constructed."

The question which cannot fail to occur to the reader of the Committee's report is—How great must be the advantages derived from canal water when an efficient *ahara* is practically abandoned and Rs. 6,000 paid yearly for canal water? Irrigation in this village is not a thing of yesterday. Water has been continuously taken since the canals came into operation in 1876, so that the villagers, who are themselves the contractors, have had ample opportunity of appraising the value of the commodity bought. If in such cases it is profitable to use canal water, how much more must be the resulting advantages where, as in the vast majority of cases, the *aharas* have an insufficient gathering ground and are not kept in proper order. The Belgaon *ahara* is one of the very few provided with masonry escapes. There are probably not half a dozen others so furnished in the whole of the Shahabad district.

The inference is irresistible that canal irrigation must, even after the payment of water-rates, be highly profitable to the cultivators, especially to those who have not enterprising landlords like Messrs. Burrows, Thomson, and Mylne, able and willing to construct such works *aharas, &c.*, as are necessary for their prosperity.

Vol. I, page 17, section 41.

It is perhaps necessary to observe that Belgaon is situated on the last reach of the Kunteya distributary, from which water is supplied in the *kharif* season, and that the canal water used in that village could probably within a short time be equally profitably utilised elsewhere. The demand for canal water in the *kharif* season is already practically in excess of the supply. The cultivators are not improbably reckoning on canal water being available as a '*dernier resort*' should the *ahara* fail. It is quite likely that such would not be the case, and that they would find that exemption from even a tribute of Rs. 6,000 a year had been purchased at too high a price.

46. Against Mr. Solano's opinion may be quoted that of Mr. Nolan, contained in a note, dated the 10th July 1888:—

"I may say that when I was Collector of Shahabad—an office which I held during the five years ending with 1884-85—no one appeared to doubt that irrigation had on the whole been profitable to the district. The system was then extending; indeed the area irrigated doubled during the period; and coincident with its extension was observable a degree of comparative prosperity clearly distinguishing the inhabitants of north Shahabad from the poverty-stricken population of the surrounding districts."

Even now the difference in the appearance of the villages on the Patna-Gya Railway and the Patna Canal cannot fail to strike the most casual observer, and Mr. Solano's practice does not, from the following extract from a report by Mr. Stephen, appear to be in accordance with his recorded opinions:—

Irrigation from ahurs.—I am not aware, with one single exception, of any ahurs which have been destroyed by the canals in the Gya district. More than 75 per cent. of the lands irrigated from the canals are very high and cannot be irrigated by flow from *ahurs*. These lands are all now sown with rice, whereas formerly only inferior crops such as *rahar, kodo*, &c., were grown on them. Where ahur water has been abandoned by the ryots for canal water, it is because they prefer canal water and can depend on a constant supply. Last year it was at the special written request of Mr. G. L. Solano, of Arwal, that I executed a five-year lease in, and supplied water to, village Bugpore, pergunnah Arwal. This village in former years used to take canal water and had a five-year lease, but in 1885-86 and 1886-87 it was unable to get water, as the village is situated far down the Malli distributary. There is an ahur in this village. In a second village of Mr. Solano's, Pooran, where also Mr. Solano asked for a five-year lease, I was unable to grant the lease as I could not supply water to the village, it being situated very far down the Khojassa distributary.

47. The complaint that *aharas* were injured by the can and that no compensation was paid, is supported by t specific instances only—

I.—That of the Ghoosia bund. This embankm was ordered to be cut by the Collector un the provisions of Act II (B.C.) of 188 dangerous to life and property, not be provided with masonry escapes and no lon protected by embankments higher up the ri Kao, the embankments having disappear There would have been a strongly contes legal question as to the compensation paya and the persons liable when the zemindar hi self settled the matter by altogether declin to receive any compensation which might charged to the public revenues. The remova the embankment had no immediate connect with canal irrigation. The liberality and pul spirit displayed by the zemindar in the mat were cordially acknowledged by Sir A. Eden.

II.—That of the Domraon bund which was remov by the Maharajah himself as dangerous to t town, when all the bunds across the Kao abo it, by which it was formerly in some measu protected, had been abandoned. There w always the risk of a breach, in which case t town would have been flooded.

The Superintending Engineer's statement that no spec action has been taken by Canal offic in reference to *aharas* with the exce tion of the two mentioned above can scarcely be impugn though it is not denied that in many cases inconvenience, a occasionally even actual loss, resulted from the construct of canals and distributaries. Such injuries as were suffer were occasioned from 10 to 20 years ago, and compensati should have been claimed at the time. It is impossible say now without careful enquiry whether compensation w paid in all cases. There is no doubt that in some it w neither claimed nor paid.

Volume I, page 121.

48. One other instance, which is given as an examp of how the *aharas* have been "inte cepted and destroyed," will be refe red to under the head Drainage; an when the question of rates is discussed, it will be show that there are strong grounds for believing that the irrigati capacity of many of the *aharas* has actually been increas by the canal water which drains f from irrigated rice fields, and is inte cepted by these *aharas* and again us for irrigating crops not liable to assessment.

Volume I, page 24, paragraph 64.

Sone Circle Revenue Report for 1889-90, page 11.

Two other points may perhaps be mentioned—

I.—That as regards the village of Ekwari, prominent referred to in a note to page 13, Volume I the report, and again at pages 22 to 56, M Geo. Fox (who has been Messrs. Moran a Company's Agent since they acquired t village), states (paragraph 27 of Mr. Odlin di-sent) that no application for a syphon h been made by them.

II.—That the three villages referred to by Mr. Solan are unfortunate beyond the area f which water is ordi arily available in the *kharif* season. Two o of the three have, however, had one crop or oth under irrigation every year, 1,828 bighas havi been watered during the four years endi with 1888-89.

* Volume I, page 17, section 41.

49. The Sone Canals have developed into channels chief utilised for the irrigation of rice, not altogether in accor ance with the expectations of the Engineers who design

them, and, possibly, not in the best interests of the people if other than financial considerations are taken into account. It is, however, submitted that the facts brought forward show that for this purpose they are efficient, and that the contention that canal irrigation is other than voluntary, or, as compared with *ahara* irrigation, not profitable to the cultivator, rests on no solid foundation.

Canal versus Well irrigation for Rabi.

50. The Sone Canals have so far not been successful in regard to the irrigation of *rabi* crops. These crops form approximately 10 per cent. of the area under five-year lease, and to this extent *rabi* crops are probably regularly irrigated; but the annual leases which vary in amount from 15,000 to 70,000 acres have always been disappointing. Taking into account five-year leases the largest area ever irrigated was 129,012 acres in 1887-88 which is scarcely one-third of the area to which water could without difficulty be supplied. *Rabi* irrigation has never recovered from the disappointment which the cultivators suffered in 1877-78. They gave it a trial, and the result, partly owing to their own inexperience and partly owing to natural causes, was disastrous. The water was easy to get and the land was flooded to the injury of the crops. There was a pest of caterpillars which destroyed the pulse crops and the wheat was injured by blight. Barley in fact was the only crop which escaped. Large remissions of water-rates were made by Government, but the landlord's rents were, except in a very few cases, exacted as usual.

The water-rate for *rabi* is unquestionably high, and has doubtless an injurious effect both in respect to Government and the people in preventing water which is available being turned to account.

In suitable localities canal water is used for irrigation even at the cost of considerable labour. Lands bordering the Jehanabad Distributary are every year irrigated, though the water has to be lifted twice and in places three times, entailing a cost in labour probably equal to the water-rate.

51. The result of the experiments made to date on *rabi* crops is as follows:—

Crops.	Number of experiments.	Canal irrigated crops, average yield per acre.	Number of experiments.	Irrigated from other sources, average yield per acre.
		Mds. srs.		Mds. srs.
Wheat ...	495	11 1	473	10 31
Barley ...	57	10 34	58	12 21
Wheat and barley ...	117	9 25	106	9 37

Wheat therefore apparently produces as much grain if irrigated by canal water as by the wells usually available, whilst in the case of barley canal water does not seem to give good results. So far as the experiments go, there is, however, nothing to show that as regards one staple crop canal water might not be much more largely utilised, and probably will be if the rate is made more favourable.

52. That canals in places where there is much percolation render the construction of *cutcha* wells in their proximity impossible is admitted. It is, however, only in parts of the Patna Canal that this difficulty occurs, whilst on the other side owing to the percolation such lands frequently require no irrigation at all. There is no remedy: the canals, it may be hoped, will gradually become more watertight.

Volume I, page 20.

53. The difficulty with the Opium Department was not general: it was most felt in Patna and Gya and the east of Shahabad. The number of aqueducts applied for—and the application comes through the Opium Department—has not been very considerable, and many of them are but little used. The objection entertained to these by Canal Officers had little reference to the irrigation of opium. The crossings can be, and, as a matter of fact are, used for irrigation generally; artful contrivances of one kind or other being resorted to. There is the temptation, which the late Sub-Deputy Opium Agent of Shahabad had to admit was generally irresistible, of taking the first and sometimes the second watering from the canal, a course leading to disputes the canal officers were anxious to avoid. Experience has proved that the Canal officers were right in considering that there was no general demand for crossings, but it certainly would have been better if they had provided such as were actually required without pressure from another department.

Marginal note, Volume I, page 20, paragraph 44.

Obstruction to Drainage.

54. This matter has throughout received the most careful attention from all the Engineers who have been engaged in the project.

That all drainage works rendered necessary by the canals should be carried out is admitted. On this point there is no difference of opinion, Mr. Odling observing* that—

* Volume I, page 119.

"Any actual obstruction is remediable, and ought to be remedied, provided always that as a matter of fact it exists. Anything like impeded drainage is under all circumstances and under any conditions an evil from an irrigation point of view, as tending to water-log the land. Liberal provision was made on the general estimates for any drainage works that might be found necessary. The fact of drainage being impeded cannot be hidden, though it may happen that it does not at once come to light, the flow in years of ordinary rainfall being absorbed or utilised before it reaches the canal bank."

The fact is, and it cannot be too strongly insisted on, that the Engineer's objection to *aharas*, which is alluded to several times in the Committee's report, is based not on their capabilities as irrigating agencies, but because as a *condition of existence* they must obstruct drainage. Injurious as the influence of embankments, necessarily aligned across the drainage of the country and, except in rare cases, not provided with escapes must be at present, it would be greatly intensified if canal water was regularly poured into them as suggested in section 232 of the report, and it is for this reason that the Superintending Engineer* advocates caution in dealing with such applications.

* Volume I, page 96.

55. One special case is referred to by the Committee in paragraph 64 of their report. In this instance it is not denied that drainage was interfered with; but, as stated by the Committee, it also—

Volume I, page 24.

"Affords evidence of the action taken by the Engineers to remedy the obstruction which their own works had in the first instance occasioned"

Our sins have certainly found us out. There is, however, no other such case in the whole system. There has equally been no hesitation in remedying the evil appalling to an Engineer as the number of works required to counteract the mistake made has been. One of these only would have been wanted if the correct alignment, *i.e.*, an extension of the Sikrour Distributary, had originally been preferred.

The only condition required precedent to the construction of a syphon is that water shall actually be impounded: wherever this can be shown to be the case, even to a slight degree, there will be no hesitation in providing such a work: where, however, there is no obstruction, no possible good can result from expending public money on the construction of works which, when finished, would be useless.

No trace can be found of most of the petitions for syphons referred to in the report. In a matter of the kind where influential landholders are concerned, it is surely not asking too much if, in cases where their wants are asserted not to be attended to, they are asked to communicate with the Superintending Engineer.

56. In August 1888 the rainfall was exceptionally heavy, and whatever defects in drainage provision existed became apparent. A note by the Superintending Engineer, giving, as suggested by Mr. McNamara,† a list of all cases where the canals or

† Volume II, page 330.

distributaries were breached or cut is attached. The note also contains information as to the drainage works that have been carried out since the date of the Committee's report, and as to what works are known to be still required. A perusal of the note will show that the Committee's recommendation, expressed in the concluding part of section 25 of their report, has received that full attention which it is quite admitted it deserves. Material progress has been made without neglecting the care and caution expressly stated to be necessary, and which has been the real cause of any apparent delay in dealing with the question.

57. Before concluding my notice of this part of the report, it is perhaps desirable to allude to the fact that the drainage works carried out are in many cases of immense benefit to unirrigated tracts of country, it being necessary to deal with the whole area to be drained irrespective of the precise parts thereof affected by the canals. Such a case is the Bachere drainage cut which has cost Rs. 57,763, and which includes a weir by which the water in the *aharas* above can be kept at any desired level. A similar work has just been sanctioned in connection with the Chowsa canal.

Obstruction to District Communications.

57. The Committee refer to the obstruction to district communications stated to have been occasioned by the canals. The case is thus put by the Magistrate:—

"Existing roads are injured by the side cuttings being used as village channels, by unauthorised channels being made across them, and by flooding from surplus canal water. Potential roads are affected by the canals and distributaries occupying the water sheds wherever practicable."

Of actual injuries stated to be caused to the roads, the road authorities are to a certain extent responsible for the first two, which can only be stopped by criminal prosecutions. Should there be real fear of scarcity, the local pressure is such that they are indisposed to object to any means of irrigation. It has been decided that permanent road crossings will for the future be provided by Government. It is unlikely that any considerable addition will be made to the length of the roads in the district; in fact some roads made in the famine of 1874 have been practically abandoned. The fact that the canals have, as far as practicable, been kept on the ridges, which might possibly in future years have been utilised as roads, is hardly a sufficient reason for the District Board claiming what is *de facto* heavy pecuniary compensation. It is essentially a case of "first come first served."

58. The Committee observe—

"We have seen for ourselves that the canal embankments and towpaths are now largely used as means of communication by the people, and that the convenience of the canals in this respect is appreciated. They are suitable for foot-passengers only, for as a rule the banks and berms are too narrow for wheeled traffic. During the rainy season only it is necessary to impose certain restrictions for the protection of the canals which cannot be relaxed.

To the statement of policy contained in the above extract, the canal officers have never taken exception, but as berms vary in width from 5 to 10 feet only, and would soon be absolutely destroyed by heavy carts, they have been compelled to object to wheeled traffic except in a few cases in which, as a matter of public convenience, the berms of some distributaries or parts of distributaries are kept open during the dry season for light vehicles only, such as ekkas. That a very distinct assertion of the right of Government to control the use of the lands acquired and roads formed at its expense is sufficiently obvious from the following resolution of the Shahabad District Board:—

Extract from the Proceedings of a Special Meeting of the Shahabad District Board, held on the 27th of March 1888.

"Read the application of Syed Mohamed Jan and others for a bridge over the Kao Nuddi, and the papers connected therewith.

"Resolved that a sum of Rs. 2,000 be provided in the budget estimate for 188 -90 for making a road from Koath village to the Doomraon Canal, and that representations be made to the Irrigation Department to throw open the Doomraon Branch Canal spoil bank, between Tendoni on the one side and a point opposite Karanserai on the other, to public traffic as of right."

In this case an arrangement for light traffic was arrived at, though the claim to the use of the berms as of *right* was necessarily repudiated.

The Superintending or some other Engineer connected with the canals would, in the light afforded by the Committee's remarks, probably be a more efficient representative in the District Board than the Irrigation Deputy Collector, who has, for some reason not known to me, been selected apparently to represent the Public Works Department.

DETERIORATION OF PUBLIC HEALTH.

59. The statistics available on this subject are not in themselves very reliable, and there is the further difficulty that the divisions into which the resulting figures are abstracted are by no means conterminous with the irrigated area.

The actual facts are probably tolerably fairly put in the following extract from the report of the Civil Surgeon, dated the 13th January 1880, which was furnished at the request of the Committee:—

Volume II, page 319-25.

"*Effect of canal irrigation.*—In conclusion, it seems to me from a study of such statistics as are forthcoming on this subject that the canal irrigation of this district has without doubt intensified pre-existing disease-producing influences.

"It is a mistake to assert, as is sometimes done, that malaria fevers were almost unknown previous to the canal period. The fact is that the district has been subject to malarial fevers for a very long number of years, and it is also, I believe, a fact that in recent 'epidemic years' the district suffered, certainly to a greater degree, but in common with neighbouring districts.

"I fear it cannot be denied that obstructions to drainage have been caused by canals: but numerous other obstructions exist from bunds and embankments, leaving water after heavy rainfall stagnating in barren channels.

"Then it is said that water is wastefully used, and I can vouch for its being *injuriously* used. The cultivation of crops, such as sugar-cane, requiring very frequent flushing, has enormously increased since the canals were made. I saw a village a few days ago close to the canal, about 20 miles from Dehree, on the side almost hidden by jungle and undergrowth, and surrounded so as to be almost lost to view by dense crops of sugarcane. Any one with any knowledge of hygiene must know that it is impossible to retain health with such surroundings.

"I think it must be recognised that land surrounding towns and villages must not be irrigated from canals. I need hardly point out how injurious to health damp dwellings are.

"*Summary.*—To sum up, I should say that the effect of the canal system has been of a mixed nature. On the one hand they are said to have placed the district beyond the danger of famine (although I do not think this to have been proved, if population goes on keeping pace with production, as before last census, when an increase of nearly one-fourth of a million was found); by offering a means of sowing the crops in years of drought, they have increased productiveness, and made fertile what was previously barren.

"They have without doubt benefited the people by affording means of easy communication throughout the district, and one chief element of good has been the introduction of a good supply of water to places where formerly it was of very inferior quality.

"On the other hand, they have brought about such conditions as without doubt, promote the spread of diseases such as malarial fevers &c. These conditions can to some extent be improved. I have not been asked for an expression of opinion as to the remedies which suggest themselves. Much has already been done, I am told, to improve drainage channels, remove obstructions, and to prevent injurious use of water; more can still be done. But when all has been done that can be done, I fear that conditions favourable to malaria will continue to exist in years when the rainfall is above the average.

The extent to which drainage can still be said to be obstructed by canals is shown in the Superintending Engineer's note. Such obstructions never were numerous, and counted for nothing besides the *aharas* which have been in existence for generations. The main drainage channel of the district, the river Kao, was almost obliterated, there being no less than 14 bunds across it when the canals were commenced. Fever has followed—not immediately, but many years after—such blocking up of drainage channels

ough Bengal, and it would be no matter of surprise
ie usual result was experienced in Shahabad. There
were, as noted by Mr. McNamara,* in the extract quoted below, mitigating
stances which, however, by no means accord with the
l statement of the efficiency as irrigating agencies of
aras which pervades the Committee's report.

* Volume II, page 337.

ıat Mr. Cameron evidently referred are the numerous *aharas*
anked reservoirs that abound in the district. These have
possibly from prehistoric time—most certainly they were in
ce in the days of our earliest surveys of the country. How
ın these ancient reservoirs have so suddenly produced the new
eviously unknown results now attributed to them? It might
vered, because they have been put to new uses. In the old
s their limits were strictly defined as to area and time. The rain-
ber that drained into them was limited to the months of the rainy
son. As a rule, the supply was too scant for the requirements,
in the case of abnormally heavy rainfall, when the surplus water
not pass off round the embankments, in the manner provided for
purpose, it almost invariably burst the embankment, leaving only
imited quantity of water in the reservoirs. And the water that
subsequently used for irrigation had to be *lifted* for the purpose.
labour exerted in the process was tedious. The area under irri-
ion and the duty of the water were strictly limited. There was no
ste and no indiscriminate flooding of the country. Long-establish-
custom had created ways and means for the distribution of the
er that are remarkable for the smoothness with which they work-

Now the irrigation season is indefinitely prolonged. Water
plied by the high level canals and distributaries commands every
rs, long after the cessation of the rainy season. There is no need
ift it, and there is not the same inducement to economise it."

The *aharas* are more efficient than before, more and better
ps can be raised, and rice cultivation has to a large extent
erseded financially less profitable *rabi* crops.

0. It is probable that districts under wet cultivation are
years of heavy rainfall less healthy than those in which
crop does not require that for many months the land
ll be covered with from 4 to 6 inches of water. To the
ent the health of the district has suffered by this sub-
ution, it may be partially ascribed to the canals which
e rendered rice cultivation on such a scale possible. On
other hand, as pointed out by the Civil Surgeon above, the
als have helped to meet an equally pressing danger, the
reased population which may even render the increased
ductiveness of the soil of no avail. The effect of the
ension of wet cultivation on the hygienic conditions of the
trict as opposed to obstruction of drainage, which *de facto*
rcely exists apart from the remaining *aharas*, cannot be too
ongly insisted on.

The Committee, it is noticed, are of opinion—

"That a stronger case is needed than now exists to justify inter-
nce by rule with the discretion which the cultivators now exercise
rrigating their lands as they please."

I am not prepared to recommend coercion in this respect,
, as stated by Mr Mylne, it is unlikely that anything
rt of—

"The absolute refusal of canal water would compel the ryots now
forego the cultivation of that crop."

Water is not now supplied for the purposes of irrigation
r Arrah, and there would be no objection to the Superin-
ding Engineer being vested with power to restrict or direct
refusal of permits for irrigation generally, or for irriga-
n in the *kharif* season only in specified places where proper
nage facilities do not exist, or where flooding to an objec-
nable extent is persistently carried on, or where the public
lth is apparently suffering.

1. There is another side to the question, as will be evident
m the following quotation from a note, dated the 10th July
8, by the Hon'ble Mr. Nolan:—

"The canals have given what was much wanted in many villages, a
ply of pure drinking water, and have so far been of great sanitary
. This must be taken as some set-off against the fact that they
ease moisture and probably facilitate the spread of malarious
er."

It should also not be forgotten that the wave of malarial
er, to which reference is made by the Committee, is not
fined to irrigated tracts, but is as rife in Bhuboah, where
there are no canals, and on Gya, where the tract irrigated is only a narrow slice along the Sone, as in Shahabad generally and it has now shown itself in Bhagulpore.

VALUE OF THE CANALS TO THE PEOPLE.

62. In the preceding paragraphs the value of the canals to the people has been more than once incidentally referred to, and there probably has never been a more striking instance of the benefits they have conferred than was experienced during the year 1888-89. There was scarcity approaching to a famine in Behar generally, and this is what Mr. Luson, C.S., who was specially deputed to report on the subject, says regarding the crop on the land irrigated by the Sone canals. It "has reached on the average a high standard of excellence, and stands out in high contrast with the sad picture of the almost total failure of the crop which depended upon rain-water alone, or rain-water stored in *aharas* with small local catchment basins."

He observes—

"As soon as I received my instructions, I rode, before the time of *dhan* harvest arrived, through a large number of villages unaffected by the canals. In the cases of small *aharas*, as the great majority are, I found a complete failure of the crop. Very little of it was worth cutting, even for the sake of the straw. In the cases of *aharas* with somewhat larger catchment areas, a few fields only were sufficiently watered (these were chiefly the malik's *zirats* and the higher caste cultivators'); and in the cases of some of the very large *aharas*, such as those at Belkhara in Gya, Hitampur in the Jagdispur estate, and Udwantnagar near Arrah, the area commanded by the *aharas* was all watered and produced a good crop, though more water would have improved it. But such large *aharas* as these latter can be counted upon the hand. The *dhan* crop dependent upon *aharas* this year, as far as I saw it, was a great failure. It was upon the whole much under 4 annas—probably about 2 annas—of the crop on canal-irrigated lands."

63. The value of the rice and wheat crops on the area irrigated by the Sone canals in 1888-89 alone exceeded 76½ lakhs of rupees, and it is not too much to say that half at least of this sum would have been lost to the people but for the canals. In the sum mentioned above no account is taken of other crops, such as sugarcane and barley of the value of 33½ lakhs of rupees, which benefited materially by canal irrigation. The total amount leviable as water-rates on crops of the value of 110 lakhs of rupees was 8 lakhs only, or about 7¼ per cent. on the value of the crops irrigated.

PART III.—COMPLAINTS AGAINST ADMINISTRATIVE PROCEDURE.

64. The Committee commence by acknowledging that improvement has been effected in both the assessment and collection departments during the past two years. They say:

Volume I, pages 33, sec. 96.

"The improvement is admitted by several of the witnesses who gave evidence before us, and as a fact we find that the great majority of the individual complaints we have received relate to the events of past years."

It is in fact only necessary to refer to the complaints in which names are mentioned, when it will be found that reference is frequently made to events which occurred eight or nine years ago, into the merits of which any kind of investigation was impracticable. The improvement mentioned has since been more than maintained.

COMPLAINTS AGAINST THE ENGINEERING STAFF.

65. Under this head both "Assessment and blackmail," and "Unauthorised irrigation," separately noticed in the Committee's report, will be considered.

It has been explained (paragraphs 17 to 21 of this Note) that in the earlier years of irrigation in Behar an attempt was made to follow, as far as practicable, the system pursued in the North-West Provinces, that is, to depend on the patrol's register or *shudkar* as the basis of the demand statement. The introduction of five-year leases was the first decided attempt to dispense with the services of subordinates of this class in the assessment of irrigated land. The area under five-year lease for the last three years has averaged 200,000 acres,

out of an average of 313,000 acres irrigated yearly, so that approximately two-thirds of the area irrigated has been altogether withdrawn from the cognisance of the patrol for some years past. As will be explained later on, the procedure in the case of annual *kharif* leases has, to a large extent, been assimilated to that followed for five-year leases, and irrigation beyond the boundaries specified in the application has ceased to be assessed, so that the patrol's functions have been much restricted; in fact, so far as the assessment of *kharif* crops, his influence, which was always more restricted than would be inferred from the report, has altogether disappeared.

66. The complaints, to a certain extent endorsed by the Committee, have been that unirrigated lands have been assessed, that blackmail has been levied, and that the law and rules have been oppressively interpreted to the detriment of the people of the country. On the other hand, there is the conviction of the Engineer referred to by the Committee in paragraph 157—

Volume I, page 59.

"that Government is more ill-used by the cultivators than the cultivators by Government, and that instead of the cultivators being themselves oppressed they are rather the persistent trespassers and offenders upon the patience of a long suffering department."

The opinion given is quoted by the Committee as evincing a want of sympathy with the people, though (paragraph 180) it is not denied that—

Volume I, page 57.

"In some villages, especially Brahmin and Rajpoot villages, there is an everlasting struggle carried on to get water without paying for it."

It must be obvious to any one reading the report that a large number of the witnesses more or less resent having to pay anything more than a nominal amount for so common a commodity as water. As observed by Mr. Power,* the great majority of the witnesses before the Committee were Rajpoots and Brahmins—

* Letter No. 8491 of date the 31st August 1888.

"Castes who always claim special priviliges and resent being placed on an equal footing with working cultivators."

With regard to the assessment of unirrigated lands, the same officer observes that—

"Nearly all appeals have reference to unauthorised irrigation. When there is proper evidence in support of the assessment, it must of course be upheld. My conviction in such cases is that in most such cases the canal underlings have been bribed to wink at the malpractice, and that the Canal Sub-divisional Officer's vigilance alone has defeated the fraud; they come chiefly from the Bhojepore pergunnah."

The Canal officers were quite aware that efforts would be made to bribe these subordinates, and doubtless, as stated by Mr. Power, exception was taken when the unauthorised irrigation was detected and the people had to pay twice over, especially where an unsuccessful appeal was preferred.

67. The evidence on the subject of blackmail labours under two disadvantages: first, that it mostly consists of statements which were in no way sifted; and secondly, the bribe was frequently avowedly given with the object of obtaining some illegal object. That the statements made are far too sweeping is obvious from the appendices to the report: for instance in section 105 a pleader's evidence is cited as to the corruptness of the overseer, which was expressly denied by witness No. 74, who is believed to be his own servant. Other witnesses, Nos. 86 and 90 may be taken as examples, refer to the incorruptibility of a particular sub-overseer. Another pleader (section 122 of the report) was equally mistaken, the village mentioned having been irrigated, in the first instance without permit, in the very next year.

The subordinate staff employed on the canals are probably neither better nor worse than those employed in other departments: whatever power they originally possessed has been, as already pointed out, largely reduced, and it is evident from Mr. Power's remarks quoted above that the bribes when given were, owing to the close supervision exercised, of little real use.

68. Replies more or less conclusive to the allegations made regarding assessments and unauthorised irrigation will be found in the reports of the Canal officers quoted in paragraph 3 of this Note; and as the remedy taken is of a nature to altogether exclude the possibility of the recurrence of such cases, it will probably be sufficient to allude briefly to the three cases brought forward by Mr. Mylne and commented on in sections 117, 118, and 119 of the report.

Volume I, pages 28-29.

In the case of the village Kishwa the Collector by no means admits the justice of the Committee's remarks. He points out that the assessees were in a position to know the proper procedure, and there was no apparent reason why they should deliberately allow the period of appeal to lapse and then seek a re-opening of the question. The Assistant Engineer concerned observes that at Ramnugger, between the 24th September and the 20th October, the only rainfall was one-tenth of an inch on the 9th of October, and that water was certainly required. The Collector, with all the facts before him, declined to interfere, and it can scarcely be fairly contended that the case was not considered by an independent tribunal.

Letter No. 8491, dated 31st August 1888. Note on paragraphs 157 to 163 of Committee's Report.

Note, dated 4th July 1888.

In the case of Banwar no appeal to the Collector was apparently made, the assessees accepting the Executive Engineer's order modifying the amount originally charged.

In the case of Chukwa, the Assistant Engineer points out that in the two years succeeding 1884-85 land was admittedly irrigated, and that his assertion is not that water escaped from five-year leased lands into the village, but that the water of about four channels was entirely diverted into the *ahara*. Under any circumstances, and whoever might be the appellate officer, the Sub-divisional Officer had an undoubted right to prepare a demand statement, and it was for forcibly resisting a Government officer in the execution of his duty that a prosecution was instituted. Different defendants were tried by three different Magistrates, with the result, upheld on appeal by the Judge, that convictions were in every case obtained: in fact, three independent tribunals took a different view of the case from that which commends itself to the Committee.

Different as is the aspect which these cases present from different points of view, there can be no question that it is neither in the interest of the people nor of the Canal authorities that such disputes should arise: there is the further fact, admitted in paragraph 21 of this Note, that the Canal officers were also to blame in permitting a supply of water through the outlets in excess of the requirements of leased areas, and the actual remedy taken has been to impose conditions which practically forbid unauthorised irrigation in the *kharif* season being assessed at all.

69. The instructions quoted at length below were issued by the Superintending Engineer with my concurrence, on a consideration of the most prominent defects noticed in the Committee's report. The Circular refers to other subjects beyond the one under discussion which will be referred to as occasion requires:—

Circular No. 1, dated Arrah, the 21st March 1888.

To Divisional Engineers.

The proceedings of the Irrigation Committee having shown that in some cases an alteration in practice is desirable and in others that the rules are not strictly adhered to, I have the honour to request that particular attention may be given to the following instructions:—

I. *Complaints.*—A separate receipt must be given for every complaint; those belonging to one village or for the same cause must not be lumped together in one receipt. One day in each week is to be fixed by the Sub-divisional Officer for receiving complaints, and it is expected that he will be present on that day to receive them, unless unavoidably prevented, in which case the zilladar will be

horised to receive petitions. The Sub-divisional Officer must also ceive petitions on any other day on which they are tendered, if sent at head-quarters. Executive Engineers must make arrangements to receive complaints daily, and petitions sent through the st are not to be refused on that account.

II. *Village channels.*—Great complaint was made that five-year ses were granted where no proper arrangements for the supply of ter existed. In future no permit is to be issued until proper and fficient village channels have been provided. No exception in s respect is to be made owing to money being deposited for a annel to be made by Government agency.

III. *Lands on bhaoli tenure.*—In the case of lands held on bhaoli ure, the zemindar's signature is to be obtained before that of the ots, and if it is refused, the ryots are to be informed in writing that ive-year lease will not be granted. Every such case is to be erted to this office.

IV.—*Five-year leases.*—No preliminary application for five-year se is to be received after the 1st of July; and in cases where, after ee months, the signatures of all the ryots cannot be obtained, the cial orders of the Executive Engineer are to be taken as to ether the lease should not be definitely refused All applications a five-year lease must be accompanied by an application at annual es if water is required to be given before the five-year lease permit issued. The number and size of the outlets will be specified in permit issued for a five-year lease, and no reduction in their mber or size made during its currency.

V.—*Unauthorised irrigation.*—The provisions of sections 78, 79, 80 of Act III (B C.) of 1876 are to be strictly observed. No authorised irrigation is to be assessed without the written order the Executive Engineer, and in passing this order it must be expli- ly stated—

.—That the person by whose act or neglect the irrigation occurred not be identified, and

i.—That benefit has been derived. Where unauthorised irriga- n has occurred through the negligence or with the connivance of anal servant, no assessment can be made. Irrigation from aharas, ich may have been filled or partly filled with canal water, is not be assessed. The aim of Canal officers must be to prevent un- horised irrigation rather than to detect and assess it when it urs.

VI.—*Outlets.*—In the definition of village channel the outlet is ressly excluded. It follows that the Canal officer is responsible the opening and closing of the outlet, and unauthorised irrigation urring through the outlet not being properly looked after cannot assessed. In the case of permanent outlets permits should be used where unauthorised irrigation is likely to occur, and in the e of temporary outlets their size should be adjusted to the areas plied for.

VII.—*Shudkars.*—The signature of the lumbardar should be en when land is for the first time entered in the shudkar, and the rol should make all entries in his register in the presence of the mberdar, or, where his attendance cannot be procured, in the pre- ce of two or three leading villagers whose names should be noted. e shudkar should be frequently examined by the Sub-divisional icer, the silladar, and the sectional officer, and orders recorded rein.

It will be noticed that paragraph V clearly lays down the nciple that prevention, not punishment, should be aimed at, d paragraph VI affirms the responsibility of the Canal Officer the proper regulation of the supply through the outlet.

70. One result of the orders given was that in 1888-89, ,794 acres were leased whilst 69,621 acres only were assessed thus it is clear that written applications had been filed where ter-rates were levied. These areas are those assessed at nual rice rates. There may be more criminal prosecutions future as recommended in paragraph 304 of the Com- tee's report; but, so far as unauthorised irrigation is ncerned, it is proposed that in future, before water-rates der section 79 are imposed for *kharif* irrigation, the charge all be approved of by the Collector. In such cases more an ordinary rates should usually be imposed.

THE FIVE-YEAR LEASE SYSTEM.

71. The deliberate opinion of the Committee may be said be summed up in paragraphs 143, 144, which are quoted low—

"143. It is tedious to enter into such details; but it is necessary, order to justify our assertion, that some portion at least of the tension of five-year leases is due to other causes than the popularity the system.

"144. We are able to fully recognise the comparative advantages ich are enjoyed by the holders of five-year leases. These advan- ges are appreciated by cultivators who possess no other sources irrigation than those which the canal supplies. Among these the five-year lease system has extended by a healthy and natu process. But to the lands of others, who are not dependent on canals for irrigation, the five-year lease system has been extend by other means. The procedure followed has been marked by c stant pressure."

The individual cases quoted by the Committee will be com mented on presently. In the meantime the following fa afford perhaps the most conclusive evidence that the Committ were in error in concluding (paragra 135) that the area under five-year le was due to any other cause than the increasing favour wi which the system was regarded by the people. The Superi tending Engineer was, in Bengal Government orc No. 1921. of date the 8th February 1888, vested wi power to cancel five-year leases. No single applicati has been refused. There leases, aggregating 1,456 acres, were cancelled in 1888-89, and five leases, aggregating 529 acres, in 1889-90. The area under five-year lease in 1888-89 was 200,102 acres against 210,555 acres in 1887-88, but applications for 15,050 acres were refused or not completed owing to the more stringent conditions as to channels and suitability of block insisted on. This year, 1889-90, the area under five-year leases will show a further increase. In fact, since the Committee sat, five-year leases for 65,500 acres have been concluded, and except where the Canal officers have raised objections, nearly every lease which has lapsed has been renewed. It is not denied that formerly assessments in cases of unauthorised irrigation, a species of pressure not necessarily improperly applied, had some effect in inducing the cultivators to make a regular application for a five-years' lease.

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72. Turning to the instances quoted. Nonnur is selected by the Committee as a very special case showing the pressure exercised by Canal officers. The case appears in a very different light the Hon'ble Mr. Nolan, whose remarks, dated the 10th July 1889, are quoted below:—

"The only investigated case on which Mr. Cotton and Baboo Jai Perkash Lall rely to establish the fact that coercion has been exercised of a nature to justify the general reduction of rates is that of the Nonhur villagers, described in paragraph 140 of the report. 'Could anything,' they ask, 'show more conclusively than the circumstances of this case the extraordinary pressure which is being put on the people to induce them to take five-year leases?' 'We can imagine,' they add, 'no clearer case than this, to use Mr. Solano's words, of "forcing five-year leases down the throats of the people." The sole witness examined in support of this case, Bishoshur Roy, No. 50, opens his statement by saying: 'There are no means by which our village can be irrigated; there is no channel.' With reference to this, we must consider the Committee's observations:—'It is true that the village is situated by the side of the Bhojepore distributary, and that it is bounded north and south by villages which are already under five-year lease.' Now if the village lies actually on the side of a distributary, and not, like many less fortunately situated, some miles off, what are we to think of the witness who says there are no means of irrigation? He goes on to depose that he had never heard of any man of his village having applied for a five-year lease, whereas it was ascertained from other sources that no less than three such applications had been made, one for 400 bighas, in the previous month. In addition to this oral statement, there is the documentary evidence of a petition presented to the Engineer in charge, which contains the words described in the report as 'pathetic'—'we accept the five-year lease to avoid your annoyance.' The annoyance consisted in charging cultivators for surreptitious irrigation charges against which they could appeal, if so advised, to the District Collector. And their subsequent conduct proved that an overwhelming majority of the ryots, a majority to whom the Committee would give the power of binding the minority, really wanted the lease, as is shown by the following statement of Mr. Odling:—

The applicants have since had ample time to reconsider their position. Any influence which Canal officers might have possessed has, for the time being at least, disappeared, and the result is that since the sittings of the Commission at Dhungain, a formal application, signed by the holders of the 420 out of 450 bighas comprised in the block, has been signed, and will be submitted to me for sanction under rule 10, page 229, Irrigation Manual. The holders of the 30 bighas who have declined to sign were probably the only real opponents of the lease, and able to a certain length to carry their co-villagers with them.

"Many persons will, perhaps, be inclined, under the circumstances, to answer by a distinct affirmative the question of the members of the Committee—Could anything show more conclusively than this

case the extraordinary pressure which is being put upon the people to induce them to take five-year leases? And if after a protracted enquiry this was the best evidence which the Committee found; if, with all the results of their investigating before them, they could not, as they say, even imagine a clearer case, what must we consider to be the character of the evidence in support of other allegations of coercion?"

Mr. Mylne does not give the facts on which he considers pressure was put upon the village of Chukwa, but it is clear from his letter of the 12th August 1886* that a majority at least of the cultivators of Jugdispore desired a lease, the difficulty not being with his tenants, but with rent-free holders. The lease has since been renewed.

* Volume II, page 172; also Mr. Odling's dissent. Volume I, page 99, paragraph 24.

As regards the other cases, it is clear that the real object of the Canal officers was to prevent unauthorised irrigation, *i.e.*, to prevent a valuable commodity, the property of the public, being used without payment. Whether the lease was annual or five-year was not a matter of concern What was aimed at was the assessment in some regular way of land the crop on which was benefited by canal water, and the cessation of irrigation without application or permit. The mistake made, which has been fully acknowledged, was the facilities given for unauthorised irrigation by permitting the cultivators to allow a supply of water to flow through the outlets in excess of the legitimate demand for leased areas. This error was being gradually corrected, and during the last two years the Canal officers have, as they are legally bound to do, themselves taken charge of the supply of water through the outlets.

COMPLAINT OF DEFICIENCY AND IRREGULARITY OF WATER-SUPPLY.

73. This complaint is admitted to be now practically non-existent. It has disappeared with unauthorised irrigation. The Engineers have adjusted the outlets to the areas to be irrigated, and have temporarily stopped the supply when it was found that water was being used beyond the leased areas: in some cases they have instituted criminal prosecutions. There are still difficulties with regard to individual holdings when there are village quarrels, or where the more powerful men are disposed to oppress their weaker brethren. The absence of complaint on this head in the Jugdispore estate was in truth more due to the care and trouble taken by Messrs. Burrows, Thomson, and Mylne to see that the supply of water was fairly distributed and economically used than to any special consideration in the matter of supply shown to them. It has at times taxed even their energies to secure a fair division of a supply of water which, properly and economically used, was ample. Unfortunately there are many non-resident proprietors and—resident or not—no others who have an establishment competent and willing to carry out distribution arrangements so effectively as the firm named.

Pamphlet by Bahoo Kandjhi Sahai, page 34:—"The supply of water was satisfactory, the prayers of the cultivators were attended to, and, generally speaking, the arrangements were good."

Volume I, page 46, paragraph 147.

74. The Canal officers can secure a proper supply of water to leases (blocks), but ordinarily the internal distribution must be managed by the lessees: at times a subordinate has been deputed to insist in the water not being monopolised by one section of the cultivators; but as regards particular holdings there will always, in the absence of influential and fair-dealing *lambardar*, be a chance of individuals suffering. So long as *lambardars* are remunerated their responsibilities in this respect can be enforced, and default can be in most cases be punished, though inadequately.

75. There remains the important question whether the supply allowed should be calculated on a *total absence of rain*, such as occurred in 1888, or whether a low average, say half to three quarters of an inch in the first ten days of October, should be reckoned on. In the proposals which will be made later on, the experiences of 1888 will be for the most part relied on; but the avowed object will be that in such years which are not of frequent occurrence (though those in which there is a scanty rainfall are) there shall be a difficulty in obtaining a full supply. The quantity of water supplied will suffice, but there will not be the ordinary margin for waste, which, indeed, is then less likely to be permitted to occur.

76. In the earlier days of irrigation, before the results of past experience were available, permits were issued in the *kharif* season for irrigation in villages which it is now known cannot be satisfactorily supplied in a season of pressure on the canals, and for which leases are consequently now refused. An example of this kind is referred to by Mr. Solano, who, however, states (as is the fact) that no contract for irrigation in this season is now entered into within several miles of the place referred to. The Canal officers were unable, until they had experience to guide them, to determine with any approach to accuracy the irrigating power of the canals, especially with indifferent channels and a system of cultivation which was itself in process of yearly change. There were therefore grounds for complaint—unavoidable under the circumstances mentioned above.

Volume II, page 230.

77. It will be noticed that the Committee* expressly state that the power vested in Canal officers of stopping the water-supply has been rarely exercised, and that in one case only, where redress was promptly given, was there any ground for complaint.

* Volume I, page 147, section 149. Volume II, page 16, paragraph 8 of memorial.

SYSTEM OF ENQUIRY INTO COMPLAINTS.

78. As stated by Mr. Power†—

"The great desideratum is to have a large proportion of objections disposed of in the quickest time possible by officers of an average high class."

† Letter No. 849I of the 31st August 1888. Note on paragraphs 252 to 259 of Committee's Report.

The nature of the complaints made is now analysed in great detail in the Superintending Engineer's Revenue Report. Every complaint made, though it may in point of fact be identical with others previously or simultaneously preferred, is separately numbered so that the information contained at page 18 and Appendix XIV of his report for 1888-89 may be looked on for all practical purposes as complete. The whole proceedings in the case of twenty consecutive complaints from the last sub-division inspected by the Superintending Engineer have been examined. In effect they are little more than requests for alterations, and eventually the decision arrived at is mostly acquiesced in by the person making the complaint. With some 200,000 different charges to be made yearly there are certain to be mistakes, and it appears to follow almost as a necessary corollary that the officer charged with the assessment should also have the power of correcting it. In fact in the words of Mr. Inglis—

"As regards the second point, the Canal officer who makes the assessment is primarily in the same position as any other merchant or trader who submits his account for goods supplied or for work performed. It appears to me only a matter of ordinary reason that any complaint as regards a charge in the bill should be made in the first instance to the person who prepared the account. It is true that the enquiry by the Canal officer into the assessment made by himself is termed a 'judicial proceeding,' but I do not see how this affects the question. What is desirable is that mistakes in the assessments should be put right as soon as possible, and this can, in my opinion, be done sooner by the person who made the mistake than by any one else. The Canal officer is no doubt in a different position to that of a private trader when the question of enforcing payment of a disputed item in the account is considered. The law that provides that in case of debts due to Government payment can be enforced without recourse to the civil courts applies to 'water-rates' as it does to other demands, such as rent of land, cesses on land, &c. But the decision of the Canal officer is not final. There is a right of appeal to the Collector, who is certainly not a prejudiced officer, under the present system of assessment."

Volume II, page 55.

79. There have as a matter of fact been comparatively more complaints in Orissa and nearly as many in Midnapore, where the assessments are not made by Engineers and the percentage admitted is even higher. The grievance which is most strongly insisted on "unauthorised irrigation" is proposed to deal with in another and more drastic manner, and an alteration in the agreements regarding the supply of water in the hot weather which furnish the majority of complaints regarding insufficient supply will have to be made, so that little except ordinary mistakes will remain to be dealt with by the assessing officers under this head. In 1888-89 upwards of 2,000 complaints were at once disposed of in favour of the applicant, and it is clear that any system which would have entailed a reference to another authority would have caused needless expense and trouble to the persons concerned.

Revenue Report, 1887-88, Resolution, paragraph 10.

All that is wanted is that the assessing officer shall be informed of the objections raised, and have an opportunity of correcting an error, if one has been made: after that it is in the interest of both Government and the cultivator that an easily accessible appeal to an independent tribunal shall be available.

80. It is proposed to secure this end by allowing appeals direct from the orders of sub-canal officers to the Collector or a Deputy Collector specially vested with the powers of a Collector in this respect. This is apparently the course recommended by Mr. E. Solano in the following extract from his letter dated the 31st December 1887:—

Volume II, page 222.

"II.—Sub-divisional Officer to prepare *khationis* in the usual way; notices to be given to each assami, stating the quantity of land assured against him and the amount of demand.

III.—All appeals to be presented and disposed of by the Sub-divisional Officers. If the objection is rejected, he is to give the owner a copy of this order.

IV.—The appeal from the Sub-divisional Officer's decision to be direct to the Collector."

This is the system proposed to be followed in future. Mr. Solano lays much stress on the number of Sub-divisional Officers being increased. As a matter of fact there are nine Sub-divisions as recommended by him, of which the two in the Western Sone Division are not by any means the largest.

The result of the appeals so far made to the Collector has, as the statement below will show, not been unfavourable to Canal officers, and in cases requiring it further evidence is called for and taken, should the record not be altogether satisfactory:—

Statement showing the result of appeals preferred to Collectors against orders of Canal Officers of the Sone Circle.

Year.	Number of appeals.	Appeals allowed.	Appeals dismissed.	Pending.
1886	148	51	75	17
1887	73	9	55	9
1888	41	15	20	6
1889	28	3	15	5
Total ...	290	78	165	37

In the Collector of Shahabad's letter No. 849I. of the 31st August 1889, it is stated that 161 complaints had been disposed of by him and his predecessors between 1879-80 and 1888-89, of which 121 were dismissed, 29 allowed wholly and 11 allowed in part.

81. Mr. Luson, who investigated the subject, recommended a classification of complaints which has practically been followed. He was of opinion that the true method of dealing with the subject was to anticipate objections, or rather to secure their being preferred before the demand statement was finally prepared. This is what he says on the subject:

"I wish here to suggest a practicable means of discovering as far as possible the areas in which there has been a failure of the crop owing to deficient supply. The Superintending Engineer has given his general approval of it. It is to insist upon a report by a certain date from each *sattadar* of the specific fields in which the crops fall below a certain standard, say that the outturn will be below 2 maunds a bigha. In the case of *dhan* these reports should be brought or sent into the canal office before November 1st; and if any *sattadar* neglects to send the report in time, he should be at once called upon to explain personally. The *sattadar* is overpaid for the work he does at present, and there seems no reason why this extra duty should not be imposed.

On receipt of the reports, the Sub-divisional Officer would be able to mark down the bad crops and to make arrangements for investigating the causes before the cutting; but in many cases he has a very good idea of where the supply was deficient, so that he could direct the measurements in these places first and commence enquiries before these reports come in."

In the part of this note dealing with the alterations recommended it will be proposed that *lambardars* shall be bound to report at the end of the *kharif* season, the 1st of November, what complaints require investigation, and a separate report will be required from sectional officers on the 15th October or thereabouts as to the state of the crop in each lease. These measures, it is thought, will ensure the Sub-divisional Officer being in a position to omit from demand statements or to include in remission statements any areas on which water-rates are not properly chargeable. The onus of ascertaining what remissions should be granted will in fact, to a limited extent, be assumed by Canal officers, with or without complaints.

It is hoped that the means taken will ensure speedy redress in cases where there are just grounds for complaint.

82. The exercise of magisterial powers by certain of the Canal officers is noticed in the concluding sections of this part of the report. The Committee remark:—

"We are glad to notice the very sparing manner in which these powers are now exercised, and we have no reason to doubt that, as a general rule, they have been exercised in the past with discretion. We are aware that the withdrawl of the powers will weaken the hands of the Engineer officers at times of crisis."

They add that in the Buxar Division the powers were not then exercised, and that as it was objectionable on principle that Engineers should exercise powers in departmental cases, they recommended that the powers should be withdrawn.

In the following year practically every Magistrate and every available constable in Shahabad was engaged in guarding the canals and distributaries, despite which they were cut in several places, and the leased areas of some villages injured and in some cases destroyed by their supply of water being cut off. One special case is mentioned in which the rice on 512 acres, worth approximately Rs. 16,000, was injured in this way. In the face of these circumstances it would appear to be preferable to leave matters as they are, the control of the Magistrate of the district, to whom every case is appealable, being sufficient to ensure that the powers are exercised with discretion. This is the opinion held by Mr. Power.

Superintending Engineer's Note of date the 10th December 1888, paragraphs 11 and 12.

It is desirable that Assistant Engineers should, as in other provinces, be called on to pass an examination in elementary law, and one of my recommendations will be to this effect. The examination will have reference to their work both as assessing officers and to the class of cases they are authorised to try when vested with magisterial powers.

COMPLAINTS AGAINST THE COLLECTION DEPARTMENT.

83. The Committee remark that the complaints against the Collection Department arose to a considerable extent from demand statements, in which it was known that alterations would have to be made, having been forwarded to the Collector for realization. Pressure was brought on the Assessing

Department to forward the demand statements by fixed dates with the result mentioned above. They add :—

	Rs.
1885-86 ...	87,344
1886-87 ...	34,640
1887-88 ...	18,313
1888-89 ...	16,284

Includes remissions disposed of by refunds or cancelled demand statements.

"We are glad to say that this matter, as soon as it attracted attention, was enquired into and stopped."

The progressive diminution in the remissions yearly allowed, which are marginally noted, wiill show that a marked improvement in the accuracy of the demand statements has ensued.

84. The realization of arrears of water-rates by the distraint procedure is referred to in section 173 of the Committee's report.

Volume I, page 54.

As the water-rate is a charge inferior to rent only on the crop, this method of recovery of which the legality is unquestioned appears *primâ facie* to have much to recommend it. The real grievance consisted in the costs, which it is stated averaged Rs. 8-12-10 per case, the average demand being under Rs. 3. The costs amounted to an enormous addition to a charge, however moderate, in itself.

The practice for reasons not clearly apparent, but probably owing to the heavy costs entailed, which are referred to in the following remarks recorded by one of the Hon'ble Judges of the Calcutta High Court has of late years been abandoned :—

"A continuance of the present practice must ruin the ryots. No doubt water-rates should be promptly paid, but it is not always that a ryot has cash in hand to meet such demands, however honest he may be. To make him pay tenfold is certainly not calculated to improve his position. I heard while at Arrah that a somewhat serious attack had been made upon the person of an irrigation officer. It is not improbable that these distraints may have provoked such conduct."

Volume I, page 54.

Apart from the question of costs, there does not appear to be any good grounds for abandoning what appears to be a peculiarly legitimate charge on the crop which was matured by the aid of canal water, and the law should, I think, not be changed in this respect unless some summary powers are given by law, as recommended by the Deputy Collector, for the recovery of sums under Rs. 10 in amount.

85. The Committee make the following remarks on what is known as the joint and several liability system :—

"The complaint which has been urged before us most frequently relates to the provision in five-year leases under which all the co-signatories of the lease are made jointly and severally liable for the payment of the whole of the amount due under the lease. This provision applies to leases in what is known as form C. In D form leases, under which collections are made by a contractor, there is no such provision. The object of rendering all co-sharers jointly and severally liable was apparently to instil into the minds of all a sense of joint responsibility under which the influence of all would be brought to bear upon each individual to pay up the amount which might be due from him singly. And this object is no doubt one of importance. The principle is calculated to work well in some cases. But it is obviously liable to abuse; and so we find that in its widespread operation in the case of water-rate leases, it has been applied as an engine of injustice."

Volume I, page 54.

Instances of oppression are adduced, and it is stated that the system is opposed by the Engineers who have found from experience that it deters cultivators from entering into five-year leases.

The soundness of the Committee's conclusions as to the oppression exercised is strongly questioned both by the Collector and Deputy Collector. An extract from the observations made by the former, Mr. Power, is appended :—

"*Paragraphs* 174 to 176.—I beg emphatically to protest against the conclusions arrived at in these paragraphs. Out of Rs. 3,44,945, to which the joint and several liability clause applied, a sum of Rs. 1,460 only was recovered from persons in excess of their proportionate share. In 1887-88 none of the demand was so realized; consequently the percentage recovered in excess is very small indeed. There is no reasonable ground for the imputations that the power has been used as an engine of injustice and to save the collecting staff trouble. It is true that in a few, a very few, cases the liability has been enforced, but under what circumstances? After each assessee had paid his individual share, a balance remained unrealized. the contracting body was known to be well able to pay, and it happened that defaulters were reasonably believed to be men of s whose names were included in the lease by connivance of the le signatories in order that a remission might be granted on the g of their poverty. Is it not right that when a certificate has been out against the whole body, execution should be taken first ag the leaders, that is, the zemindars, thikadars and headmen t take out execution simultaneously against each co-signatory, c proportionate share of the unrecovered balance, however equital theory, is totally impossible in practice. There is an excellent to the Committee's remarks on Debi Mahtow's case. It was enough for Debi Mahtow, thikadar of the village, to make his pay what the Irrigation Department tehsildar failed to collec tehsildar pays occasional visits only. Anyone who finds it inc nient to meet him can easily find it convenient to visit a tion at some distance until he has moved on. A resident t dar, however, knows exactly when a ryot is in a positio pay, when heh as received his poppy advances, when he sold his linseed to the itinerant bepari, and what the heifer he at the fair fetched Once a tehsildar is out of the village he is with temporarily at least; but the thikadar is always with him need say no more to show that a resident zemindar or thikada means of applying for payment at the right time not open to a tehsildar, and more direct power of enforcing payment than is p ble for the collecting staff of the Irrigation Department to exer The Special Deputy Collector's explanation on this subject i pressed in rather forcible language, but I think his indignation i by any means unjustifiable."

Joint and several liability.

Letter No. 849I. of 31st August 1888.

86. The Deputy Collector is even more emphatic in objections to the conclusion drawn the Committee that—

Letter, dated 25th May 1888, paragraphs 9 to 13.

"Nowhere in Bengal has the law been more inconsiderately ministered with larger and more obvious opportunities of abuse in Shahabad."

He points out that in the two years, 1885-86, 1886 during which he applied the rule, Rs. 1,460 only was recove from other than real debtors, and avers that the cens bestowed by the Committee in individual cases were seld warranted by the circumstances which were not fully knc to them. The Committee state—

"We do not condemn the system absolutely; the power tha implied may conveniently be held reserve for extreme cases, to be exerci with great caution; but when the opportunities for its misuse ar abundant as they now are in the collection of water-rates, we do think that the exercise of the power can be justified, or that it be possible to impose any system of check which will prove effecti

Vol. I, page 55, section 176.

87. It appears to be doubtful whether the condemnati pronounced by the Committee on both the system and results was not too sweeping. It is, however, hardly worth wh to retain a rule, which has some influence in deterring cul vators from joining in applications for water for the sake of t small amounts recovered under its operation. These amoun would be further reduced if, as certainly would have to be t case in future, bad debts were recovered *pro rata* only from the signatories of the lease.

88. At present amounts due on five-year leases or are recovered by instalments, and the Committee, whi entirely approving of the principle on which the present s tem of collection is based, viz—

"That a receipt shall be given for a fixed and known amo specified in it," think that "the effect is somewhat hard on rate-payer; and while maintaining the rules substantially in th integrity, we consider that they should be adapted to the receipt two instalments of the rate every year in equal parts instead of one

The Collector and Special Deputy Collector both express t utmost repugnance to this proposal. They point out that will necessitate increased establishment, and the latter obser that on the whole of the 238 petitions, of which abstracts ha been given in the report, he has only been able to find o man who has applied for the change. Seeing that water-rat on two-thirds of the irrigation is now paid in two instalmen it is probable that the extra work would be less formidal than is supposed, but as it is proposed to lower the rates f *rabi* irrigation, and not to encourage annual leases for ri irrigation, no further alteration appears to be require Mr. L. Mvlne observes :—

"A great deal may be said against recovering rates in two instalments, and much in favour of payment in one instalment about harvest time, when the cultivator is in funds and can command cash."

Letter dated 30th June 88.

Certificate procedure.—The Committee (paragraph 79) state that, whilst there are no actual proofs of the fact, they—

"have no doubt that the same processes have been resorted to for the recovery of arrears of water-rates in Shahabad as are invariably adopted in other parts of India, and in other departments here large collections have to be made by the collecting authorities direct from an almost infinite number of cultivators."

Letter dated 30th June 88.

They, however, admit that—

"It is possible to establish a strong case on the other side In some villages, especially Brahmin and Rajput villages, there is an everlasting struggle carried on by the cultivators to get water without paying for it."

It is proposed in paragraph 266 of the Report to take away from the Special Deputy Collector his powers under the Certificate Act. The Collector strongly objects to this suggestion, as will be seen from the extract quoted below :—

"As pointed out by the Special Deputy Collector in his note, there is nothing illegal or unauthorised in the present procedure, and I am strongly opposed to any change. From experience gained in the Road Cess Department, I am certain that not only would there be great delay in disposing of the certificates, but ultimately the assessees would suffer. Supposing the change were introduced, what would happen? The certificates would be referred to the Deputy Collector in charge, who has already upwards of 2,000 on his file more than he can deal with effectively; when, after much inevitable correspondence and delay, sanction had been accorded to an increased establishment, the notices would be written up and made over to the nazir for service; that officer is fearfully overworked as it is—see Report of Salaries Commission, pages 251-254. So what happens? Further delay occurs in serving them; then (after the defaulter has had a month's warning that he had better conceal it) commences the search for property to attach: the peon who is sent out reports none available; he has not the smallest interest in making adequate enquiries, and the defaultor is only too ready to pay a consideration for a report of "no effects." Then ensues a complication about recovery of process fees.' Altogether, I cannot conceive any procedure more likely to increase work, retard collections, involve loss of revenue, and cause harassment to defaulters than to transfer execution of certificates to the Collectorate General Department."

Certificate procedure.

Letter No. 849I, of the 31st August 1888.

The proposal has no special connection with the other alterations proposed on the system of irrigation administration now under discussion, and it involves considerations not touched on in the report. It is therefore reserved for separate treatment after the other changes proposed to be made have been carried out.

It may be mentioned that in Orissa and Midnapore the collections under the Certificate Act are not altogether satisfactory. The matter is obviously one in which the opinion* of the Board of Revenue is entitled to almost paramount consideration.

*Letter No. 634A. of the 25th June 1888, paragraph 11.

90. The enforcement of the payment of even just dues can never be a pleasant proceeding for the payees. It is certain that any faltering in pressing collections can only lead to the accumulations of arrears, a part of which will never be cleared off, and thus lead to loss to the public treasury. The remainder will eventually have to be recovered by the means which hesitation was felt in the first instance in employing. The Deputy Collector gives the following as the result of his experience in the matter :—

"Again, I tried the experiment of keeping separate registers of rates due from the biggest and the most intelligent zemindars of the district, and addressing them by letters to pay up, but without effect. Only in one exceptional case, viz., that of the Beheea firm, it must be said to their credit, I have been successful. The biggest zemindar of the district, viz., the Maharajah of Doomraon, I regret to have to observe, has given us no inconsiderable amount of trouble. Letter after letter and reminder after reminder are sent to the *Dewan* calling for rates due, but still the money is not forthcoming, and even reply, except in rare instances, is not vouchsafed. A letter from Raj to pay up the full amount due from it. During the past three years, I was obliged, in a large number of cases, not only to file certificates and issue notices of demand against the Maharajah, but also to issue warrants of attachment. Similarly, the rates due by Baboo Baij Nath Sahai, a big zemindar and mahajan of the town, is never paid without coercive measures. It is a noteworthy fact that he always waits for a notice of demand, inasmuch as it gives him a month's time after the notice is served, and which he considers a great advantage. I can multiply such instances, but it is hardly necessary for me to do so here. Suffice it to say that when such is the conduct of the biggest and richest men of the district, what can be expected of the less favoured."

Note dated 25th May 88.

With such examples it is scarcely possible not to recognise the truth of the observations with which Mr. Power concludes his notice of this matter :—

"I would ask whether, in the face of the difficulties specified, any display of weakness, however amiable, would not result in loss of public revenue; in other words, in making less refractory people pay an undue share of general taxation? It is charged against our collection department that the aim of its policy is *Debellare superbos* (see written statement of Lalu Ram Paure, ex-Sub-Inspector of Police, Appendix IV. Part IV, section 13, page 212, Volume II). The allegation appears to me to involve an unconscious compliment. If the poor only had been rigorously kept up to their engagements, and favour shown to "the rich and the litigious," we should never have heard of a Commission being required to investigate grievances."

Letter No. 849I of the 31st August 1888.

PART IV.—RECOMMENDATION OF THE COMMITTEE.

91. I do not propose to discuss the recommendations *seriatim*. The points on which alterations in the system are considered to be desirable have been generally indicated, and they will now be specifically detailed. Several of the recommendations made by the Committee involve an alteration in the law which it may not be convenient to take up at present, and accordingly the system proposed will have reference to the existing law, the further changes possible, only after the law has been altered, being separately noticed.

The question of rates will first be considered. This is what the Committee says on the subject :—

"Although the present rates will not be considered high by those who are accustomed to irrigation in other provinces in India, we found in our enquiries that the most universal complaint against the irrigation system in South Behar was 'the excessive rate.' So general indeed and persistent were these complaints that we are satisfied that no remedies we may suggest, no improvements we may devise, will be accepted by the people as any adequate outcome of the results of this Commission, unless they are at the same time accompanied by a substantial reduction in the water-rate. In deciding this question, all the circumstances of the Sone irrigation must be considered. It must be remembered that canal irrigation is unpopular. It is alleged that Sone water is injurious to the soil, to man and beast. It must never be forgotten that an old system of irrigating from ahurs and pynes prevailed before its introduction, which the ryots declare was more beneficial to them than the present system which has superseded it. It is admitted that well irrigation is more beneficial to the crops than canal water. The country is to be water-logged; the health of the people is said to have suffered. The vigorous and often injudicious assessment of water, combined with the energetic realisation of the existing rates, has embittered both zemindars and ryots."

Necessity of some reduction.

Volume 1, page 85.

Further on they say :—

"There are those who speak favourably of the canals and of the good they have rendered the country. But the preponderance of testimony, including that of the most moderate witnesses, is in favour of a reduction in the rate."

Volume I, page 86.

It would be strange if the purchasers were not in favour of reduced prices. The fact is that canal water is indispensable, and that the one matter in which there is still real interest in the proceedings of the Committee is in that of rate. In a late publication, to which reference is made in paragraphs 134 to 140, Baboo Kandhji Sahay, B.A., B.L., Secretary to the Co-operating Committee, observes :—

"Such is the summary of the recommendations of the Commission. I shall begin with the last, for the lowering of rates, first, as being the most important, and without which, in the words of the Commission, no improvement will be accepted as an adequate outcome of the

92. Practically, the discussion of rates may be confined to that for rice, which is comparatively of overwhelming importance, and the rate for five-year leases, which the Committee propose to reduce from Re. 1-4 to Re. 1 per local *bigah*, is that which must rule the other rates.

93. It must not be forgotten that the validity of every one of the reasons given by the Committee as a reason for reducing the rate is strongly contested.

It is stated that canal irrigation is unpopular. In the last two years practically the whole of the water available in the *kharif* season has been disposed of. It is suggested that this demand, which cannot be questioned, is partially at least due to the *aharas* having been rendered useless. The fact is that in the jungle portion of the Jugdispore estate, where there were no *aharas*, not only has the transformation from *rabi* to *kharif* cultivation in the land irrigated by canal water been complete, but the inhabitants of Belgaon, who could get water from one of the half dozen efficient *aharas* in the district for nothing, positively prefer to pay Rs. 6,000 a year for the regularity and convenience of canal irrigation.

One apparently strong instance illustrating the assertion made that *aharas* have been destroyed by the canals is repeatedly referred to as a convincing proof of the fact, though it is in the same page* of the report admitted that the Engineers took immediate steps to remedy their own mistake.

* Volume I, page 24, section 64.

94. It is stated that the Sone water is injurious to the soil, to man and beast. The crop experiments made by canal officers are derided. Experiments made by an independent civil officer and by an eminent firm of European zemindars show that exceptional crops averaging 30 maunds of paddy per acre are grown on almost every variety of soil, including *kewal*, which is repeatedly asserted in the report to be injured by canal water. The average of the Canal officers' experiments to date is two maunds per acre less than the estimated yield of average crops in a year in which there was no rain in the *hatiya*: so that the crops depended on canal water only, and more than ordinary loss might have been anticipated.

Volume I, page 24 section 64.

95. The injury to *aharas* is strenously denied by the Superintending Engineer, who even considers that their effective supply has been increased by the extra quantity of drainage water they must necessarily receive from the canal water poured over the country. It is not denied that well irrigation is superior in the case of opium, and the crop experiments show barley, but the chief crop, rice, is not irrigated by wells, and wheat appears to thrive equally with well or canal water.

Volume I page 121.

96. These in general terms are the replies of the Canal authorities. A special civil officer was deputed to investigate the subject with special reference to the rise or fall in the rent of lands irrigated by the canal. This is what he says on the subject:—

"I have recorded in my note-book statements gathered on the spot as to the increase of rents throughout the villages irrigated. I will give a few examples only. In experiment No. 2, the village Danwar has been held by————in *thika* from the Dumraon Raj for 30 years; the ryots are nearly all Rajpoots and claim that their holdings are *guzashta* (*i.e.*, with a right of occupancy at a low rent); they say that————is demanding an increase of 5 annas a bigha rent, simply because the lands have been increased in value by the regular crops they now get from canal water in place of previous precarious outturn. In experiment No. 24, 15 annas of the village is held by Baboo————, an Arrah pleader, who filed a long written statement before the Committee asking for a reduction of rates. From the shareholder of 1 anna, the putwari and the ryots, I found that the *jamabandi* of this village has risen since the opening of the canals from Rs. 1,800 to Rs. 3,200. I was told that no ryot is considered to have any right of occupancy except those specially declared *guzashtadars* by the courts; no *pattas* are given, and rents are regularly increased. This village lies between the Koilwar branch and the Arrah main lines close to their junction. Experiment No. 25 bears more directly upon the question of the rate. The whole area under cultivation is only 22 bighas, most of the village having been acquired for canal works; the area being below 50 acres is too small for a five-year lease, yet a mahajan, who foreclosed a mortgage upon the cultivated lands, is content to irrigate *dhan* year after y paying Re. 1-14 a bigha. Similar instances to these will be fou throughout my note-book.

Mr. Odling in his minute of dissent from the Committee's rep in paragraph 19 stated:—'It was not to be expected that eit zemindars or cultivators would care to bring before the Commiss cases in which the value of their property had been increased. T road cess revalution will afford some means of estimating the eff of the canals on the value of the landed property in the distri affected.' I have accordingly endeavoured to analyse the figu filed before the Collectors under Act IX of 1880 and its predeces and to compare them with the areas upon which canal water been regularly taken.

"The periods when the road cess returns were filed are extrem convenient for comparison at the present time. The last retu were filed last year, and the former returns in 1876 A. D., when ca irrigation was just commencing.

"To make the comparison, I first obtained from the Engineer list of all the villages in which the areas now under five-year le exceed 400 bighas, and then identified them with the Collect maps. This was a work of some little difficulty, as in some ca I found that in order to secure a 'block' pieces of another vill had been included. I then consulted the original papers, filed the landlords or their representatives, referring to these villa As from my previous connection with the districts, I was person acquainted with the officers in the Road Cess Departments in S habad and Gya, I found little difficulty beyond clerical labo Summary valuation by the Collector I have taken no notice of, all returns which on comparison were obviously wrong, I h rejected. Little exception can therefore be taken to the figu given

* * * *

"We then get this result:—Taking canal water upon one-third the area of a large number of villages enables the zemindar increase the rents per bigha in these villages at least 10 per ce more than he could otherwise; in other words, regular canal i gation enables the landlord to obtain 30 per cent. more from the l than he would obtain without the canals.

These results seem to me to have a very important bearing u the question of the reduction or increase of the rates for water. the extra increase of rent is the true test in South Behar of advantage derived from canal irrigation. As the Rent Law Co missioners on page 73 of volume I (1880 A. D.) wrote:—'Enhan ment on the ground of increase in the value or price of the prod is a stern reality to the ryots of Behar. While in Bengal ryots are the stronger and the landlords the weaker party;' in Be it is just the reverse, the ryots being (save in some exceptio places) in a depressed condition, and incapable of maintaining agai their landlords the rights given them by law.. The Bengal Tena Act, 1885, is tending to improve this state of things, and the use the prescribed form of receipt is being adopted, though it is far fr general. But the figures comparing the irrigated and unirriga villages above mentioned relate to times before the Bengal Tena Act became law, and I have no hesitation in stating in regard to ————estate in particular, and to almost all the estates in Sone Circle, except the Dumraon Raj, where there are Raj *guzashtadars*, that any improvement in the amount or value of produce eventually finds its way into the pockets of the landhol in both *bhaoli* and *nagdi* tenures. Reduce the five-year lease four annas (*i. e.*, 20 per cent.), and the landlord, consciously unconsciously, will eventually get his rent-roll increased by 20 cent. on the land irrigated.

"I may here mention that in my opinion the improvement sh above is in no way due to the superior fertilising power of c water. I know of no material difference between the Sone w and the rain water stored behind bunds. Putting aside the incr of area under cultivation, improvement is due, it seems to me two things—(1) the substitution of the easily grown and more v able *dhan* for *rabi* and inferior crops; (2) the considerable raisin the *average* annual outturn by a full crop being always secu instead of outturns varying with unsatisfactory rainfalls.

"All the figures given in this paragraph practically relate to *d* only. In the figures for the three districts only five-year leases considered; in mehal————, *dhan* on annual lease is included, as the percentage of *dhan* in five-year leases is more than 83 per c (*cf.* Superintending Engineer's annual revenue report for 1887 paragraph 4, where he also writes that 'five-year leases are p tically long leases for the irrigation of kharif crops only'), co quently we are right in considrring *dhan* as the crop which caused the great increase in rents.

nuares, 30·69 per cent. of the pre ... increased cultivated area would been if it had only increased at the same rate as in the unirrigated villages.

'All the figures given above I can personally vouch for; the cal-ations have been tested in the offices of the Superintending Ea-eer of the Sone Circle and the Bengal Secretariat"

As regards the *aharas* he observes—

'If the majority of the Commissioners had seen the rice crop this r, which was not irrigated from the canals, I feel sure that they ld not have written in paragraph 276 of their report as one of the of reasons for the reduction of the rates that 'It must never be gotten that an old system of irrigation from *aharas* and paynes vailed before the introduction of the canals, which the ryots lare was more beneficial to them than the present system which superseded it.'

It is only by seeing the crop on the ground in a season like the , when the *Hathia* and *Chitra* rains entirely failed, that a clear parison can be made of the two systems."

Mr. Power, the Collector of Shahabad, is of opinion that case for reduction in the kharif rate has been made out. observes :—

"*Paragraphs 275 to 290.*—Admitting the force of the arguments summarised in paragraph 276, and adding that the history of the canals with their ensive head works designed for a very much larger scheme would admit of anything like a commercial rate, I am still of opinion that rate of Rs. 1-4 per bigah for leased areas is not too high, and that case has been made out for reducing it. The bulk of legitimate nplaints refer to 'unauthorised irrigation' charged for at Re. 1-14 a ah, or, if penalty rates are imposed, Rs. 3-12. There is no general complaint that the five-year lease rate of Re 1-4 a bigah is too high; the evidence cited in paragraph 277 does not prove anything relevant to this issue. Owing to a number of causes irrigation the Dumraon estates has resulted in friction; it is unpopular, but in the Revenue and Public Works cess, so is the Income-tax, and is every institution to takes cash out of pocket without an immediate return, no matter what benefit, past or potential, may attach to Mr. Selano's villages referred to were practically beyond the ch of canal water, and for a couple of years they suffered because regular supply was available: this is no reason for reducing the e in villages where water can be supplied, though it might be one differential rates. The Behcea firm does not press for a reduction of rates; it is obvious why tenants of their village mentioned uld request them to spend a large sum on repairing an ahar which l serve for irrigation in ordinary years, save Rs. 6,000 a year, and ve that sum available for payment of rent. It may be assumed as tain that if in a year of scarcity the villagers wanted canal water, water (though intended for others) was in the canal, they would it somehow: see also my remarks against paragraphs 41 and 42. all other rates proposed I concur with the Committee."

* Rates.

Letter No. 849I, dated 31st August 1889.

98. The following remarks are taken from a note by the n'ble Mr. Nolan :—

"The whole report of the Committee seem to be directed towards ving that an exception should be made to this primary rule of financial justice in favour of Shahabad. As a former Collector of the district, having many associations with its people, my personal sympathies are by no means opposed to such a course; but I st own that it appears to me unjust and the reasons urged in its port unsound. These reasons, as summarised in paragraph 276 of report, headed "Necessity of some reduction," and opening with passage quoted above, are (1) the desire of the Commissioners that changes to be introduced should be accepted by the people as an quate outcome of the Commission; (2) that canal irrigation is opular; (3) that it is alleged to be unprofitable; (4) that it is said e injurious to health. On the first of these considerations comit has been made above, and I will proceed to deal with the other gations, in so far as they can be considered to be grounds for ng the water at less than its value.

ote, dated 10th July),

"With regard to the unpopularity of irrigation, if the expression o be taken as synonymous with a failure in the effective demand water, it is obvious that, under a system of free sale, this consiation must be decisive If ryots do not consider that it pays them to Re. 1-4 an acre for canal water, and to suffer such inconvenience lealings with the Department entail, they will not send in written lications for leases, and the rates must be lowered. In that case uction is a commercial necessity as well as an act of justice. And o I may remark that if, as sanguinely suggested in paragraph 292 of report, a reduction in the rates is considered to be desirable in the mate interest of the revenue, as facilitating retrenchment and the ension of irrigation, there is no objection to the proposal, or rather hould be supported from a financial point of view. That is a hnical question, as to which I can only remark that, considering favourable character of recent seasons in respect to rain, there ms to be no falling off in the demand for water at existing rates, no supply of water available for the extension of operations at most important season of the year. But the unpopularity referred to by the Committee is of a different kind. It is consistent with brisk demand for water at current rates and under the existing system. It finds its expression in attacks upon the canal administration, made by those who would, nevertheless, resent the cutting of of their water as the greatest possible calamity. These attacks may be most just, or they may be altogether unfair, but as affecting rates I submit that they are irrelevant. If individuals are to blame, they may be punished; if the system is in fault, it can be altered when found defective: but the principle that fair rates should be levied in the interest of the tax-payer must, nevertheless, be maintained. These rates were not fixed with a view to attracting local popularity, and cannot properly be altered with that object. If they were reduced on this ground, we would soon hear of the unpopularity of irrigation rates elsewhere.

"With regard to the assertion that irrigation at the present rate is unprofitable to the cultivator, I fail to reconcile it with the fact that he applies for the water. He cannot do so for his pleasure only and the inference is that he does so for his profit. That he depreciates the article he buys is no matter of surprise: most purchasers act in this manner where by so doing they can hope to influence prices. I presume the members of the Committee did not expect to hear the purchasers of water state how it had converted barren sand into valuable estates with large profits to the owners, or to infer that the rates they paid should, therefore, be enhanced.

"I may say that when I was Collector of Shahabad—an office which I held during the five years ending with 1884-85—no one appeared to doubt that irrigation had, on the whole, been profitable to the district. The system was then extending; indeed, the area under irrigation doubled during the period. And coincident with its extension was observable a degree of at least comparative prosperity clearly distinguishing the inhabitants of north Shahabad from the poverty stricken population of the surrounding districts. Complaints of proper assessment and of the occasional failure of the water-supply were indeed rife, but the advantages of the system as a whole were at the same time acknowledged."

99. It appears that in the light of the facts brought forward by Mr. Luson's enquiry, the information given by the Civil officers consulted, and the fact that the demand for water in the rice season is quite equal to, if not in advance of, the supply, not only is no reduction called for, but the rate might without injustice to the cultivator be raised.

Mr. L. Mylne states that—

Volume II, page 199.

"Any raising of the present rates would very probably tend to a combination against canal water."

And taking all the circumstances connected with the appointment of the Committee and the alteration in system now proposed into account, it will probably be better, for the present at least, in the interests of both Government and the cultivator, to retain the present rate, regarding which Mr. Mylne makes the following observation :—

"I am of opinion Re. 1-4 per bigah for all crops under a five-year lease during all but the hot months a fairly moderate charge."

100. This favourable rate should, however, apply in the case of good registered channels only and in situations where suitable blocks involving little or no waste of water can be obtained. It is proposed, with the view of inspiring confidence and avoiding interference with the cultivators more frequently than is absolutely necessary, that the lease under such circumstances shall be for seven instead of for five years. Where the blocks are less suitable, and the channels, though not necessarily involving waste, are less substantial, it is proposed to reduce the term of lease to three years and to raise the rate to Re. 1-9 per *bigah*. A distinct advantage would thus be given to the proprietors of estates whose arrangements in the matter of canal irrigation were such as not to cause loss to Government. In annual leases the rate would be Re. 1-14 per *bigah* as at present, but even in their case a suitable block would be insisted on. In no case would irrigation beyond the limits of the block be assessed. The precautions to be taken to prevent the misuse of canal water will be detailed subsequently.

101. For *rabi* irrigation the general rate would be five annas lower than at present, viz., Re. 1-4 per *bigah* for flow irrigation and 15 annas for lift. In the case of land on selected distributaries not open for *kharif* irrigation the

rate would be 15 annas and 10 annas per *bigahs* for flow and lift irrigation respectively. Water would not, in the case of leases at the lower rate, be given before the 25th October, unless the season was one of seasonable rainfall, when the Divisional Engineer would be authorised to open these distributaries by the 7th October, and no water would be given to *rabi* crops after the 25th of March. It is never, as a matter of fact, wanted after that date except for sugarcane and hot-weather crops.

102. *Bhadoi* crops would, as at present, be charged Re. 1-9 per *bigah*, but it is intended to include *seerha* in this rate if further investigation shows that this class of rice can be separated from *kartika* and *aghani* without the risk of frequent disputes.

103. The rate for hot-weather irrigation between the 25th of March and the 25th June would be, as at present, Rs. 2-8 per *bigah*, but water would be allowed to be taken earlier for indigo and other crops requiring it, not before the 25th February, provided an equivalent number of days was cut off in May and June.

104. Sugarcane it is proposed to treat in a special manner. At present half the complaints refer to this crop, which is peculiarly liable to damage from other causes than want of water. In 1887 the crop was generally destroyed by rain. Permits would be given for sugarcane irrigation at Rs. 5 per *bigah*, flow or lift, payable about the time the crop was reaped, with the undertaking that, in the event of the crop failing through any cause, a proportionate remission would be made. This rate would include irrigation in the hot weather for which no extra charge would be made. Otherwise canal water taken during the different seasons—*rabi*, hot weather, and *kharif*—would be charged at the rate fixed for the season, without reference to the failure or otherwise of the crop, except so far the rates for the current season were concerned, which would be remitted in the event of failure of supply only.

105. The charges would in all cases be in *bigahs* and decimals of *bigahs*, any smaller area than one-tenth of a *bigah* being charged as a tenth. The Committee's proposal is similar, except that one-eighth has been replaced by one-tenth. The Government will reap a small advantage by *cottahs* being replaced by decimals of a *bigah*; but it is proposed to expend Rs. 75,000 of public money on bridges, over village channels crossing public roads, which will quite neutralise any financial advantages the alteration might give to the canals.

Volume I, page 88, section 289.

106. There will be some minor changes. When the five-year lease rate was fixed, it was partly with a view of avoiding interference with the cultivators and partly with the object of inducing applications to permit sugarcane included in the block to be watered without extra charge. No alteration in this respect is proposed. It was, however, never intended that water should be given to these blocks after the time when it is ordinarily required for *rabi* crops without extra charge, and the season will, therefore, end on the 25th March, after which water is required for sugarcane and hot-weather crops only.

Mr. Mylne says:—

"I am against hot-weather irrigation, believing that during May and June the land should have respite from canal irrigation;"

Volume II, page 202.

whilst in the paragraph immediately above he observes:—

"I am decidedly of opinion—and in this I agree with Mr. Solano—that, if for nothing else than cane irrigation, the canal should supply water till, at any rate, the end of April in each year."

In the case of cane irrigation the transaction is, at any rate, purely commercial. If the cultivator does not find it to his advantage to pay the extra rate for canal water, he can sink wells, and it is desirable that he should be driven to consider it in this light as early as possible, and not trust to keeping the cane alive until the 31st March by canal water and afterwards in April, May, and June by rain, which is pure lottery or surreptitious irrigation. This is what five year lessees frequently do at present.

108. Adopting the proposals made in the preceding paragraphs, the water-rates for the future will stand as follows:—

Leases for a term of years.

For water supplied between the 25th of June of one year and the 25th of March of the next.	Flow or lift. Rate per bigha.	Flow or lift. Rate per ac
	Rs. A. P.	Rs. A.
For leases for seven years—all crops	1 4 0	2 0
For leases for three years—all crops	1 9 0	2 8

Season leases.

Name of Crop.	Date of supply.	Flow or lift. Rate per bigha.	Flow or Rate per
		Rs. A. P.	Rs. A
Rice and sugarcane for kharif season only	25th June to 25th Oct.	1 14 0	3
Bhadoi, serha rice, or any other crops	Ditto to 15th Oct.	1 9 0	2

In the case of annual leases no extra charge will be m for a crop of *kesari*, linseed, or *gram* sown in rice-f watered with canal water, for these a supply will be all to be taken until the 15th November.

In the case of both annual leases and leases for a of years, water will be supplied for rice seed beds only an earlier date in June, if the supply in the river adm this being done.

The following will be the rates for *rabi* crops, inclu sugarcane leased for by the season, for water between 25th October and 25th March:—

Season leases.

Time of Supply.	Locality.	Flow. Per bigha.	Flow. Per acre.	Lift. Per bigha.	Lift. Pe
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs
15th October to 25th March.	Water supplied from distributaries open for *kharif* irrigation.	1 4 0	2 0 0	0 15 0	
25th October to 25th March.	Water supplied from distributaries or parts of distributaries from which *rabi* irrigation only is allowed.	0 15 0	1 8 0	0 10 0	

N.B.—In both cases Executive Engineers may, in years when the demand f for *kharif* crops admits of it, supply water for *rabi* on any date after t October.

The rate for sugarcane treated as an annual crop s as follows:—

Annual leases.

Time of supply.	Flow or lift. Per bigha.	Flow or lift. Per
	Rs. A. P.	Rs.
First of January one year until the crop is cut, which may be March in the following year ...	5 0 0	8

in the case of leases at this rate proportionate remission be allowed if the crop suffers from causes independent he water-supply, such as excessive rainfall or blight. tivators will thus have the option of taking water arately by seasons, in which case they will take all s except failure of supply, or taking water by the year, which case proportionate remission will be allowed if crop suffers from any cause; water-rates at the proper being charged in lieu in the event of another crop ng substituted. The total charge for separate water- s by seasons will be Rs. 1-14 + Rs. 1-4 + Rs. 2-8 (*vide* ow), or Rs. 5-10 for the crop.

The hot-weather rate will be as follows:—

Season leases.

	Flow or lift.	
	Per bigha.	Per acre.
	Rs. A. P.	Rs. A. P.
water supplied between the 25th March and the 25th June, or at the option of the applicant, between the 5th of February and the 25th of May, or all crops.	2 8 0	4 0 0

e rates mentioned to take effect from the 1st of April 90, except in the case of seven and three year leases, which l commence from the 25th of June 1891; five-year leases der existing conditions to continue to be entered into another year. The Superintending Engineer will have power to admit existing five-year leases fulfilling the essary conditions as part of a new seven-year lease, should circumstances of the case appear to require it. It is irable that the rates should be fixed for a term of years, an undertaking might be given that no increase will be de in the above rates before the 25th June 1896, which vise would fix the rate for long leases for the next seven welve years.

09. The water-rates will be due and payable on the es mentioned below:—

Seven-year leases	One moiety	... 15th December.
Three-year leases	One moiety	... 1st March.

Season or annual leases.

Bhadoi and crops classed as *bhadoi*, including sugarcane waterings from the 25th June to the 25th October... ... 1st November.
Rice ... ... 15th December.
Rabi and crops classed as *rabi*, including sugarcane waterings from the 25th October to the 25th March ... 1st April.
Hot-weather rate ... ... 1st July.
Sugarcane, full annual rate. One moiety ... 15th December. One moiety ... 15th February.

The Divisional Canal Officer will endeavour to forward as ny of the demand statements as possible to the Collector een days before the dates fixed for payment, but accuracy the individual charges should be regarded as of more portance than a rigid adherence to dates.

10. Leases issued during the *kharif* season will be ject to the following general conditions:—

I. Preliminary applications for seven or three-year leases must be made by the 1st of April at the latest. The word preliminary is used, as the regular application cannot be prepared until the measurement is complete, so that the correct area may be entered opposite each cultivator's signature appended in the presence of a witness. Water will not be supplied until the application has been signed by all the occupiers of the land to be irrigated and a permit issued. If there is delay in obtaining the signatures and water is immediately required, it may be given on annual lease permits issued under the conditions noted below, which will be cancelled, provided the application for a seven or three-year lease is completed by the 30th of November, or with the special sanction of the Superintending Engineer the 1st March following.

II. Annual leases will be on the same conditions as regards the block being strictly defined, but the measurement will not necessarily be made before water is given, an area more or less being entered in the application in which the boundaries of the land to be irrigated will be specified. The application will state that the actual area measured within the boundaries specified will be charged.

III. The permit will consist in effect of a copy of the application with the permit endorsed on the back. In the permit the size and position of the outlet, head of water to be maintained, and approximate discharge will be mentioned. No alteration in the outlet will be allowed during the currency of the lease without the express consent of the lessees.

IV. The permit will state that water is to be supplied for the sole purpose of irrigating the lands mentioned therein. This, of course, includes the right to *nigar* or drain the lands at the proper season of the year. It will be expressly agreed in the application that water-rates will be chargeable whether or no rain falls, and water is required and supplied.

V. It will be noted in the application that no claim for remission will be entertained unless an application is filed 20 days before the crop is cut, on a form which will specifically state the names of the cultivators and the areas for which remission is claimed. A suitable form will be supplied at the cost of half an anna, but its use will not be compulsory, provided the required particulars are given.

VI. Leases, whether annual or for a term of years, will be granted for well-defined blocks only, and in the case of the latter the lease will be refused, unless the block includes all the land which would ordinarily or probably be irrigated. The block must therefore have well defined boundaries. The principle would be applied in the case of annual leases, but somewhat less strictly, as the lease need not be accepted in the following year if it is found that water is allowed to be wasted or to be used for irrigating unleased lands. On the other hand, land too high to be irrigated by flow will, at the discretion of the Canal Officer, be excluded from the lease, which will be for water at the level it can be delivered under existing circumstances, without its level being raised by cross bunds or other temporary appliances.

Mr. Mylne, volume II, page 191.

VII. Under no circumstances will unauthorized irrigation from water supplied to land under a *kharif* lease be *measured* or assessed. If water is found to be flowing beyond the boundaries of the lease, the outlet will be temporarily closed. In the case of leases for three or seven years, power will be reserved to the Superintending Engineer to cancel the lease with the concurrence of the Collector, if water is habitually wasted or used

for purposes of unauthorized irrigation, and also on the applications of all the signatories for good cause. Such leases will likewise be liable to be cancelled on the application of the Collector if, on the 1st of June of any year, water-rates are in arrear by more than half a year's demand. These conditions will be recited on the application form.

VIII. The only condition under which unauthorized irrigation in this season will be assessed, will be when a village channel has been cut and the perpetrators of the offence cannot be traced, in fact where a criminal offence has been committed. In such cases the papers will be submitted to the Collector before any measurement is made, and assessment only made on his order after such enquiry as he may consider to be necessary.

IX. The Divisional officer may, at the request of the Collector and with the sanction of the Superintending Engineer, refuse permits to the cultivators of villages where there have been constant difficulties in realising water-rates unless half the amount specified in the permit is paid in advance.

111. These conditions apparently fully meet those stated by Mr. Mylne to be necessary in the sentences quoted below :—

"No question of liability for rates would arise in the case of long leases. But because for various reasons considerable areas of the district are unlikely to come under long leases, safeguards must be provided to secure *equitable assessments* in respect of such areas, whenever canal water may be supplied. It is difficult to suggest any other plan than the following :—

"1. Sufficient water to be arranged for on written application for irrigation of the whole or major portion of well-defined blocks beyond which no charge for illicit irrigation should be made.

"2. Such application to render cultivators liable for rates on the crop, except on undoubted failure of supply, ascertained promptly by the aid of established gauges and from the appearance of crops. Liability to rates would remain whether or not rain fell during the irrigation of the block with canal water."

Volume II, page 191.

Unfortunately under the system mentioned, two evils will arise. Unanimity is required and a small minority may object, and in the words of Mr. Mylne—

"It has always been found that such minorities refuse to join any contract on application, believing they can enjoy the benefits of canal water without paying for them."

Volume II, page 19.

The other is that in most cases no punishment or penalty can be inflicted in the case of unauthorized irrigation, it being usually impossible to detect the actual offenders and to secure a conviction in a criminal court. A higher charge for the water, which is in many respects the most appropriate penalty, is deliberately abandoned, as on the whole this remedy leads to greater evils than the disease which it is intended to cure.

112. It might and frequently will happen that after the 1st of September there is a pressing demand for water, when, as frequently happens, the *hatiya* rains fail. The quantity of water available to meet this demand is at present and is likely to continue to be very limited. Crops supplied with water at this late period of the season, though greatly benefited, produce indifferent crops. There are always difficulties both as regards assessments and collections. Villages irrigated in October 1888, at the urgent request of the Collector, have failed to make any payment whatever, and in many, cases though canal water was used, no assessment was practicable. The whole available staff is required to distribute water to the leased areas, and they cannot be employed in examining blocks proposed to be leased. The only possible solution of the difficulty appears to be in such cases to sell the discharge of an outlet for a limited time after the leased areas have been supplied. In such a charge of four rupees for one cubic foot per seco twelve hours will be made, half being payable befor outlet is opened, and the other half secured by a without reference to the area to be watered. The proposed is rather less than one rupee per *bigha*, but will be considerable wastage.

113. The charges to be made for water supplied be the end of the *kharif* season, say, the 25th October an 25th March, require litt e comment.

A considerable reduction has been proposed to be in the rates for *rabi* crops. It is necessary to imp higher charge, where water required for *kharif* crops c utilized, as water is certain to be taken, and it will int with the supply required for the rice crop at the critical season. But the reduction in rate propos be made varies from 20 to 40 per cent. In the of sugarcane the rate proposed is somewhat less th present charged, and its realization will be depe on the crop coming to maturity. If the cultivator cl to take water for part of the year only, he will be ch the rate appropriate to the season, and no claim for r sion on grounds other than failure of supply lie to. *Serha* rice, which is harvested in September, has included under the head *bhadoi*, and the rate for irri it consequently slightly reduced, whilst the time which water can be given for the hot weather rate has made variable to suit indigo and other crops requiring in March.

114. The strict provisions proposed to be made rega unauthorized irrigation in the *kharif* season, 25th June 25th October, will not apply to irrigation at other tin the year, when the canal officers will exercise their p powers, regarding which there have been no real compl This is in accordance with the Committee's recommen quoted below :—

"But there is always ample water in the canals and distrib during the *rabi* season. The canal runs to waste into the Ganges: the never any complaints of insufficiency of supply at this time. N there any complaints of assessment of unauthorized irriga regard to *rabi* crops. The object of the fixed duty systen put an end to these complaints, but where there are no com there is no advantage to be gained by its introduction. Th and simplest arrangement for the *rabi* season will be, we to follow the practice which now prevails, and allow the hol the land under lease to take just as much water as they plea their *rabi* crops. If they abuse their privilege, and the w allowed to flow on the lands of others, those lands will l liable to assessment. But the experience of the past affor strongest reason for assuming that the privilege is not likely abused."

Volume 1, page 67.

115. In the existing rules it is provided that in the of land held on a *bhaoli* tenure the water-rate shall coverable from the cultivators and zemindar in the proportion as the produce is divisible among them.

It has been held as a matter of law that the zemind only be made responsible where the application has signed by him. There are great difficulties in obtainin signatures of zemindars, who frequently reside out district, and there are often numerous shareholders. La in many cases the ryots have made themselves responsi all the water-rates rather tha get water or wait an indefinite until the zemindars are willing to sign. An alterati the law on the lines recommended in paragraph 223 Committee's report is desirable, but in the meantime legal rule for the practical guidance of canal offic required.

Volume 1, page 70.

The matter is very fully dealt with in Mr. Luson's from which the following extract is quoted :—

"The position of affairs will be more clearly illustrated subsequent history of the case which led to the statement of t now in question. It referred to one of the Doomraon village after it occurred the representatives of the Maharajah ref

with the ryots any leases last *kharif* season on *bhaoli* lands, notstanding that, hitherto they had paid half the rates, and notstanding that as far as I could ascertain, every other landlord ept one) in the circle consented to share the rate. The consece was that in a number of the Doomraon villages water for rice ot taken by the ryots, and with the failure of the *Hathiya* rains rops died. It was the *rabi* sowing time when I commenced my iries: the sowing rains held off; still the representatives of the vere refusing to agree to half the charge of the water the ryots asking for, till the Collector of the district, at my request, l the case of the ryots upon the Dewan, and induced him to a tardy notice that the Raj would this season share half the f irrigation, so far as *rabi* only was concerned. In 15 *bhaoli* es belonging to the Doomraon Raj, *kharif* was irrigated by canal taken by the ryots last season on their own responsibility. In cy could, no doubt, afford to pay the extra tax of 15 annas, as were informed that by law the malik could not be charged; but eral I heard that they meant to deduct the value from the rent *danabandi* time—a state of affairs likely to lead to unseemly tes."

ere can be no question that the only settlement of the ion at present practicable involves possible injustice to enant, but it is better that he should be able to procure at even an enhanced price than allow his crop to fail. is proposed that in future the cultivator shall invariably himself responsible for the whole of the water-rates, that the canal officer shall be authorised to issue a it and supply water on his written application.

ovision will be made in the rules that on the written st of the zemindar any specified proportion of the -rate will be recovered from him, but it will rest with yot and not the canal officer to procure this authority the zemindar, or to take action under section 40 of the al Tenancy Act if he is so advised.

SUPPLY AND REGULATION OF WATER.

3. This point must be viewed from three different -points. In the *rabi* season there is always an ample y, and the tendency of cultivators has been towards irrigation. In the hot weather, April, May and June, arantee in regard to the supply of water can be given. e rains or *kharif* season the demand for water at n times is in excess of the supply, and it is necessary to ise great care both in granting permits and in regard e situation and suitability of the blocks to be irrigated. e bulk of the irrigation is in the *kharif* season, and only in regard to the supply at that time that are required. The principles to be followed are thus l by the Committee—

tion of irrigable to be let on lease.

is essential to the proposals we are making that the canal officer should be allowed to select his own area for irrigation. This area should be let on lease under conditions we shall tly explain. The canal officer would not grant a lease for a area than the outlet or outlets from the distributary could in each case, and he would refuse a lease if the area applied re insufficient to take the full supply of water which would be furnished by the outlet. He would be guided in his judgment by the fixed duty acres per cubic foot of water. It is of course not intended lease should be arbitrarily reduced or enlarged so as to bring in the exact area commanded by the outlet. A small margin side or the other would exist in all cases. It will be better to the side of liberality than of strictness. But the canal authomust be allowed the power of refusing a lease at discretion."

me I, page 65.

ring the last two years irrigation has been conducted e main in the manner suggested. The outlets have adjusted to discharge approximately the quantity of required (arrangements having been made to procure under six inches in diameter) and leases for blocks, ing a strong probability of unauthorised irrigation, or ring a discharge which could not be efficiently arranged ave been declined.

7. Since the Committee's report was written valuable ience has been gained.

1888 there was practically no rain from the 7th mber to the 29th November, and the rice crop depended on canal water only. Practical results, the fruits of this experience, will be followed in preference to any particular scale of duty, and in all cases special care will be taken that the lessees shall know exactly what outlets will be allowed, the essential particulars regarding which will be entered on the permit. The rules will provide that general instructions issued from time to time on this subject must be followed. The ordinary base will, taking the rice area included in the block only into account, be for a duty of 50 acres per cubic foot per second on the discharge from the outlet with a *tatil* of five days in 15; but this duty will be liable in places to be reduced to 40 acres per cubic foot per second, or increased to 65 acres per cubic foot per second, where it has been found by experience that this latter duty can be obtained. Where the supply required is in excess of the lowest duty mentioned, the lease will ordinarily be declined. It would be an obvious loss of power to use the canals as a means of growing rice in soil which is practically in the condition of a filter bed. Such soil is suitable for *rabi* crops only.

The division of leases into seven-year at a lower rate and three-year at a higher will also afford a means of differentiating leases in unfavourable situations. Seven-year leases will only be accepted where it is positively known from former experience that a sufficient supply of water is always available, and that the quantity required is not excessive.

118. The department will accept and ordinarily exercise full control over and responsibility for the supply of water through the outlets. It will, however, be provided in the rules that, with the consent of the lessees, the custody and control of any outlet may, by an order in writing by the divisional canal officer, be made over to the *lambardar*, provided the latter is willing to undertake the charge. The delegation will not impose on the latter any responsibility with regard to unauthorized irrigation to which he is not otherwise subject. The *lambardar* will take charge as a matter of convenience to both the lessees and the canal department, and if the latter are not satisfied with his conduct they will resume charge of the outlet themselves. It will always be part of his duty to close the outlet in accordance with orders received from proper authority.

VILLAGE CHANNELS.

119. The Committee recommend—

Volume I, page 93, recommendation XII.

"That the construction of water channels be undertaken by the Canal Department, and that a suitable charge of from two to four annas a bigha be added to the water-rate as channel rent."

With this recommendation Mr. Odling found himself unable to agree. Very many of the leases are at present supplied with efficient village channels—not less than 185 miles have been made by canal officers at the cost of zemindars, and in the construction of much more than that length they have given advice and assistance. It is difficult to say what upwards of 1,000 miles of village channels would cost to construct, more especially as land would have to be acquired for maintenance purposes, and its price in the immediate neighbourhood of the canals has through their agency been largely raised. It has been ascertained that the road crossings alone will cost Rs. 75,000, and altogether it is not likely that less than three lakhs of rupees would suffice. The maintenance charges would be Rs. 20,000 a year, whilst in private ownership it is doubtful whether one quarter of that sum is expended, the cultivators being willing to carry out the repairs to a large extent without payment. The real difficulties are the road crossings and the length of some of the village channels which are *de facto* minor distributaries. It is proposed (I) to construct all road crossings required at the cost of Government; (II) to allow no village channel exceeding one mile in length to be constructed in future, and (III) except in the Jugdispore Estate, to take over and

Volume I, page 97.

maintain at the public cost any village channel already constructed which is in reality a distributary, provided it is made over to Government without charge.

120. There is no objection to its being laid down by rule that channel rent shall not be less than two or more than four annas a bigha, and, in the case of seven or three-year leases to recovering at the written request of the zemindar the channel rent together with the water-rates. But in such cases it will be necessary for canal officers to be placed in a position to keep the channels in a proper state of repair. It is not desirable to impose the collection of channel rent on the Canal Department as a duty. In some cases Messrs. Burrows, Thomson and Mylne may be taken as an example; the landholders have deliberately refrained from asking for channel rent from their own tenants, and in others, where the land is *bhaoli*, it is doubtful whether any rent can equitably be charged. Mr. Luson is of the contrary opinion, remarking that—

"Certainly he should at least pay for the construction of village channels."

121. The majority of the Committee look with much favour, not fully shared by the departmental member of the Committee, on the proposal to sell water for the supply of *aharas*. Mr. Odling considers that it is a matter in which great caution is required. It is recognized by the Committee that there is a risk of further water-logging the country, and that a supply could only be given when water is available without prejudice to leased areas.

Volume 1, page 78.
Volume 1, page 96.

The price proposed, one rupee for a discharge equivalent to a supply of one cubic foot per second for 12 hours though low, may be tentatively accepted, provided water is supplied from November to March only. To the supply of water in the months when the river is in flood, and the water heavily charged with silt, there is not only the grave objection of water-logging, but there is the imminent danger of the canal being silted up if constantly run at full supply. At present there are 14 steam dredgers at work, and it is with difficulty that the canals are at times kept open. Every extra cubic foot per second of supply deposits in the canal its quota of silt which must again be lifted out by steam power. It is therefore undesirable to fill *aharas* with canal water in this season at all, and, if allowed, a double charge sufficient to pay for the extra expense necessarily incurred should be levied. It is, however, in March, when the permission to take water for *aharas* will probably be most valued. The supply in the river in April, May and June is scanty, and generally there is no surplus water available for sale then.

Assessments and Collections.

122. The arrangements in these respects will remain much as at present, with the important exception that in the *kharif* season the areas included in the application will generally be measured at an earlier date than at present, and without reference to the patrols' *shudkar* or register of irrigation, which will be retained in a modified form to record the discharge through outlets. There will practically in this season at least be no unauthorized irrigation.

The Committee's recommendation has been followed except with regard to the increased number of Sub-Deputy Collectors it was proposed to employ partly for the purpose of disposing of complaints, and partly to admit of the localisation of the offices with the view of facilitating the collections.

Volume 1, page 78, section 250.

So far from it being likely that an increased revenue will be derived from the canals, it is nearly certain that the reverse will be the case. Though the area watered by the canals is steadily increasing, the assessments are decreasing owing to the extension of five-year leases. It is hoped that the work of the collection department will become lighter as these leases, which imply regular annual payments, extend.

The proposals of the Committee by no means sati the Special Deputy Collector, who is in favour of the or tion of the office of Deputy Revenue Superintendent s the employment of four Special Dep Collectors, whose functions would pr tically be those discharged by the Sub-Deputy Collectors at present employed. Four r sets of buildings for their residences and offices are asked and there would be extra office establishment in addit The addition to the work now carried out by the collec department proposed was the disposal of complaints and preparation of alteration statements.

Note dated the 25th May 1889, paragraphs 29-32.

123. It has been shown in paragraph 78 of this note nearly half the objections to assessment raised were at, admitted by the canal officer to be correct and the ne sary orders passed A reference from another office w have led to the same result, but with a very appreci delay and extra trouble and work resulting in incre expense to Government in both departments. It was pointed out that on general grounds it was only that the canal officer should be given the opportu of correcting what was alleged to be an erroneous ch It is admitted that cultivators or others—

"Should be able to present any complaints or objections they have to make as to the effect of *orders* p by the Engineers before an indepe tribunal."

Volume I, page 79, section 253.

The word *orders*, which has italicised, is the key-note to the case. All that is ask that the Engineer should be given an opportunity of pa an order.

The actual alterations in the position of the colle department proposed are—(I) that orders regarding a ments passed by sub-divisional canal officers sha appealable direct to the Collector or to an officer v in this respect with the powers of a Collector, the inte diate appeal to the divisional canal officer being aboli he will, however, continue to exercise revisional po (II) that the Deputy Collector shall be vested with to sanction alterations in the demand not affecting amount due, in certain cases remissions, and to finally with certain classes of irrecoverable items. It is be that this extension of the functions of the collecting d ment, which will materially lessen the number of compl can be carried out with the establishment as it at p stands, or at least without any material addition theret

124. I am altogether opposed to the creation of any class of Canal Deputy or Sub-Deputy Collector, or t increase in their numbers, which I do not think is call and as regards the former objection I find that supported by the Board of Revenue. The circle offic Daudnugger and Bikrum fill the same position a occupied by the Sub-Deputy Collectors in Shahaba their charges are materially less important and no imm alteration is called for. The expediency of placin collections in Patna and Gya under the Special I Collector, Shahabad, may be reserved for further co ation.

125. With the exception of a sanctioned office est ment, the Special Deputy Collector, Shahabad, is dependent on the amount placed at his disposal unde for the payment of his mofussil establishment. W sanction of the Collector he appoints circle officers, *teh* &c., on pay from Rs. 50 per month and downward amount not exceeding 3½ per cent. on his collections year. On this subject the Committee observe—

"As a fact, what is realised as tehsildars' fees is, we beli paid away as commission, but is d the payment of fixed salaries to t and even to circle officers. Such a p may easily give rise to misunderstanding. We are of opin no value commensurate with the expenditure incurred is lik obtained by the payment of fees either to tehsildars or p It is a better arrangement not to allow fees. The collectio

Volume I, page 81.

e think, to be made as in other departments by establishments n a fixed salary without commission. We have therefore omitted ees altogether as an item of expenditure in future arrangements."

The only real objection which can be taken to the principle aid down by the Committee that fixed salaries shall be paid s on the score of expense. The Deputy Collector makes the trongest objection to the limits proposed by the Committee, nd so far is supported by the Collector.

The matter is one which will have to be considered in letail with special reference to Mr. Power's remark that power hould be reserved to dismiss men at times of year when heir services are not required. The so-called circle officers hould certainly be appointed permanently and graded as illadars. Six zilladars as proposed by Mr. Power would replace the present establishment of seven circle officers. For the remaining establishment a limit should be fixed within which the Collector should be authorized to entertain such establishment as might be required, but the collections are diminishing and not likely to again show any important recovery, so that it is indispensable that the total expenditure shall not exceed that at present incurred The grant of a local allowance to the Special Deputy Collector has been repeatedly recommended by me. It should, I think, be attached to the appointment, which is very important, rather than be granted to the officer filling it at any particular time.

Volume II, page 27.

Intermediary Agency and Lambardars' fees.

126. When irrigation was first commenced, an attempt was made to appoint *lambardars*. who should both transact business on behalf of the cultivators with the Engineers and assist the Deputy Collector in collections. One moiety of their fees, then 10 per cent. on the assessments, was payable by each department. The arrangement was not found to be satisfactory; the canal officers and the collecting department were not always in accord as to the merits of particular *lambardars*, and eventually the fees, reduced to 6¼ per cent., were divided, the collecting department taking 3⅛ per cent., the sum now at their disposal for the payment of circle officer, *tehsildars* and others whom it was found expedient to retain on monthly salaries, and leaving 3⅛ per cent. to canal officers for the payment of *lambardars* who ceased to have any connection with the collections, but continued to act on behalf of the cultivators in matters connected with the presentation of applications, the receipt of permits, and the distribution of water amongst the signatories to the lease.

The *lambardars'* fees amount to a considerable sum, and their abolition would result in an appreciable saving to the State. Real work is, however, demanded from them, and it is proposed to increase both their duties and their responsibilities. They are required (I) to attend all measurements; (II) to obtain signatures to applications and to certify to the correctness of the same; (III) to attend to the distribution of water amongst the persons entitled thereto; (IV) to be present at the investigation of complaints by any canal officer or subordinate, and to give any information required in connection with irrigation.

It is now proposed that in addition they shall (V) distribute (*parchas*) to every ryot, and (VI) report at the end of the *kharif* season personally to the canal officer as to the state of the crops in the lease; (VII) report to the Deputy Collector all mutations in holdings; (VIII) to assist the collecting department by pointing out the residences of the persons assessed and identifying them. The duties are responsible and involve a considerable amount of physical exertion. It is probable and desirable that in most cases a Committee or *punchayet* will be appointed, but this will not diminish the amount of work to be jointly performed. It is absolutely necessary, in the irrigation season especially, that the *lambardar* shall devote a considerable amount of his time to his duties. He must be ready to trudge with the canal officers for several hours at a time in all weathers.

It is idle to expect that these duties will be performed b any one without remuneration—the are not the class of duties constitut ing an honourable burden for which remuneration is no found to be necessary, certainly not in this country.

Volume I, page 84.

On this point Mr. Mylne entirely agrees with Mr Odling, and his opinion is particularly valuable, as the firm themselves dis charge the duties of *lambardars* for l large part of their estate, employing paid servants whos wages it is understood the allowance received in the way o fees is not sufficient to cover. The Collector is also o opinion that remuneration must be given, and refers to th prevalence of party spirit and factious opposition which, i is believed, has interfered with the successful working o the Chowkidaree Act.

Note dated 30th June 1883.

As the *lambardars* will in future be to a certain exten responsible to the Collector, it will b desirable that a portion of the fee levied shall be paid by him, but th duties to be performed in connection therewith will requir to be strictly limited. In particular they will have n concern with certificate cases. The total fees may in futur be limited to three per cent., of which two per cent. will b payable by the canal officer and one per cent. by th Collector, fractions of annas being omitted in payments.

Letter No. 8491 of the 31st August 1888.

127. The only practicable way of creating the interme diary agency so strongly insisted o by the Committee appears to be t extend the system under which leases are at present grante on the joint applications of a contractor and cultivators. Th contractor might be a zemindar or an association of three o four cultivators. It is essential that he shall have a benef cial interest in land included in the lease extending for i full term. The control of the outlet might ordinarily b made over to the contractor in these cases, and h might, if a resident zemindar, be himself allowed to pr pare the demand statements for hot weather irrigation, i which case only is there an extra charge. The remuneratio at present granted, 10 per cent., should not, however, be i creased, unless the contractor is prepared to take the risks bad debts, in which case 12½ per cent. might be allowe In leases of this kind the approval of the Collector to t contractors would be requisite. Long leases on the appl cation of the cultivators will continue to be granted; b in their case the *lambardar's* fees will be 5 per cent. on (on condition, of course, that it is earned), one per cent. which will be paid by the collecting department and t remainder by the canal officer.

Volume I, page 75.

128. It is proposed to abolish putwaries' fees, but it m be necessary to call on these men to attend measuremen or to attest the signatures to a lease, in which case th must be paid for the work done. A fee varying from annas to 2 rupees, in accordance with the time taken u will be authorized.

Administrative Control by Superior Officers.

129. It is not possible to permit appeals as a matter right to the Superintending Engineer. He has many oth duties besides the management of the Sone Canals, in whi his position is purely that of a controlling officer. H duties are in no respect of an executive nature, and it is u desirable that he should be called on to give decisions matters in which there is by law an appeal to the Collect Mr. Inglis says:—

"I think it is worthy of consideration whether the Superint Engineer should not be brought into immediate contact with the revenue work his subordinate officers."

Volume II, page 253.

It should certainly be expressly declared that the Supe intending Engineer exercises full revisional powers, an that orders passed by any canal officer shall be modified

ccordance with his directions. He should be required to ue definite orders regarding the limits within which leases various descriptions can be allowed, as the whole distribuon of water from the canals must be arranged on one conrted system.

There are also matters which might usefully be referred to e Superintending Engineer by the Collector. It is indisensable (recommendation VIII of the Committee) that the lection of irrigable blocks to be let on lease shall rest with e canal officer. But it is not intended that this power shall arbitrarily exercised. Leases cannot be granted in areas cluded by the Superintending Engineer; but outside these eas all persons complying with specified conditions have a oral if not a legal right to be supplied with water; in the se of an appeal to the Collector that officer should be titled to call on the Superintending Engineer to give his ritten opinion as to whether the grounds of refusal were his judgment sufficient. The same liberty should be iven in the case of village channels, where the matter is sually decided on professional considerations.

130. Remissions on other than legal grounds are at present anted by Government on the application of the Superinnding Engineer. In most cases it is of importance that if ese remissions are granted at all they should be granted in me to prevent a demand actually being made. Whilst it necessary that the orders of Government shall be obtained here public money of large amount is involved, the Superntending Engineer might be vested with powers to grant traordinary remissions without previous reference to higher uthority, provided (I) that the water-rates shall not be reuced below 10 annas per bigha, and (II) that the remissions n any one lease or for any single cause shall not exceed s. 500.

Summary.

131. The chief recommendations made are summarized elow—

I.—Five-year leases to be abolished, but to be replaced by leases for seven or three years, the former being sanctioned only where channels in really good order exist, the owners of which have been registered, and really suitable blocks can be obtained; the rate for these leases to be Re. 1-4 per bigha, the present five-year lease rate. Where the channels, though not necessarily involving waste, are not altogether satisfactory, or the block is not so good as is desirable, the lease to be for three years only, and the charge to be raised to Re. 1-9 per bigha.

II.—The lease to be in detail specifying all conditions, more especially regarding the outlets which the canal officer is not to be allowed to alter during the currency of the lease. The duty to be fixed as far as practicable on the results of past experience, the area under rice when the lease is entered on being mainly considered. Leases for seven years to be ordinarily refused for lands not previously irrigated, regarding which therefore *data* for fixing the discharge required is not available.

III.—Canal officers to be responsible for the supply of water through outlets, but to be allowed to delegate the custody of the outlet to *lambardars*, who will be required to close the outlets when water to the full extent required has been supplied, or in accordance with orders given by proper authority.

IV.—The *tatil* to be limited to five days after ten days consecutive supply.

V.—The assessment of lands irrigated without authority in the *kharif* season shall be prohibited except with the previous sanction of t Collector, where a criminal offence has be committed and the offender cannot be di covered.

VI.—The rates for *rabi* irrigation to be reduced a those for sugarcane modified.

VII.—No water to be supplied for *kharif* irrigation applications filed after the 1st of Septemb except by volume, and in such cases half t amount payable to be recovered in cash befo water is supplied. The discharge of an ou let for a specified number of hours will sold, and not a specified quantity of water.

VIII.—The length of village channels counting to t boundary of the lease to be in future limited one mile, crossings to be provided at t public expense, and existing village channe of more than one mile in length to be take over and maintained in future by Gover ment on certain conditions. The distanc mentioned will be measured in a straight lin

IX.—In the case of assessments or remissions appeal to lie direct from orders passed by t Sub-divisional Canal Officers to the Collect or to an officer exercising the powers of Collector, who will be empowered to dire the Divisional Canal Officer to himself enqui and to report in the matter.

X.—The Superintending Engineer to be require to define the limits within which can water is available for (*a*) *kharif* irrigation three or seven-year leases; (*b*) *kharif* irrig tion on annual leases; (*c*) *rabi* irrigation low rates; and (*d*) hot weather irrigation. Th it be expressly declared that Canal Office shall exercise all powers vested in them subordination to the Superintending Enginee and that they shall modify any order pass by them in accordance with his direction Subject to the revisional jurisdiction noted above, no appeal to lie to the Superi tending Engineer, but in any appeal to t Collector under section 91 regarding (*a*) village channels or (*b*) the refusal of a Can Officer to grant a permit on the ground anticipated waste of water owing to the unsui ability of the block proposed, the Collecto to be authorised to call on the Superintendin Engineer for his written opinion, which sha form part of the records of the case.

XI.—Water to be sold for the supply of *aharas* fro November to March only.

XII.—Joint and several liability to be abolished.

XIII.—Copies of the Revenue Report to be sent yearl to selected landholders, who will be asked favour Government with any suggestions f improving the administration of the canal and, if it is considered necessary, a conferenc will be held with the Superintending Engine to discuss any possible improvements.

XIV.—In certain cases the Superintending Enginee with the concurrence of the Collector, to ha power to cancel leases or prohibit permi being given to particular villages unless a arrears of water-rates are discharged, or whe water is persistently and habitually wasted utilized for irrigating lands beyond the bou dary of the lease.

Recommendations involving a change in the law.

132. The following provisions appear to be equitable, b legislation is necessary to admit of their being carried out.

I.—It is certainly only right that in the case of *bhaoli* tenures the landlord should in one form or other be made to pay a share of the water-rates. The recommendation (section 223 of the Committee's report) meets the case.

Volume I, page 70.

II.—It should be made clear that water-rate is an encumbrance on the land of the same nature as rent, and any tenant should be allowed to create this encumbrance. At present this point appears to be doubtful, there being a presumption only (capable of being rebutted) in its favour.

Section 76(e) of the Act.

III.—Where water has been misappropriated, and the Magistrate is unable to detect the offender, the persons benefited should be assessed by the Collector without reference to whether the water was obtained by cutting a village channel or a canal or distributary. This is not recommended by the majority of the Committee; but, as a matter of fact, it is almost impossible to secure a conviction, as proof of the actual perpetrator of the offence is seldom forthcoming.

Volume I, page 92.

Volume I, page 100.

IV.—Provision should be made as recommended by the Committee. "That application of cultivators representing an area of 85 per cent. of a block shall bind all the remaining cultivators of a block whether they assent or not."

V.—The *users* not *owners* of village channels should be registered. This course would avoid difficult legal question as to ownerships.

ESENT OF RAI JAY PRORASH LALL BAHADUR, DATED 4TH APRIL 1888.

133. The dissent* commences by assuming that it has been proved that *ahara* irrigation is generally more beneficial than igation from the canals, that former methods of irrigan have been actively interfered with by the Canal partment, that drainage has been obstructed and the blic health deteriorated by the canals, that the increased are nder cultivation is doubtful, that benefit from sugar cultivan has not been proved, and that the canals are no appreciale help in time of scarcity. No special grounds beyond neral references to the Committee's report are given for e conclusions drawn, which have been dealt with *seriatim* previous parts of the note, and will not be again referred

Volume I, pages 102-116.

The experience of 1888, if the Rai Bahadur had casion to visit the irrigated parts of the district, can arcely fail to have convinced him of the benefit which the ops received from the canals in that year, and the experiments Mr. H. Luson, C.S., and Messrs. Burrows, Thomson and lne, have at any rate set at rest any doubt that might be ertained, as to the productive power of any kind of land ll cultivated and sufficiently irrigated.

134. It is proposed by the Rai Bahadur, paragraph 46, that ases shall be granted under the control of the Agricultural epartment; paragraph 33, that no attempt shall be made to ve water to defined blocks, which is the key-note of Mr otton's proposals; paragraph 34, that no power shall be given canal officers to restrict the supply; and paragraph 21, that *tatil* shall be allowed. It is safe to say that under such onditions the value of the canals would approximate the Rai Bahadur's opinion of them. It would not be ible, where there was the least pressure, to get water ore than 20 miles from the head, and it would be impossible for canal officers, or indeed any one, to give limits ithin which it would be safe to grant leases.

135. The rates suggested by the Committee are paragraph 37 of the dissent and sections 283 and 285† of the Committee's report distasteful, and paragraph 43 of the dissent, five-year leases are stated to be unpopular. Objection is also, paragraph 35, taken to the system of occasional waterings, and annual leases at a higher rate suggested. In this latter particular it has been found possible to conform to the wishes expressed, provided application is made by the 1st of September. The area under five-year lease has not diminished, and the ryots are stated by Mr Luson to have shown, in 15 of the Doomraon villages, their opinion of the value of the water by, the tenure being *bhaoli*, agreeing to pay the landlord's share of the rates as well as their own.

† Volume I, page 87.

136. An endeavour has been made to remove all well-grounded causes of complaint, but the canal officers must conform to physical conditions; they have water for sale available at certain times only, and under certain restrictions which are not arbitrarily imposed, but necessary to admit of the supply through the canals not being interfered with by accumulations of silt.

It has not in practice been found that these conditions clash with the requirements of agriculture (paragraph 37 of the dissent), and canal water has in fact during the last two years been eagerly availed of, the dissatisfied cultivators being those to whom it was on sufficient grounds found necessary to refuse leases.

PAMPHLET BY BABOO KANDHJI SAHAI, B.A., B.L., ON CERTAIN ASPECTS OF THE SONE IRRIGATION QUESTION.

137. Baboo Kandhji Sahai, who, as Secretary to the Co-operating Committee referred to in section 4 of the report, gave valuable assistance in the enquiry, has written a pamphlet under the above title, of which I have received a copy, mainly with reference to the reports by Mr. Odling and Mr. Luson, published in the *Calcutta Gazette* for the 9th January and the 3rd of April 1889, referred to in paragraph 4 of this note.

138. The Committee are stated to have arrived at the following main conclusions:—

"(*a*). That the canals are on the whole beneficial to the country, now that they have rendered it impossible to revert to the old system of *ahar* irrigation.

"(*b*). That canal water is not beneficial to *rabi* or opium.

"(*c*). That the shudkar system is the root of all evil, and that it should make way for a better system in which the chances and opportunities of doing evil might be minimised to the lowest degree

"(*d*). That the magisterial powers in the hands of Engineers had not worked well.

"(*e*). That the collecting staff by its previous inaction and recent over-activity (put) gunpowder to the hidden flames,"

and brought the feeling of soreness and exasperation to a climax.

Statement (*a*) has been fully dealt with in the earlier paragraphs of this note. Statement (*b*) is probably, except as regards wheat, so far true that crops irrigated by well water give better results, much better in the case of opium watered from old wells. Statement (*c*).—It is proposed to abolish the *shudkar* system in the *kharif* season, where it has led to evils, and to in its place substitute the system recommended in page 35, under which—

"No water will be given, unless lease is executed beforehand, the tenants binding on the one hand to pay the water-rate, the Government binding itself on the other to supply the water timely."

As regards (*d*), the Committee's conclusions are not accurately stated. The Committee certainly on general principles recommend, section 169, the withdrawal of the magisterial powers, but they expressly state that they—

"notice the sparing manner in which these powers have been exercised, and we have no reason to doubt that, as a general rule, they have been exercised in the past with discretion."

Volume I, page 52.

The recommendation is in no way based on whether the powers had worked well or otherwise (*e*). The recovery of arrears was doubtless unpopular with the assessees, who had hoped to escape payment, but, as has been stated in the commencement of the note, the agitation was one of the results of the introduction of irrigation, without rules found by experience to be suited to the district.

It is stated that—

"Many other points have been found to which it is not necessary to refer to at present."

They are incidentally adverted to throughout the pamphlet, which it is right to say is obviously animated by a desire to improve the irrigation administration by suggestions offered in a spirit regarding which complaint cannot be made.

139. The main object of the pamphlet is, however, to show that the rates at present charged for water are unjustifiable. Paragraph 7 runs as follows :—

"Such is the summary of the recommendations of the Commission I shall begin with the last, for the lowering of rates, first, as being the most important, and without which, in the words of the Commission, no improvement will be accepted as an adequate outcome of the results of the Commission."

It is perhaps desirable that the arguments adduced in support of this contention shall be specially noticed; the other points have been fully commented on in previous pages of this note. Whilst the accuracy of the crop experiments which were carried out is not questioned, it is stated that the results are not such as would ordinarily be obtained—

"In ordinary course of business all the fields are not reaped at once, and generally a great amount is wasted in reaping, in threshing, in winnowing, before the grain is actually stored"

This loss is stated to reduce the yield to $\frac{8}{9}$ths of that estimated, and it is contended that Mr Luson's figures—

"should be reduced not only by what is called the co-efficient of shrinkage, but also by the co-efficient of wastage."

The objections raised are entirely met, as will be seen from the quotation below, in the experiments carried out by Messrs. Burrows, Thomson and Mylne, which gave an average outturn of 31 maunds 5 seers per bigah on grain weighed on the threshing floor at a distance from the field—

"The results obtained from the different sources are nearly identical. The figures of Messrs. Burrows, Thomson and Mylne are slightly lower than the rest, because a certain amount of wastage occurred from the method they adopted of drying the crop. They had it tied up in bundles and carried to head-quarters, so that some grain must have fallen out on the way. The wastage, however, would not be much greater than occurs usually when the cultivators carry the bundles from the fields. In my experiments there was absolutely no wastage, because as soon as it was cut the crop was sewn up in bags, which were afterwards opened only in my presence. Similarly in weighing wet crops upon the ground the canal officers would not make any waste."

In these experiments this particular source of error was certainly eliminated.

140. Further on in paragraph 9 it is suggested that it may be intended to infer that the average produce is 31 maunds an acre. Such is not the case; the above was the average of experiments on *good* crops; the average on the whole irrigated area for 1888 is $18\frac{7}{10}$ maunds per acre. The average of 1,227 experiments made by canal officers to date on average crops is $16\frac{3}{20}$ maunds, and it is contended that Mr. Luson's experiments go far to show that these were substantially accurate.

141. A number of calculations on the profits of cultivators, which afford no real information, are given, and it is then asked :—

"Is there any marked improvement in the export or import of the country? Is there any change in the condition of the people of canal tracts as distinct from non-irrigated tracts? These are questions which do admit of no equivocal answers. If we compare the export and the import of recent years with ten years back, we will find that increase in these items is not at all distinct from the general increase, which of course is due to the improvement of the yet undeveloped resources of the country.

"The export and import of a country have been truly regar the index of a country's material prosperity. If we would know whether a country has improved in its material wea should examine whether the import or the export has increased of the chief articles of import in this country is European piece With the spread of English education, and a desire to co Western ways of living in matters of convenience and com'o expected that the import of such goods would increase, even country did not improve in wealth. There is yet another fact always tends to increase the consumption of the articles of i The population is an increasing quantity which is attended v increase in the value of imported articles in proportion to the incr the number of population. In this view of the case we would that the import of the district would show an increase in 188 that of 1874 in proportion to the two causes above referred to. I would compare the value of the European piece-goods impor the district in the year 1874, when the canals had no existence that imported in the year 1888, when they were placed in a fair ing order, and would prove that instead of showing an improv in the material condition of the people, as one would expect, canals were so beneficial to the country as we are led to beli shows a deterioration. If the contention of the other side correct, we should have found an increase in the value of the i more than what could be referred to the two causes above ment In the year 1874 during the first four months the value of the Eur piece-goods imported from Howrah was £128,568 (Statistical Rep Shahabad, page 269), but in the interval, i.e., from 1874 to 188 population increased from 17 to 19 lakhs; hence the import shoul increased in the proportion of 19 to 17, assuming every other ci stance to be the same—that is the value of the import whic would expect in 1888 is £140,441. If we now take into ac the other cause of increase which is an indeterminate quantit value of imported article would be more than the sum above But what do we actually find the value of European piece- imported in the district to be in the first four months of 1888 is not more than Rs. 15,15,410, which is equivalent to £1(at the present exchange rate (see for the value of the import, *cutta Gazette* Supplement, pages 721, 990, 1230, 1536, of Thus the consumption of the European piece-goods now is not is was in 1874."

142. The Statistical Department of this Governmen furnished the subjoined statement which gives the partic relied on by Babuo Kaudhji Sahai, not for four months, for 13 years :—

Statement showing the Imports into the Shahabad dis from Calcutta of piece-goods, European, during th years from 1876-77 *to* 1888-89.

Year.	Quantity.	Rate per maund.	Value
	Mds.	Rs.	Rs
1876-77	25,904	80	20,72,3
1877-78	31,198	80	24,95,8
1878-79	37,565	80	30,05,2
1879-80	39,125	75	29,34,3
1880-81	46,493	75	34,86,4
1881-82	46,101	75	34,57,5
1882-83	43,345	75	32,50,8
1883-84	46,537	72	33,50,6
1884-85	42,034	72	30,26,4
1885-86	55,162	68	34,75,2
1886-87	70,003	63	44,10,1
1887-88	56,136	63	35,36,5
1888-89		63	42,16,1

The Statistical Department states that figures prev to 1876-77 are not available, but those given do not ap to bear out the contention that the import of piece-goods not increased, and the assertion that—

"In the face of this fact the friends of the canals have no nor can they ever justify its* case to exist on its own merits"

* *Sic* in original.

is not altogether in keeping with the facts. The statem that—

"Care has been taken always to allow the errors to be in favor the canal"

appears, under the circumstances, to be of more t doubtful accuracy.

143. Another consideration is put forward, which is, that—

"In more favourable years, which are by God's grace more numerous than unfavourable, the canal water is either not at all required, or required as a luxury. It is only at long intervals that dry season recur."

Again—

"Therefore it is useless to lay much stress upon the failure of the *Hathea* water when it is known that the *Chitra* came opportunely to supply the place of the *Hastha*."

Out of 19 years in nine there was less than one inch of rainfall in the first twenty days of October, which covers the greater part of both the *Hatiya* and *Chitra*.

144. The arrangements during 1888 appear to have met with general approval, except from one point of view, regarding which the following remarks are made :—

"If a system works well or badly according as the person in charge of it is good or bad, the system is imperfect. But if the system does not change with change of hands, the system is a model of perfection. Viewed in this light, the present system stands condemned. It is almost admitted that in the year under review the canal authorities have worked better in all the departments than in previous years. The supply of water was satisfactory, the prayers of the cultivators were attended to, and generally speaking the arrangements were good. It may be asked how is it that it was not so successful in previous years. The recent agitation may be said to have produced this salutary effect. But when things can be managed better or worse according to the will of the officer, which may be voluntary, forced or interested, they must be placed on a better footing. In fact the successful management of this year carries with itself condemnation of the system. The proposed scheme differs from the existing, in that it offers the least opportunity for the exercise of individual idiosyncracies."

Reference is made by the writer to the falling off in five-year leases in the Buxar Division, whilst those in the Arrah and Eastern Sone Divisions were mostly renewed. The leases in the Buxar Division have this year largely increased, and the report shows clearly that there were special difficulties in Bhojepore, due partly to the area of land held *bhaoli* and partly to the cultivators being to a large extent Rajpoots or Brahmins. But the experience of one year has been sufficient to overcome even their reluctance to pay water-rates.

General Remarks.

145. On one point I quite agree with both Rai Jai Prokash Lall Bahadur and Baboo Kandjhi Sahai, and that is as succinctly stated in the Superintending Engineer's Revenue Report for 1888-89 :—

"It is fully recognised that lasting contentment can only result by securing irrigating cultivators full crops, and that anything short of this standard will whatever may be the measure of the benefits derived compared with the water-rates paid, lead to complaints which, though ill-founded, are to be avoided."

The system now proposed will, I believe, secure this end in the largest degree possible.

146. In the report the Committee acknowledge the services of various officials and gentlemen, foremost amongst whom is Mr. L. Mylne of the firm of Messrs. Burrows, Thomson and Mylne. To the gentlemen comprising this firm the thanks of Government are due, not only for services rendered in the course of this enquiry, which were important, but for a long course of assistance to the Irrigation Department, which has been more than once cordially and fully acknowledged both by Government and by the local Head of the Department, the Superintending Engineer. The suggestions they have made have always been deserving of the most attentive consideration as based on reliable data, and having in view the equitable treatment of both the cultivator and the canal officers.

The name of Baboo Kandhji Sahai is amongst those mentioned ; his efforts to put the popular side of the question before Government and the Committee in a fair and becoming manner deserves recognition. The Committee specially acknowledge the assistance received from Mr. W. A. Inglis, Executive Engineer, and Baboo Sarodá Pershad Chatterjee, Deputy Collector.

147. Mr. Luson's report on the subjects into which he was directed to enquire is very full and complete It would not have been possible to deal with these subjects with anything approaching to the same certainty in the absence of the very valuable information collected by him. Mr. Luson has thoroughly earned the commendation of Government.

148. Mr. Cotton, the President of the Committee, brings to notice the assistance rendered by the Maharajah of Doomraon and his Dewan Rai Jai Prokash Lal, Bahadur, who was one of the members. It would have been difficult to have obtained the facilities necessary for the meetings without the assistance of the Maharajah, who declined to receive even a reimbursement of the actual expenses incurred. Mr. Cotton also mentions the candour and moderation displayed by Mr. Odling, from whom I have received material assistance in preparing this note.

149. The report of the Committee is in point of clearness and desire to introduce improvements all that could be wished. Alterations in the system in force, all in the direction pointed out by Mr. Cotton, have led to a considerable departure from the recommendations made by the Committee of which he was President ; but none the less does he deserve the acknowledgments of Government for the valuable services he has rendered in the enquiry.

C. W. I. Harrison, *Lieut.-Col.*, R.E.,

Chief Engineer, Bengal.

APPENDIX I TO NOTE, DATED THE 14TH OF JANUARY 1890, BY COLONEL C. W. I. HARRISON, R.E., CHIEF ENGINEER, BENGAL, ON THE REPORT OF THE COMMITTEE APPOINTED TO ENQUIRE INTO THE ADMINISTRATION OF THE SONE CANALS.

Note by C. W. ODLING, ESQ., *Superintending Engineer, Sone Circle, on Drainage Works carried out and still required in connection with the Sone Canals, dated the 14th January* 1890.

IN sections 46 to 65 of the Report of the Committee appointed to enquire into the administration of the Sone Canals, the complaints regarding obstruction to drainage occasioned by the canal are adverted to. It is stated that much has already been done, but that much remains to be taken up. The necessity for care and caution is admitted, but the paramount importance of the subject is urged as a reason for continuing to pay the utmost attention to it.

2. Since the Committee sat, the matter has continued to receive the fullest attention. There was an unusually heavy fall of rain in August 1888, and data have been obtained which has admitted of a large number of projects being sanctioned after full and thorough investigations based on reliable observations.

A list of drainage works sanctioned from 1884-85 to 1886-87 is given at pages 124-125 of Vol. I of the Committee's Report. Works estimated to cost Rs. 1,61,861 have since been sanctioned, and a complete list of these, as well as of those shown in the report, is appended to this note. Material progress, it can scarcely be denied, has been made.

3. The statement following gives particulars regarding the heavy fall of rain mentioned in the preceding paragraph.

Statement of rainfall for the period 26th to 29th August 1888.

STATIONS.	MONTH AND DATE.				
	26th August 1888.	27th August 1888.	28th August 1888.	29th August 1888.	Total.
Eastern Sone Division.	Inches.	Inches.	Inches.	Inches.	Inches.
Bankipore	2·50	2·90	0·25	0·00	5·65
Bikram	2·20	6·25	0·50	0·00	8·95
Daudnagar	1·70	5·85	1·75	0·00	9·30
Average ...	2·13	5·00	0·83	0·00	7·96
Buxar Division.					
Buxar	0·00	5·60	4·00	0·25	9·85
Sikroul	2·30	7·05	1·20	0·40	10·95
Jumrore	0·00	4·15	2·41	0·20	6·76
Basawan	0·00	4·07	1·27	1·11	6·45
Average ...	0·57	5·22	2·22	0·49	8·50
Arrah Division.					
Arrah	0·04	7·70	2·27	0·00	10·01
Ageaon	2·75	8·30	0·50	0·00	11·55
Nasrigunj	1·25	5·01	1·85	0·00	8·11
Ramnagar	0·58	6·90	2·90	0·60	10·98
Koath	0·00	9·00	0·60	0·00	9·60
Average ...	0·93	7·38	1·62	0·12	10·05
Sone Circle average of 12 stations ...	1·11	6·07	1·62	0·21	9·01

The average fall at all stations on the 27th of August exceeded six inches, followed by upwards of one inch and a half on the following day, so that the opportunities for observation were very favourable, and they were taken advantage of.

4. In the following statements all cases where drainage was found to be obstructed are mentioned, the action taken to remedy it being also noted:—

Eastern Sone Division.

Locality.	Nature of obstruction.	Size of cut or breach.	Action taken.
Patna Canal, 9½ mile ...	Water impounded against canal bank.	Nil ...	The existing drainage cut has been extended.
Ditto, 14th mile ...	Ditto ...	Nil ...	Drainage channel provided in sanctioned estimate for extending Weir II, Patna Canal.
Ditto, 16½ „ ...	Ditto ...	6′ wide ...	Culvert built.
Ditto, 28th „ ...	Ditto ...	Nil ...	Pipes 12″ in diameter fixed.
Ditto, 11th „ ...	Ditto ...	Nil ..	Two pipes fixed, 50 bigahs only affected.
Mali Distributary, 7th mile ...	Ditto ...	Nil ...	Estimate for works required nearly completed.
Khojassa Distributary, 22nd mile.	Ditto ...	Nil ...	Estimate for syphon under preparation. Drainage area ½ square mile.
Khojassa Distributary, 24th mile.	Ditto ...	6′ wide ...	Estimate for syphon under preparation. Drainage area ¾ square mile.
Emamgunj Distributary, 2nd mile.	Ditto, but to a very limited extent.	Nil ...	Inlet estimate being prepared.
Emamgunj Distributary, 5th mile.	Ditto ...	Nil ...	Two pipes fixed. Drainage area 1 square mile.
Emamgunj Distributary, 20th mile.	Drainage water impounded.	Nil ..	Estimate for syphon sanctioned.
Unna Distributary ...	Ditto ...	Nil ...	Two pipes fixed. A syphon will be provided
Shamshernugger escape ...	Ditto ...	Nil ..	Two culverts sanctioned.

Arrah Division.

Locality.	Nature of obstruction.	Size of cut or breach.	Action taken.
Arrah Canal, 24th to 25th mile	Drainage water impounded.	Nil ...	Existing drainage cut cleared and outfall improved.
Rajpore Distributary, 2nd „	Ditto ...	2′	A small drainage cut made.
Rajpore Distributary, 7th „	Ditto ...	Nil ...	Ditto ditto.
Mongrowlia Distributary ...	Ditto ...	Nil ...	Under consideration.
Mouna Distributary ...	Ditto ...	4′	Temporary inlet provided and small drainage cut.
Doomraon Canal, 7th mile ...	Ditto ...	17′	Two syphons have been constructed and an inlet and drainage cut are in progress.
Doomraon Canal, 9th „ ...	Ditto ...	17′	
Doomraon Canal, 17th „ ...	Ditto ...	12′	Estimate under preparation.
Sukunea Distributary ...	Ditto ...	20′	Apparently an accident, not the result of obstructed drainage.
Arrah Canal, parallel channel, 35th mile.	Ditto ...	9′	The Chouri drainage cut under construction provides for the drainage of this part of the country.
Panmaree Distributary, 5th mile.	Ditto ...	10′	
Panmaree Distributary, 6th mile.	Ditto ...	32′	
Panmaree Escape, 7th mile ...	Ditto ...	15′	Plans for remodelling this work are under preparation.
Dillia Distributary, 1st mile ...	Ditto ...	5′	Drainage culvert built.
Dillia Distributary, 4th „ ...	Ditto ...	8′	Apparently an accident; drainage not obstructed.
Jytpore Distributary, 1st mile	Ditto ...	6′	Estimate for drainage cut being prepared.
Jytpore Distributary, 5th „	Ditto ...	13′	Caused by village channels belonging to private owners; under consideration.
Arrah Canal, parallel channel, 43rd mile.	Ditto ...	5′	The breaches were cuts made by villagers. Obstruction doubtful.
Arrah Canal, parallel channel, 45th mile.	Ditto ...	6′	
Arrah Canal, parallel channel, 48th mile.	Ditto ...	18′	Inlet built.
Asni Distributary, 1st mile ...	Ditto ...	10′	Under consideration.
Koelwar Distributary, 14th mile	Ditto ...	Nil ...	Syphons being constructed.
Ekwari Distributary	Ditto ...	Nil ...	

Locality.	Nature of obstruction.	Size of cut or breach.	Action taken.
Behcea Branch Canal, 12th mile and parallel channel.	Flood water from Sydha syphon impounded.	25′	Under consideration. A proper outfall from the Sydha syphon is required, but there are many difficulties, as the natural drainage is intersected by *aharas*; an inlet into the canal for from 100 to 150 cubic feet per second is admissible.
Behcea Branch Canal, 13th mile	Flood water impounded.	12′	
Kuteya Distributary, 1st mile	Breached from canal.	25′	Caused by escape of water from canal.
Kuteya Distributary, 3rd mile	Water impounded against bank.	20′	Under consideration; outfall for discharge through syphons under Gudhani Distributary required. The necessary survey has been made and levels taken.
Kuteya Distributary, 4th mile	Ditto ...	10′	
Kuteya Distributary, 6th mile	Ditto ...	10′	
Gudhani Distributary, 2nd mile	Ditto ...	6′	Existing syphons apparently sufficient but outfalls, as mentioned above required.
Gudhani Distributary, 3rd mile	Ditto ...	10′	
Gudhani Distributary, 4th mile	Ditto ...	15′	
Gudhani Distributary, 5th mile	Ditto ...	6′	
Naranpore Distributary, 4th mile	Ditto ...	5′	Not yet taken up.
Naranpore Distributary, 3rd mile	Ditto ...	10′	
Gyanpore Distributary, 3rd mile	Ditto ...	5′	Syphons under construction.
Gyanpore Distributary, 4th mile	Ditto ...	6′	
Kuteya Factory Distributary, 1st mile.	Ditto ...	19′	Ditto ditto.
Kuteya Factory Distributary, 2nd mile.	Ditto ...	14′	
Bachire Drainage Cut, 4th mile	Ditto ...	25′	Inlets will be arranged for; possibly cuts on the bank will suffice.
Bachire Drainage Cut, 5th mile	Ditto ...	25′	

Bwxar Division.

Locality.	Nature of obstruction.	Size of cut or breach.	Action taken.
Bhojepore Distributary, 3rd mile.	Drainage water impounded.	15′	A drainage cut of some magnitude required. Project approved by Chief Engineer; detailed estimate under preparation.
Saiyonhee Distributary, 4th mile.	Ditto ...	6′	Drainage water for the present passed down side cuttings. Under consideration.
Gurrah Distributary, 2nd mile	Ditto ...	10′	Small syphon required; estimate under preparation.
Salya Distributary, 3rd mile ...	Ditto ...	6′	Area affected small; all waste land.
Chousa Canal, 11th to 17th mile	Ditto .	Nil ...	Drainage cut sanctioned; work commenced.
Kochus Distributary, 1st mile	Ditto ...	Nil ...	Existing drainage cut will be improved. Funds available on sanctioned estimate.
Kochus Distributary, 8th mile	Doubtful ...	19′	It is stated that drainage is not impounded, but that breaches are due to nature of soil. Under enquiry.
Kochus Distributary, 9th mile	Ditto ...	15′	
Kochus Distributary, 11th mile	Ditto ...	15′	
Kurbasi Distributary, 1st mile	Drainage water impounded.	4′	Syphon under construction.
Khurghun Distributary, 1st mile.	Ditto ...	Not given	Under investigation.
Khurghun Distributary, 4th mile.	Ditto ...	Ditto ...	Extra opening in syphon being provided.

5. It will be noticed that in the majority of the cases mentioned, steps have actually been taken by which whatever obstruction existed has been remedied. It is only in years when there is an exceptionally heavy fall of rain in a limited time that minor obstructions become apparent, and any delay in carrying out the necessary work is due to this cause. The major works, such as the Chousa catch drain, estimated cost Rs. 57,448, the Doomraon drainage cut, estimated cost Rs. 18,201, and the Chowri drainage, estimated cost Rs. 22,412, have been the subject of prolonged investigations, and the exact plans adopted have been only settled after several discussions with the Chief Engineer, and the most careful consideration of all the interests involved.

6. The large works still required are those in connection with the Kuntiya Distributary, miles 1 to 5, the Burhowlie and Tar Distributaries, the Doomraon Canal, 18th mile, and the Bhojepore Distributary, 3rd mile. The main features of the plans for the latter work have been approved of by the Chief Engineer, and surveys and investigations regarding the remaining three are in progress.

C. W. Odling,

Superintending Engineer, Sone Circle.

List of Drainage and Protective Works sanctioned since 1884-85.

EASTERN MAIN CANAL SERIES.

Particulars.	Authority.	Amount of estimate.	Total.	Remarks.
1884-85.		Rs.	Rs.	
Estimate for a syphon under the head Khojasa distributary at 26th mile, 3,760 feet.	Superintending Engineer's No. 360, dated 24th January 1885.	344		
Estimate for two lines of Ranegganj pipes under the Khojasa distributary at 25th mile, 4,743 feet.	Ditto ditto ...	189		
			533	
1885-86.				
Estimate for an aqueduct overfall on drainage cut at the 43rd mile of the Patha canal.	Superintending Engineer's No. 2697, dated 3rd July 1885.	87		
Estimate for Belsar drainage cut	Superintending Engineer's No. 450, dated 13th February 1886.	715		
Estimate for a syphon to pass water from the Poonpoon river under the Futtehpore distributary.	Superintending Engineer's No. 1020, dated 25th March 1886.	395		
			1,197	
1888-89.				
Estimate for an escape from Rowa distributary, Patna canal.	Bengal Government No. 872—I., dated 18th May 1888.	5,362		Chargeable to distributaries.
Estimate for a drainage inlet into the Patna canal at 16¼ miles, on the left bank.	Superintending Engineer's No. 130, dated 8th January 1889.	271		
			5,633	
1889-90.				
Estimate for raising right bank of the Manora distributary and protecting the village Kharati by an embankment.	Bengal Government No. 918—I., dated 20th June 1889.	7,882		Ditto ditto.
Estimate for a syphon at 20½ mile of the Khojasa distributary, Patna canal.	Superintending Engineer's No. 3467, dated 6th August 1889.	218		Ditto ditto.
Estimate for protecting embankments round certain villages between the Poonpoon river and Futtehpore distributary.	Bengal Government No. 93—I., dated 20th June 1889.	4,494		
Estimate for two masonry inlets for drainage at 0 mile, 500 feet, of Shamshernuggur escape, 24th mile, Patna canal.	Bengal Government No. 1487—I.A., dated 11th October 1889.	436		
Constructing a syphon for drainage at the 19¼ mile of the Emamganj distributary.	Submitted to Chief Engineer, No. 4852, dated 25th November 1889.	1,602		Ditto ditto
			14,632	
			21,995	

C. W. Odling,

Superintending Engineer, Sone Circle.

List of Drainage and Protective Works sanctioned since 1884-85.

WESTERN MAIN CANAL SERIES.

Particulars.	Authority.	Amount of estimate.	Total.	Remarks.
1884-85.		Rs.	Rs.	
Estimate for the preliminary operations in the Loharabad (Peero drainage cut), Beheea branch canal.	Bengal Government No. 5877, dated 28th November 1884.	472		
Estimate for constructing an escape to the right parallel channel by the inlet into the Raghunathpore distributary (Doomraon branch canal).	Superintending Engineer's No. 4618, dated 1st September 1884.	413		
Estimate for constructing a culvert over drainage cut No. 5, opposite fall No. 9, Doomraon branch canal.	Superintending Engineer's No. 98, dated 8th January 1885.	301		
Estimate for constructing a culvert over the road opposite the Raghunathpore bungalow (Doomraon branch canal).	Superintending Engineer's No. 651, dated 11th February 1885.	240		
Estimate for constructing a drainage culvert under Panmaree distributary escape channel (Arrah canal).	Superintending Engineer's No. 1266, dated 19th March 1885.	849		
	Carried over ..	2,275		

PARTICULARS.	Authority.	Amount of estimate.	Total.	REMARKS.
		Rs.	Rs.	
1884-85—*concluded.*	Brought forward ...	2,275		
Estimate for drainage cut from the Rajporo village to the Dunwar escape (Arrah canal).	Superintending Engineer's No. 1463, dated 31st March 1885.	313		
Estimate for an escape channel from the Moohadah distributary (Buxar Division).	Bengal Government No. 1585—I., dated 24th October 1884.	2,659		
Estimate for drainage for the Buxar Railway station (Buxar Division).	Superintending Engineer's No. 5621, dated 10th November 1884.	956		
Estimate for constructing an escape channel from Khowmabad distributary, Main Western Canal (Buxar Division).	Bengal Government No. 316—I., dated 24th February 1885.	3,126		
Estimate for extra land required to be taken up for terminal portion of the escape to the Buxar Jail water-supply channel (Buxar canal).	Bengal Government No. 469—I., dated 14th March 1885.	122		
Estimate for constructing an escape channel from Gurra Chowbey (Buxar canal).	Bengal Government No. 522—I., dated 23rd March 1885.	7,484		
Estimate for an inlet at 12th mile, 20 chains, Doomraon branch canal.	Superintending Engineer's No. 4425, dated 21st August 1884.	334		Chargeable to distributaries.
1885-86.			17,269	
Estimate for an escape channel from the Panjraon distributary, Gurra Chowbey branch canal.	Bengal Government No. 13—T. I., dated 24th April 1885.	4,423		
Estimate for a drainage cut along the Koormooree distributary from 5th mile, 1,760 feet, to 5th mile, 1,760 feet (Beheea branch canal).	Superintending Engineer's No. 2188 dated 28th May 1885.	149		
Estimate for a syphon under the Beheea branch canal at 12th mile, 2,290 feet.	Superintending Engineer's No. 2182, dated 28th May 1885.	1,869		
Estimate for constructing an escape channel from the Bulthory distributary, Main Western Canal (Buxar Division).	Bengal Government No. 779—I., dated 25th June 1885.	6,103		
Estimate for constructing drainage culverts in the Jamrore sub-division, Chowsa canal (Buxar Division).	Superintending Engineer's No. 2748, dated 6th July 1885.	1,762		
Estimate for constructing an escape channel from the Karghar distributary, Gurra Chowbey branch canal.	Bengal Government No. 874—I., dated 21st July 1885.	6,019		
Estimate for a syphon at 3rd mile, 2,980 feet, of the Goeanpore sub-distributary, Beheea branch canal.	Superintending Engineer's No. 2904, dated 21st July 1885.	161		
Estimate for the proposed extension to the Bucharee drainage cut, Beheea branch canal.	Bengal Government No. 93—I., dated 14th January 1886.	57,673		
Estimate for a syphon under the Unwas distributary which takes off from the Chowsa branch canal of the Buxar canal series.	Superintending Engineer's No. 237, dated 22nd January 1886.	1,045		
Constructing an escape channel from the Gurria sub-distributary (Buxar canal).	Bengal Government No. 162—I., dated 23rd January 1886.	3,339		Ditto ditto.
Escape Santh distributary (Buxar) ...	Bengal Government No. 459—I., dated 11th March 1886.	2,603		Ditto ditto.
Escape from Amarpur sub-distributary (Buxar canal).	Bengal Government No. 466—I., dated 12th March 1886.	2,953		Ditto ditto.
1886-87.			88,099	
Estimate for a syphon under the Besainee sub-distributary at 2¼th mile, Arrah canal.	Superintending Engineer's No. 1140, dated 5th April 1886.	1,395		
Estimate for a culvert over drainage cut No. 4, Doomraon branch canal.	Superintending Engineer's No. 1179, dated 7th April 1886.	171		
Estimate for a syphon and drainage cut at 1st mile, 765 feet, and bridge at 1st mile, 5,080 feet, on Gudhani sub-distributary, Beheea branch canal.	Bengal Government No. 65—T. I., dated 13th May 1886.	4,392		
Estimate for a drainage channel at Chandee on the 15th mile, Buxar canal.	Superintending Engineer's No. 2—011, dated 10th June 1886.	1,398		
Amount expended on the drainage cut, Waina distributary.	Bengal Government No. 1456—I.A., dated 30th September 1886.	128		
Estimate for a bridge over the Jamorhi extension drainage cut at 3rd mile, 51 chains.	Bengal Government No. 406—I., dated 10th March 1887.	556		
Syphon culvert under the Beheea branch canal, 2nd mile, 3,250 feet.	Bengal Government No. 216—I., dated 5th February 1887.	5,272		Ditto ditto.
1887-88.			13,312	
Estimate for constructing nine drainage culverts in the Jamrore sub-division (Chowsa).	Bengal Government No. 605—I., dated 16th April 1887.	2,160		Ditto ditto.
Estimate for a drainage culvert under the Koormooree distributary at 9th mile 2,295 feet.	Bengal Government No. 1145—T.I., dated 16th July 1887.	2,094		
	Carried over	4,254		

PARTICULARS.	Authority.	Amount of estimate.	Total.	REMARKS.
		Rs.	Rs.	
1887-88—*concluded.*	Brought forward ...	4,215		
Providing the Bhojepore distributary with an escape at 22¼ mile.	Bengal Government No. 1994—I., dated 16th December 1887.	2,075		Chargeable to distributaries.
Constructing a syphon culvert with outfall drain at 10¼ mile, Doomraon branch canal	Bengal Government No. 200 I., dated 10th February 1888.	3,312	9,671	Chargeable to reserve for general purposes.
Estimate for drainage culvert under Panmari distributary.	Bengal Government No. 880—I., dated 18th May 1888.	683		Chargeable to distributaries.
Constructing a weir in the Behta abara ...	Bengal Government No. 1081—I., dated 22nd June 1888.	2,127		
Estimate for a drainage cut required at the 5th mile of the Rajpore distributary (Arrah Division).	Bengal Government No. 1403—I., dated 12th July 1888.	505		Ditto ditto.
Estimate for drainage culvert required to be constructed in connection with the Dilla distributary	Bengal Government No. 120—I., dated 23rd January 1889.	511		Ditto ditto.
Estimate for constructing the Chownri drainage cut	Bengal Government No. 472—I., dated 20th March 1889.	22,412	26,268	
1889-90.				
Estimate for land required to be taken up for repairing banks of the Kunteya escape channel.	Bengal Government No. 600—I., dated 22nd April 1889.	282		
Estimate for drainage works required in connection with the Chowsa canal distributaries.	Bengal Government No. 618—I.A., dated 23rd April 1889.	1,929		Ditto ditto.
Estimate for drainage works required in connection with the Chowsa canal.	Ditto ditto ...	425		Chargeable to reserve for general purposes.
Constructing a syphon at 6th mile, 21 chains, Doomraon branch canal.	Bengal Government No 647—I., dated 26th April 1889.	5,703		Chargeable to distributaries.
Constructing syphon at ¼th mile, Kurhasi distributary, from the Chowsa branch canal.	Bengal Government No 718—I.A., dated 16th May 1889.	1,131		Ditto ditto.
Constructing a drainage cut in village Bihta in the Arrah canal.	Bengal Government No. 776—I.A., dated 21st May 1889.	651		
Constructing an escape channel from the Rajpore distributary.	Bengal Government No. 952—I.A., dated 21st June 1889.	875		Ditto ditto.
Constructing an inlet and escape for the left parallel channel, Arrah canal, at 50th mile, 20 chains.	Bengal Government No. 1116—I.A., dated 26th July 1889.	700		Ditto ditto.
Constructing a syphon culvert for drainage under the Gecanpore distributary, 1st mile, 36 chains.	Bengal Government No. 1118—I.A., dated 26th July 1889.	671		Ditto ditto.
Constructing a syphon at 0 mile, 32 chains under the Kunteya Factory sub-distributary in the Arrah Division.	Bengal Government No. 1140—I.A., dated 23rd July 1889.	391		Ditto ditto.
Constructing an escape on the right bank of the Chowsa canal at 16th mile, 3,000 feet.	Bengal Government No. 1318 I.A., dated 21st August 1889.	1,851		Chargeable to reserve for general purposes.
Constructing an escape channel at the 8th mile. 5,122 feet, of the Kunteya distributary.	Bengal Government No. 1177 I., dated 28th September 1889.	9,705		Chargeable to distributaries.
Constructing two syphon culverts under the Ekwary distributary at 3rd mile, 38 chains, and 42nd mile, 21·8 chains.	Submitted to Chief Engineer, No. 5093, dated 4th November 1889.	1,550		Ditto ditto.
Constructing the Chowsa catch-drain ...	Submitted to Chief Engineer, No. 4851, dated 24th November 1889.	57,448		Since sanctioned.
Constructing drainage cuts at the 7th and 8 miles, Doomraon branch canal.	Submitted to Chief Engineer, No. 4896, dated 27th November 1889.	18,201		Ditto ditto.
Constructing a bridge over the Kytheo drainage cut at 1st mile, 12 chains.	Superintending Engineer's No. 5330, dated 17th December 1889.	792		Chargeable to drainage and protective works.
Constructing a bridge at 3¼ mile of the Dunwar escape channel.	Bengal Government No. 41, dated 2nd January 1890.	3,372	1,05,657	Ditto ditto.
			2,60,576	

C. W. ODLING,

Superintending Engineer, Sone Circle.

The 14th January 1890.

No. 37Mne., dated Calcutta, the 10th February 1890.

The following report of the 11th quarterly inspection of the Dock Works at Kidderpore, which are being carried out by the Commissioners for making Improvements in the Port of Calcutta, is published for general information.

By order of the Lieutenant-Governor of Bengal,

W. B. BESTIC,

Under Secy. to the Govt. of Bengal, P. W. Dept.

QUARTERLY INSPECTION OF THE KIDDERPORE DOCK WORKS.

No. 963, dated Calcutta, the 6th-7th February 1890.

From—H. Joll, Esq., and W. Connan, Esq.,
To—The Secretary to the Government of Bengal, Public Works Dept.

In accordance with the order of the Government of Bengal, memorandum No. 1? 0 (Marine) of the 27th ultimo, we have the honour to report that the 11th quarterly inspection of the Kidderpore Dock Works was made on the 5th instant.

2. The usual tabular statement and the index plan showing the work done during the quarter ending 31st December 1889, and the total amount executed from the commencement, which have been prepared by the Superintending Engineer of the Dock Works, are already with Government.

3. The progress during the quarter is under-noted.

PERMANENT WORKS.

Sixty-feet Lock.—The work is nearly completed, and only 6·8 per cent. of the masonry now remains to be done, 195,000 cubic feet of masonry having been built during the quarter.

Eighty-feet Entrance.—Completed nearly up to coping level. 72,792 cubic feet of masonry was built during the quarter, 10·7 per cent only remaining to be done.

Double Entrance to Dock No. 1.—The erection of the gates was commenced and 233,800 cubic feet masonry built during the quarter, only 13 per cent. remaining to be done.

Tidal Basin.—The graving dock entrance being ready, work was partially resumed during the quarter, and 12,000 cubic feet of masonry was built and 330,000 cubic feet excavation dug. About 22·5 per cent. of quay wall foundation and 18·7 per cent. of masonry remain to be done.

Graving Dock.—70,000 cubic feet of masonry and 85,000 cubic feet of earthwork were done during the quarter. 23·5 per cent. of the brickwork and 10·8 of foundation remain to be done.

Government Graving Dock.—Work on this dock was begun during the last quarter. 1,020,000 cubic feet of excavation were done during the quarter, and the timber trenching for the foundation is now in hand.

Dock No. 1.—363,385 cubic feet of the quay wall masonry and 3,528,992 cubic feet of excavation were done during the quarter. About 9·2 per cent. of brickwork and 24·3 of excavation remain to be done. During the quarter, 129 running feet of foundation was done, only 4·9 per cent. remaining to be done.

Boat Canal.—During the quarter, 774,093 cubic feet of excavation and 113,056 cubic feet of masonry were done, making in all about 70 per cent. of the total estimated amount. The erection of the main girders of the Diamond Harbour road bridge was nearly finished, and the rail arches for both this and the Tallygunge road bridge were completed. The erection of the gates of the lift lock is now in hand, and special measures are being taken for the excavation required in the Chetla Hât lock.

Subsidiary Works.—The hydraulic engine-house has been almost completed with the exception of the chimney shaft and the accumulator tower, and the engines and boilers have been erected in it. The foundations of the main pumping station are completed and ready for the erection of the machinery on its arrival from England.

Expenditure.—The total expenditure up to the end of the quarter under review is reported to be Rs. 1,62,15,553, of which Rs. 1,35,56,930 represents outlay on works and Rs. 26,58,623 outlay on account of land.

Sanitary.—A fever epidemic prevailed among the workpeople during the quarter which caused a considerable mortality and raised the death-rate to 48·61 per 1,000 per annum, against 12·56 in the previous quarter; the death-rate for the same quarter last year being 35·82. The average number of work-people employed during the quarter was 6,537, amongst whom there were 26·3 deaths.

GENERAL REMARKS.

We are of opinion that fair progress has been made with the works, and that, so far as we have been able to judge from a quarterly inspection, the quality of the work done is all that could be desired.

Rainfall, Weather, and State and Prospects of the Crops.

tatement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 8th February, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	ENGAL.		
	Western Districts.		
	BURDWAN DIVN.		
1	Burdwan Feb. 8, '90	Nil	Weather—cold. Outturn of *rubbi* and other winter crops rather unfavourable Potato fair. Prices of common rice :— Srs. Burdwan ... ... 17½ Culna ... . 16 Cutwa ... ... 16½ Kaneegunge ... ... 20 } per rupee.
2	Bankoora ,, 8, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops continue good. Coarse rice selling at 19 seers per rupee at Sudder and 20 seers at Bishenpore.
3	Birbhum ,, 8, '90	Nil	Weather—seasonable. State and prospects of sugarcane and winter crops good. Rice selling at 16½ seers per rupee at Soory and 16 seers at Rampore Hât.
4	Midnapur ,, 8, '90	Nil	Weather—seasonable. General prospects fair. Harvesting of rice nearly over in Contai. Indigo and *rubbi* doing well. Prices of rice :— Srs. Sudder ... ... 18 Contai ... ... 24 Tamluk .. .. 18 Ghatal ... ... 20 } per rupee.
5	Hooghly ,, 8, '90	Nil	Weather—cold. *Rubbi* crops thriving well. Prices of common rice : — Srs. Sudder and Serampore ... ... 12½ Jehanabad ... ... 17 } per rupee.
	Howrah ,, 8, '90	Nil	Weather—cool. *Rubbi* crops doing well. Transplantation of *boro* crop going on. Prices of common rice :— Srs. Howrah ... ... 13 Uluberia ... ... 16 } per rupee.
	Central Districts.		
	PRESIDENCY DIVS.		
6	24-Perghs. Feb. 8, '90	Nil	Weather—cool. *Amun* harvest completed. Threshing going on. *Rubbi* crops doing well. Ploughing going on in some parts. Common rice selling at 16 seers per rupee.
7	Nuddea ,, 8, '90	Nil	Weather—seasonable. Prospects of crops now on the ground favourable. Harvesting of sugarcane and *arhar* still going on. Ploughing for *aus* rice has commenced.
8	Khoolna ,, 8, '90	Nil	Weather—seasonable. Reaping of *amun* completed ; outturn 13 annas, as reported before. State of the *boro* crop, the transplantation of which is nearly completed, is good, and of *rubbi* fair.
9	Jessore ,, 8, '90	Nil	Weather—very cold. *Amun* harvesting nearly over; outturn 12 annas in Jhenidah. Spring crops doing fairly well. Price of new rice 14 to 16 seers per rupee.
10	Moorshedabad ,, 8, '90	Nil	Weather—bright and cold. Prospects of *rubbi* continue good.
	RAJSHAHYE DIVS.		
11	Dinagepur ,, 8, '90	Nil	Weather—warm during the day and cold at night. Nights still very foggy and damp. Prospects of crops continue good.
12	Rajshahye ,, 8, '90	Nil	Weather—cold and seasonable. Harvesting of winter rice nearly finished with good outturn. Prospects of *rubbi* crops also good.
13	Rungpur ,, 8, '90	Nil	Weather—seasonable. Land is being prepared for *aus* and jute. Prospects of tobacco, wheat and other *rubbi* crops continue good. Prices stationary.
14	Bogra ,, 8, '90	Nil	Weather—cold and pleasant. Foggy mornings. Reaping of *amun* finished. Other crops being reaped. Gram, *khesari*, *rai*, peas, and wheat promising. Rice sells at 22 seers per rupee at head-quarters.
15	Pubna ,, 8, '90	Nil	Weather—fine and cold. Outturn of *amun* in Serajgunge at least 14 annas, and in Sudder subdivision 12 annas. Sugarcane 8 annas. Mustard deficient. Other cold-weather crops satisfactory. Price of rice slightly lower.
16	Darjeeling ,, 8, '90	Nil	Weather—very cold and bright. Crop prospects generally favourable.
17	Julpigoree ,, 8, '90	Nil	Weather—seasonable. Cutting of *haimanti* paddy completed and 14 annas outturn obtained. Condition of tobacco good. Prices stationary.

No.	District and date of return.	Rainfall at under Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded.*			
	Eastern Districts.		
DACCA DIVN. 18	Dacca Feb. 8, '90	Nil	Weather—seasonable. Winter crops doing well. Mustard, pulses and sugarcane are being cut. Fodder is available. No special change in the prices of food-grains. Common rice 13 to 16 seers per rupee.
19	Furreedpur „ 8, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops fair. Sugarcane cultivation progressing. *Boro* being sown in char lands. Coarse rice selling at 14 seers per rupee at Sudder, 15 seers at Madaripore, and 17 seers at Goalundo.
20	Backergunge „ 8, '90	Nil	Weather cool and fair. Harvesting of *amun* completed; outturn estimated at 16 annas. Common rice selling at 16 seers per rupee.
21	Mymonsingh „ 8, '90	Nil	Weather—cold and bright. Transplantation of *boro dhan* nearly completed. Mustard is being gathered. Prospects of crops good. Coarse rice 14 seers per rupee.
CHITTAGONG DIVN. 22	Chittagong „ 11, '90	Nil	Weather—seasonable. Prospects of chillies good.
23	Noakholly „ 8, '90	Nil	Weather—seasonable. *Rubbi* crops doing well. Price of rice stationary.
24	Tipperah „ 8, '90	Nil	Weather—bright and cool. *Boro dhan* is being transplanted. Land is being prepared for *aus*. Tobacco, onions, and chillies are thriving. Mustard is being gathered.
25	Chittagong Hill Tracts. „ 7, '90	Nil	Weather—very cold with dense fogs in the morning, and hot at noon, throughout the week. Gathering of mustard continues. Tobacco, chillies and other winter crops progressing.
	Hill Tipperah Feb. 8, '90	Nil	Weather—cold. Tobacco and sugarcane being cut. Cotton gathered; outturn fair.
BEHAR.			
PATNA DIVN. 26	Patna „ 8, '90	Nil	Weather—cold. Mustard and *aghani rabar* are being harvested. Other spring crops doing well. Prospects of poppy continue favourable. Prices of food-grains almost stationary.
27	Gya „ 8, '90	Nil	Weather cold. Harvesting of paddy in course of completion. *Rubbi* coming on well. Poppy progressing.
28	Shahabad „ 8, '90	Nil	Weather—bright and cold, but getting slightly warmer. Prospects of wheat and barley good. Peas and mustard being cut. Sugarcane being pressed. Poppy in flower and forward, and promises well if there be no rain. Prices stationary.
29	Durbhunga „ 8, '90	Nil	Weather—cold and clear early in the week, slightly hotter at its close. Prospects of *rabi* continue favourable. Mustard is being harvested. Recent rain has done much good to poppy crop. Prices of common rice range from 19 to 23 seers per rupee.
30	Mozufferpur „ 8, '90	Nil	Weather—seasonable. Prospects of all crops continue very favourable.
31	Sarun „ 8, '90	Nil	Weather—clear and cold. Prospects of *rubbi* excellent. Harvesting of peas and mustard commenced; outturn favourable. Poppy looks well and continues to give a good spread.
32	Chumparun „ 8, '90	Nil	Weather—seasonable. Reaping of mustard nearly finished; estimated outturn 12 annas. *Rubbi* doing well. Poppy generally in flower; prospects excellent. Prices stationary.
BHAGULPORE DIVN. 33	Monghyr „ 8, '90	Nil	Weather—seasonable. Days getting hot. Prospects of *rubbi* crops continue favourable, and an outturn of 14 annas on the whole expected. A shower of rain would still benefit the crops.
34	Bhagulpur „ 8, '90	Nil	Weather cold and dry. Crops on the whole doing well, but would be improved by rain. In Soopool, crops said to be suffering from want of rain.
35	Purneah „ 8, '90	Nil	Weather—seasonably cold. Tobacco and other cold-weather crops doing well, having been benefited by the late rain.
36	Maldah Feb. 8, '90	Nil	Weather—cold. *Kalai* and mustard still being gathered. Transplantation of *boro* going on. Prospects of other standing crops good. Common rice selling at an average of 18 seers per rupee.
37	Sonthal Pergha. „ 8, '90	Nil	Weather—seasonable. *Aghani* outturn in Godda 12 annas. *Rubbi* promises to yield 12 annas for the whole district. Prices falling.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.			
Orissa Dn. 38	Cuttack Feb. 8, '90	Nil	Weather—misty in the morning. The subdivisional officer of Jajpore reports that the outturn of *guru sarad* should be 16 and not 17 annas, as stated before. Prospects continue good.
Orissa Dn. 39	Pooree ...	...	Report not received.
Orissa Dn. 40	Balasore ,, 8, '90	Nil	Weather—warmer. Such *rabbi* crops as there are, doing fairly well.
CHOTA NAGPORE.			
South-West Frontier Agency.			
Chota Nagpore Dn. 41	Hazaribagh Feb. 8, '90	Nil	Weather—seasonable. Prospects generally good, except at Chatra and Chowparun, where a full crop is not expected. Rain would do good.
Chota Nagpore Dn. 42	Lohardugga ,, 8, '90	Nil	Weather—seasonable and very cold. Prospects of *rabbi* at head-quarters good. Hoar-frost has caused much damage to this crop in Palamow, especially to *rahar* pulse. Mustard is being now reaped.
Chota Nagpore Dn. 43	Singbhoom ,, 8, '90	Nil	Weather—seasonable. Prospects of crops favourable. Outturn of sugarcane 12 to 16 annas; *surguja* 10 to 16 annas; *mohua* 10 to 12 annas; other oil-seeds 10 to 16 annas. Gram doing well. Prices stationary.
Chota Nagpore Dn. 44	Manbhoom ,, 8, '90	Nil	Weather—getting warmer. Sugarcane is being pressed; outturn full average in Sudder subdivision and about 12 annas in Govindpore. *Arhar, khesari,* and wheat ripening; probable outturn 14 annas. Rice selling at from 20 to 24 seers per rupee.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 11th February, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

QUANTITIES PER RUPEE IN

Number.	DISTRICTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLUM. (*Sorghum Vulgare.*)		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
	BENGAL.															
	Western Districts.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
1	Burdwan	14 8	13 8	12 4	No sale.			12 12	New 15 0	15 12	New 16 14	16 5	18 0	...	...	...
2	Bankoora	14 8	14 8	12 4	14 0	14 0	14 8	17 8	17 0	17 8	21 0	21 0	21 0	..	...	...
3	Beerbhoom	15 8	15 8	11 0	...	...	...	13 8	12 0	13 0	16 8	15 0	15 12	...	...	...
4	Midnapore	13 0	13 0	13 5	...	...	...	12 8	12 8	15 0	17 0	16 8	20 0	...	...	...
5	Hooghly	13 0	13 0	13 0	...	...	..	8 0	8 0	10 0	13 0	12 0	13 0	...	...	...
	Howrah	...	...	...	...	...	...	9 8	9 8	12 0	14 0	14 0	14 8	...	...	...
	Central Districts.															
	Calcutta	13 12	13 0	12 9	18 0	16 9	15 11	9 2	8 11	9 10	13 14	13 8	14 14	20 3	19 4	17 8
6	24-Pergunnahs	15 0	14 8	12 8	16 0	16 0	14 0	9 0	9 0	8 0	16 8	16 8	16 0	...	...	...
7	Nuddea	15 0	15 0	13 14	17 12	17 12	22 14	10 10½	10 10½	12 5	12 14	13 4	17 1¼	...	...	...
8	Khoolna	...		...	...	...	...	13 0	14 0	14 4	16 0	16 0	16 0	...	...	...
9	Jessore	12 12	13 5	12 0	...	...	...	9 0	9 0	14 0	16 0	16 0	17 0	...	...	...
10	Moorshedabad	16 0	16 0	13 5	...	...	...	15 8	15 8	13 5	16 0	17 0	17 0	...	...	...
11	Dinagepore	16 0	17 4	12 0	19 0	16 0	12 0	14 0	15 8	14 6	19 0	19 0	17 1	...	...	...
12	Rajshahye	15 0 / 16 8	15 0	12 0	18 12	18 12	26 4	14 4	13 8	13 8	16 2	15 12	15 0	...	...	...
13	Rungpore	14 8	14 8	12 4	...	...	...	9 6	9 6	10 8	14 8	14 8	16 12	...	...	...
14	Bogra	Boat sort. 13 5 / Common. 16 8	13 5 / 16 8	7 14	...	...	...	12 0	12 0	12 0	18 12	19 8	18 12	...	...	...
15	Pubna	13 5	13 8	16 8	...	...	...	7 2	7 4	7 12	16 8	15 14	18 0	...	...	...
16	Darjeeling	10 0	10 0	10 0	10 0	10 0	10 0	5 8	5 0	5 0	10 0	12 0	13 0	...	...	...
17	Julpigoree	13 0	13 0	10 0	16 0	16 0	16 0	8 0	8 0	8 0	17 0	17 0	18 0	...	...	...
	Eastern Districts.															
18	Dacca	13 0	13 0	15 8	16 0	16 0	20 0	14 0	14 0	16 0	16 0	16 0	17 0	...	...	...
19	Furreedpore	12 0	12 0	18 0	12 0	12 0	18 0	10 0	10 0	8 0	14 0	14 0	16 0	...	...	...
20	Backergunge	...	...	...	...	...	...	13 5	13 5	13 5	16 0	16 0	15 9	...	...	
21	Mymensingh	11 8	10 0	9 0	...	...	...	10 8	10 0	12 0	14 0	12 12	19 0	...	...	...

A In subdivisions retail prices of salt per rupee are:—Culna 10 seers, Cutwa 10 seers 6 chittacks and Ranegunge 10 seers.
B At Rampore Haut retail price of salt 10½ seers per rupee.
C In subdivisions retail prices of salt per rupee are:—Contai 10 seers, Tumlook 8 seers, and Ghattal 10½ seers.
D In subdivisions retail prices of salt per rupee are:—Serampore 10 seers and Jehanabad 10 seers.
E In subdivisions retail prices of salt per rupee are: Baraset 9 seers, Basirhat 9 seers, Diamond Harbour (at Magrahat) 8 seers, Barrackpore 9 seers 2 chittacks, and Dum-Dum 10 seers.
F In subdivisions retail prices of salt per rupee are:—Kooshtea 10 seers, Meherpore 10½ seers, Chooadanga 9 seers, and Ranaghat 9 seers 2 chittacks.
G In subdivisions retail prices of salt per rupee are:—Satkhira 9 seers and Bagirhat 8 seers.
H In subdivisions retail prices of salt per rupee are:—Jhenida 9 seers, Magura 9½ seers, Narail 9½ seers, and Bongong 10 seers.
I In subdivisions retail prices of salt per rupee are:—Lalbagh 10 seers, Jungipore 10 seers, and Kandi 11 seers.

of the Districts of Bengal on the 31st January 1890.

IRS OF 80 TOLAHS.

AJRA OR CUMBU. (*Penniseturn typhoideum.*)			MARUA OR RAGI. (*Eleusine Coracana.*)		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
4 15	14 0	12 6	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	13 0	13 0	14 0
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...

			WHOLESALE PRICES PER MAUND OF 40 SEERS.			
FIREWOOD.			SALT.			SALT.			DISTRICTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
									BENGAL.
									Western Districts.
100 0	100 0	107 0	A 10 0	10 0	10 7½	3 11 0	3 12 0	3 11 0	Burdwan.
280 0	280 0	320 0	10 0	10 0	10 0	3 15 0	3 15 0	3 14 0	Bankoora.
160 0	160 0	160 0	B 10 8	10 8	10 0	3 10 0	3 10 0	3 13 0	Beerbhoom.
160 0	160 0	120 0	C 10 3	10 3	10 4	3 15 0	3 15 0	3 14 0	Midnapore.
120 0	120 0	120 0	D 9 0	9 0	9 0	3 11 6	3 11 6	4 6 0	Hooghly.
100 0	100 0	100 0	10 0	9 2	10 8	3 13 6	3 13 3	3 10 6	Howrah.
									Central Districts.
100 0	100 0	90 10	10 2	10 0	10 5	3 11 0	3 11 6	3 10 2	Calcutta.
100 0	100 0	100 0	E 10 0	10 0	10 0	3 9 6	3 9 6	3 9 6	24-Pergunnahs
...	...	...	F 9 2	9 2	9 2	3 14 0	3 14 0	3 14 0	Nuddea.
160 0	160 0	160 0	G 8 0	9 0	9 4	4 4 0	4 4 0	4 0 0	Khoolna.
160 0	160 0	160 0	H 9 3	9 2	9 2	4 0 0	4 0 0	4 0 0	Jessore.
200 0	200 0	200 0	I 11 0	10 12	10 8	3 12 0	3 12 0	3 12 0	Moorshedabad.
160 0	160 0	160 0	J 9 8	9 8	9 8	4 0 0	4 0 0	4 0 0	Dinagepore.
240 0	240 0	240 0	K 9 0	9 9	9 9	4 2 3	4 2 8	4 0 0	Rajshahye.
100 0	100 0	120 0	L 8 14	8 14	9 6	4 8 0	4 8 0	4 4 0	Rungpore.
90 0	90 0	90 0	9 0	9 0	9 0	4 4 0	4 2 8	4 2 8	Bogra.
200 0	200 0	300 0	M 8 11½	8 11½	9 9	4 0 0	4 0 0	3 15 0	Pubna.
120 0	120 0	120 0	N 8 0	7 0	7 0	5 0 0	5 0 0	5 0 0	Darjeeling.
128 0	128 0	128 0	O 9 0	9 0	9 0	4 2 0	4 2 0	4 4 0	Julpigoree
									Eastern Districts.
160 0	160 0	120 0	P 9 4	9 4	9 14	4 4 0	4 4 0	4 0 0	Dacca.
220 0	120 0	120 0	9 0	9 0	9 0	4 4 0	4 4 0	4 0 0	Furreedpore
220 0	120 0	120 0	Q 10 10	10 10	10 10	3 14 0	3 14 0	3 12 0	Backergunge.
..	..	..	R 9 4	9 0	9 10	4 2 0	4 6 0	4 2 0	Mymensingh.

rice of salt 8 seers per rupee.
ser rupee are:—Nattore 9 seers and Nowgong 8 seers 11 chittacks.
per rupee are:—Kurigram 9 seers, Nilphamari and Gaibanda 8 seers.
seers per rupee.
Rs. 4-4 per maund.
retail price of salt 8 seers per rupee.
ser rupee are:—Mauickgunge 8 seers, Moonsheegunge 8 seers 14 chittacks, and Naraingunge

ser rupee are:—Patuakhali 9 seers, Perozepore 9 seers, and Bhola 8 seers.
per rupee are:—Kishoregunge 8 seers, Jamalpore 10 seers, Sherepore 8 seers, and

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the Head-quarter

QUANTITIES PER RUPEE IN

Number.	DISTRICTS.	WHEAT. Present return.	WHEAT. Next preceding return.	WHEAT. Corresponding return of last year.	BARLEY. Present return.	BARLEY. Next preceding return.	BARLEY. Corresponding return of last year.	RICE, BEST SORT. Present return.	RICE, BEST SORT. Next preceding return.	RICE, BEST SORT. Corresponding return of last year.	RICE, COMMON. Present return.	RICE, COMMON. Next preceding return.	RICE, COMMON. Corresponding return of last year.	JOWAR OR CHOLUM. (Sorghum Vulgare.) Present return.	JOWAR OR CHOLUM. (Sorghum Vulgare.) Next preceding return.	JOWAR OR CHOLUM. (Sorghum Vulgare.) Corresponding return of last year.
	***Eastern Districts*—concluded.**	S Ch.	S. Ch.	S. Ch.	S. Ch.	S Ch	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
22	Chittagong ...	11 0	11 0	11 0	...	...	...	11 0	11 0	12 0	15 11	15 11	16 8	.	...	...
23	Noakholly ...	...	...	...	.	...	...	16 0	16 0	16 0 Chaplash.	18 0	18 0	18 0	...	...	...
24	Tipperah ...	11 7	11 7	12 8	.			10 0 Gobindabhag.	10 0	17 0	16 0	16 0	20 0	.	..	...
25	Chittagong Hill Tracts.	...	...	..	...	..	..	12 4	10 0	11 6½	14 0	11 6	14 8½	...	...	...
	Hill Tipperah...	6 0	6 0	6 0	...	...	...	8 0	8 0	10 0	15 0	14 0	19 0	...	...	...
	BEHAR.															
26	Patna ...	17 8 Red. 15 8 White.	17 6 15 8	... 17 0	24 0	24 0	21 0	10 8	10 8	11 0	17 14	18 0	15 8	22 0	22 0	21
27	Gya ...	16 0	16 8	13 8	23 0	23 0	15 0	10 8	10 0	9 8	17 0	17 0	15 0	...	...	...
28	Shahabad ...	16 0	16 0	15 4	23 0	22 0	17 0	9 0	9 8	9 0	17 0	17 0	14 4	23 0	21 0	18 4
29	Durbhunga ...	13 3	15 6	12 0	27 8	3) 12	16 8	9 14	...	11 0	19 3	20 4	14 0	...	...	...
30	Mozufferpore	14 0	14 0	12 0	20 0	20 0	...	9 0	12 0	9 0	17 0	18 0	13 0	...	...	...
31	Sarun ...	15 8	16 0	15 0	21 0	20 0	20 8	9 4	8 8	8 8	17 6	15 8	13 5	...	...	...
32	Chumparun ...	13 0	13 0	12 0	...	...	19 0	10 0	9 0	9 0	19 0	18 8	13 0	...	...	...
33	Monghyr ...	18 10	18 10	15 8	21 0	21 0	...	16 12	13 2	14 0	19 11	16 13	17 1	...	...	...
34	Bhagulpore ...	16 6	14 11	15 2	20 8	20 8	17 10	11 6	12 0	14 13	18 5	17 10	16 13	...	...	...
35	Purneah ...	18 0	20 0	13 4	...	...	...	18 0	18 0	16 0	19 0	19 0	17 0	...	...	...
36	Maldah ...	16 0	18 0	13 0	...	...	..	8 0	12 0	13 0	17 0	17 0	16 0	...	...	...
37	Sonthal Perghs.	13 0	13 4	11 8	...	...	..	12 0	12 0	12 8	17 0	17 0	18 0	...	...	...
	ORISSA.															
38	Cuttack ...	11 13	11 13	13 2	...	...	...	10 8	10 8	11 13	22 5	19 11	18 6	...	...	...
39	Pooree ...	13 2	11 13	13 2	...	...	...	15 12	15 12	13 2	23 10	22 10	18 6	...	...	...
40	Balasore ...	15 0	15 0	13 0	13 0	13 0	13 0	13 0	13 0	12 8	19 0	19 0	19 8	...	...	...
	CHOTA NAGPORE.															
	South-West Frontier Agency.															
41	Hazaribagh ...	13 8	13 0	12 0	15 0	12 0	9 0	10 0	10 0	8 0	18 0	18 0	16 0	...	...	...
42	Lohardugga ...	13 12 Red. 11 12 White	12 8 ...	10 8 ...	...	13 0	...	17 0	17 0	13 0	20 0 Ordinary. 22 0 Coarse.	19 8 22 0	16 8 ...	...	...	...
43	Singbhoom ...	10 0	10 0	10 0	15 0	20 0	14 0	16 0	16 0	16 0	20 0	20 0	20 0	...	...	...
44	Manbhoom ...	13 5	13 5	11 14	...	...	...	14 0	15 0	14 0	20 0	22 0	21 0	...	...	...

S At Cox's Bazar retail price of salt 8 seers per rupee.
T At Fenny Hát retail price of salt 8 seers per rupee.
U In subdivisions retail prices of salt per rupee are:—Buxar 10½ seers, Sasseram 10½ seers, and Bhabuah 9½ seers.
V In subdivisions retail prices of salt per rupee are:—Tajpore 11 seers and Madhubani 10 seers.
W In subdivisions retail prices of salt per rupee are:—Hajipore 9½ seers and Sitamarhi 10 seers.
X At Bettiah retail price of salt 10 seers per rupee.

CALCUTTA,
The 11th February, 1890.

Station Bazars of the Districts of Bengal on the 31st January 1890—(concluded).

INDIAN-CORN OR MAIZE (*Zea Mays.*)			ARHAR OR THUR. CAJAN PEA. (*Cajanus indicus.*)			FIREWOOD.			SALT.			WHOLESALE PRICES PER MAUND OF 40 SEERS. SALT.			DISTRICTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
															Eastern Districts—concluded.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
...	...	...	...	...	...	110 0	100 0	108 0	9 0 S	9 0	9 4	4 0 0	4 0 0	3 14 0	Chittagong.
...	...	.	7 0	7 0	...	...	...	...	9 0 T	9 0	8 0	4 0 0	4 0 0	4 8 0	Noakholly.
...	...	...	8 6¾	8 6¾	8 0	...	...	...	8 14	8 14	8 0	4 8 0	4 8 0	4 6 0	Tipperah.
...	...	...	...	...	...	320 0	320 0	320 0	8 0	8 0	8 0	4 8 0	4 8 0	4 8 0	Chittagong Hill Tracts.
...	...	...	8 0	8 0	8 0	...	...	...	8 0	8 0	8 0	4 6 0	4 6 0	4 6 0	Hill Tipperah.
															BEHAR.
22 8	23 0	21 0	21 8	21 0	23 0	130 0	130 0	130 0	10 0	10 0	10 0	3 14 0	3 14 0	3 12 0	Patna.
...	...	...	19 0	19 0	18 0	160 0	160 0	200 0	9 2	9 2	8 12	4 2 0	4 2 0	4 2 9	Gya.
...	...	...	19 0	20 0	14 0	140 0	140 0	160 0	9 12 U	10 0	10 0	3 15 6	3 15 0	4 0 0	Shahabad.
24 3	24 8	19 12	16 8	18 8	22 0	200 0	160 0	160 0	10 0 V	10 0	11 0	3 12 0	3 12 0	3 10 3	Durbhunga.
26 0	22 8	17 0	18 0	18 0	20 0	160 0	160 0	160 0	10 0 W	10 0	10 0	4 0 0	3 12 0	3 12 0	Mozufferpore.
21 12	21 0	20 8	19 8	19 0	20 8	160 0	160 0	160 0	9 8	9 8	10 0	4 0 0	4 2 0	3 14 6	Sarun.
24 8	24 0	17 8	17 8	17 0	22 0	160 0	160 0	160 0	10 0 X	9 8	9 0	4 1 0	4 2 0	4 2 0	Chumparun
22 1	24 2	16 13	16 12	17 13	18 5	147 0	147 0	147 0	9 11 Y	9 11	9 8	4 0 0	4 0 0	4 0 0	Monghyr.
22 11	22 11	17 2	17 11	17 11	17 10	164 0	164 0	176 8	10 1	10 1	9 0	3 15 6	3 15 6	4 0 0	Bhagulpore.
...	...	...	16 0	16 0	16 0	120 0	130 0	200 0	9 0 Z	9 8	9 0	4 7 0	4 3 4	4 5 0	Purnoah.
...	...	...	...	...	...	160 0	160 0	200 0	9 0	9 0	10 0	4 4 0	4 0 0	4 0 0	Maldah.
25 0	25 0	20 0	20 0	20 0	24 0	200 0	200 0	200 0	9 0	9 0	9 0	4 0 0	4 2 0	4 3 0	Sonthal Perghs.
															ORISSA.
...	...	...	14 7	14 7	17 1	80 0	80 0	80 0	11 0	11 0	11 0	3 12 0	3 12 0	3 12 0	Cuttack.
...	...	...	15 12	14 7	15 12	80 0	80 0	80 0	11 13 Z1	11 13	11 13	3 6 0	3 6 0	3 6 0	Pooree.
...	...	...	...	...	...	160 0	160 0	160 0	10 0 Z2	10 0	9 12	3 14 0	3 14 0	3 13 6	Balasore.
															CHOTA NAGPORE.
															South-West Frontier Agency.
21 0	21 0	16 0	17 0	15 0	16 0	320 0	320 0	320 0	8 0	8 0	8 0	4 6 0	4 6 0	4 8 0	Hazaribagh.
30 0	40 0	19 0	Big. 15 0 Small. 17 0	15 4	17 0	140 0	130 0	140 0	8 8	8 4	8 8	4 6 0	4 9 0	4 8 0	Lohardugga.
24 0	32 0	...	12 0	12 0	15 0	240 0	240 0	200 0	8 8	7 0	7 0	4 12 0	5 8 0	5 8 0	Singbhoom.
32 0	32 0	23 0	20 0	19 0	17 0	00 0	200 0	200 0	9 2 Z3	9 2	9 0	4 2 6	4 2 6	4 2 6	Manbhoom.

Y In subdivisions retail prices of salt per rupee are:—Begusarai 9½ seers and Jamui 9 seers.
Z In subdivisions retail prices of salt per rupee are:—Kishengunge 8 seers and Arrareah (at Ranigunge) 9 seers.
Z1 In Khoordah subdivision retail price of salt 10 seers per rupee.
Z2 At Bhudruck retail price of salt 8 seers per rupee.
Z3 At Govindpore retail price of salt 9 seers per rupee.

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P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (who

OF 40 SEERS.

Number.	MARTS.	WHEAT.			BARLEY.			
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A
1	Calcutta ...	2 10 9	2 11 8	2 14 10	1 15 11	2 2 7	2 5 2	4
2	Serajgunge ...	2 4 0	2 0 0	2 10 0	...	...	...	5
3	Dacca ...	3 0 0	3 0 0	2 8 0	2 7 0	2 7 0	2 0 0	2 1
4	Naraingunge	...	...	...	...	...	...	3
5	Chittagong ...	3 8 0	3 8 0	3 9 0	...	...	...	3
6	Patna ...	Red. 2 4 0 / White. 2 8 0	Red. 2 4 6 / White. 2 8 0	... / 2 5 0	1 10 0	1 10 0	1 13 0	3 1
7	Balasore ...	2 8 0	2 8 0	3 0 0	3 0 0	3 0 0	3 0 0	3
8	Pooree ...	...	...	...	...	...	...	...
	Cuttack ...	3 4 0	3 4 0	3 0 0	...	...	...	3

MARUA OR RAGI. (*Eleusine Coracana.*)			KANGNI OR KAKUN ITALIAN MILLET. (*Setaria italica.*)		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
...	...	...	2 4 4	2 4 0	2 2 6
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
1 7 0	1 7 0	...	2 0 0	2 0 0	2 9 6
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...

CALCUTTA,
The 11th February, 1890.

...e undermentioned Marts of Bengal on the 31st January 1890.

...M, CHANA, CHHOLA, ...ADALAY OR SUNAGA. (*Cicer Arietinum.*)			INDIAN-CORN OR MAIZE. (*Zea Mays.*)			ARHAR OR THUR. CAJAN PEA. (*Cajanus indicus.*)			FIREWOOD.			SALT.			MARTS.
	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
2 8	2 3 5	2 7 0	1 15 0	1 14 7	2 0 8	1 15 10	2 2 9	2 2 9	0 5 6	0 5 6	0 5 9	3 11 0	3 11 6	3 10 2	Calcutta.
1 0	2 8 0	3 6 0	...	...	...	...	...	...	...	...	...	4 0 0	4 0 0	3 11 0	Serajgunge.
0 0	3 0 0	3 0 0	...	...	...	2 12 0	2 12 0	2 8 0	0 4 0	0 4 0	0 5 0	4 4 0	4 4 0	4 0 0	Dacca.
2 0	3 0 0	3 0 0	...	...	...	3 4 0	3 4 0	3 2 0	0 8 0	0 8 0	0 10 0	3 12 0	4 0 0	3 12 0	Naraingunge.
0 0	3 0 0	3 4 0	...	...	...	...	...	...	0 6 0	0 7 0	0 5 3	4 0 0	4 0 0	3 14 0	Chittagong.
11 6	1 11 6	2 1 0	1 11 0	1 11 6	1 13 0	1 13 0	1 14 0	1 10 0	0 5 0	0 5 0	0 5 0	3 14 0	3 14 0	3 12 0	Patna.
12 6	2 12 0	3 0 0	...	...	...	...	...	...	0 4 6	0 4 6	0 4 6	3 14 0	3 14 0	3 13 6	Balasore.
...	...	...	...	...	...	...	...	...	...	...	...	3 6 0	3 6 0	3 6 0	Pooree.
8 0	2 12 0	2 0 0	...	...	...	2 12 0	2 12 0	2 0 0	0 8 0	0 0	0 8 0	3 12 0	3 12 0	3 12 0	Cuttack.

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P. NOLAN,
Secy. to the Govt. of Bengal.

STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

NAMES OF MARTS.	STOCK IN HAND AS COMPILED ON—												
	1st week of Feb. 1889.	1st week of Mar. 1889.	1st week of April 1889.	1st week of May 1889.	1st week of June 1889	1st week of July 1889.	1st week of August 1889.	1st week of Sept. 1889	2nd week of Oct. 1889.	1st week of Nov. 1889.	1st week of Dec. 1889.	1st week of Jan. 1890.	1st week of Feb. 1890.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Balighatta	7,77,000	12,77,000	12,67,000	12,42,000	7,67,500	8,73,000	7,32,700	6,62,000	5,06,000	4,54,000	2,93,500	3,00,000	5,48,000
Coltadanga	71,400	80,200	87,100	82,200	88,000	86,500	78,700	74,400	71,900	67,400	55,400	63,400	83,900
Chitpore, Golabaree, Coomertooly, Hatkhola, and Culpy Ghat.	6,96,600	7,09,200	7,64,000	7,54,300	6,96,500	6,85,400	6,97,700	5,76,300	6,74,100	6,33,300	5,86,000	6,00,400	5,98,900
Pathuriaghatta, Posta, and Jorabagan.	3,500	2,000	3,200	3,000	2,500	2,000	3,000	4,000	5,000	8,000	3,000	4,000	5,000
Tallygunge, Chitlah, Kidderpore, and Moonshiganje.	1,26,600	1,37,400	1,48,100	1,59,000	1,19,700	1,03,700	1,10,700	72,500	64,550	65,200	68,100	82,750	96,100
21 Minor Bazars (estimated) ...	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000
Other retail shops, 3,129 in number (estimated).	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000
Beadyabatty, Nowabgunge, Dhuddreesar, and Chandernagore.	14,924	20,493	19,792	20,068	19,923	19,906	18,117	14,265	14,382	13,410	14,080	28,425	19,606
Total ...	21,80,024	27,15,293	27,79,193	27,50,466	21,94,123	22,60,506	21,39,917	18,93,165	18,25,932	17,31,310	15,13,080	15,68,975	18,43,506
On Railway premises on both sides of the river.	15,074 (on 4th Feb. 1889.)	6,852 (on 5th Mar. 1889.)	23,414 (on 4th April 1889.)	12,496 (on 4th May 1889.)	6,578 (on 3rd June 1889.)	7,730 (on 3rd July 1889.)	4,179 (on 3rd Aug. 1889.)	9,606 (on 3rd Sept. 1889.)	8,208 (on 3rd Oct. 1889.)	14,011 (on 3rd Nov. 1889.)	6,477 (on 3rd Dec. 1889.)	28,007 (on 3rd Jan. 1890.)	28,935 (on 3rd Feb. 1890.)
On boats unloaded ... By Port Commissioners' returns.	44,923 (1st to 3rd Feb. 1889.)	31,937 (1st to 3rd Mar. 1889.)	23,449 (1st to 3rd April 1889.)	17,963 (1st to 3rd May 1889.)	16,066 (1st to 3rd June 1889.)	25,610 (1st to 3rd July 1889.)	1,32,232 (1st to 3rd Aug. 1889.)	25,331 (1st to 3rd Sept. 1889.)	17,852 (5th to 7th Oct. 1889.)	21,324 (1st to 3rd Nov. 1889.)	20,650 (1st to 3rd Dec. 1889.)	61,641 (2nd to 4th Jan. 1890.)	68,796 (1st to 3rd Feb. 1890.)
By Canal returns	1,43,475 (1st to 3rd Feb. 1889.)	80,850 (1st to 3rd Mar. 1889.)	36,713 (1st to 3rd April 1889.)	8,972 (1st to 3rd May 1889.)	15,297 (1st to 3rd June 1889.)	27,106 (1st to 3rd July 1889.)	29,345 (1st to 3rd Aug. 1889.)	19,331 (1st to 3rd Sept. 1889.)	45,922 (5th to 7th Oct. 1889.)	14,718 (1st to 3rd Nov. 1889.)	8,835 (1st to 3rd Dec. 1889.)	1,31,815 (2nd to 4th Jan. 1890.)	2,42,044 (1st to 3rd Feb. 1890.)
Grand total of Stocks ...	23,33,496	28,34,932	28,62,768	27,89,897	22,22,064	23,20,352	22,96,673	19,48,282	18,97,914	17,81,363	15,49,242	17,90,438	21,81,281
Probable stock available for exportation by sea.	13½ lakhs	17½ lakhs	18 lakhs	17½ lakhs	11½ lakhs	12½ lakhs	12½ lakhs	9 lakhs	8½ lakhs	7½ lakhs	5 lakhs	7½ lakhs	11½ lakhs

STATISTICAL DEPARTMENT,
The 10th February, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

Abstract of the results of Meteorological Observations taken at the Alipore Observatory in the month of January 1890.

	Inches.	Date.	Hour.
The mean pressure of the month	29·946		
The average pressure of January from 24 years' registers ...	30·014		
The highest pressure in the month	30·128	29th	10
The lowest pressure in the month	29·736	24th	16
The range of pressure	0·392		
	Hours.		
The total number of hours of bright sunshine during the month	273·7		
The maximum possible number of hours of sunshine ...	337·3		
	⊖		
The mean temperature of the month	66·3		
The average temperature of January from 24 years' registers	67·7		
The highest temperature in the month	81·7	24th.	
The lowest temperature in the month	47·6	28th.	
The range of temperature during the month	34·1		
The mean daily range of temperature	20·5		
The greatest range of temperature in one day	25·8	28th.	
	Per cent.		
The mean humidity of the month	74		
The average humidity of January from 24 years' registers ...	71		
	Inches.		
The mean vapour tension of the month	0·469		
The average vapour tension of January from 9 years' registers	0·467		
The mean cloud proportion of the month ...	0·82		
The average cloud proportion of January from 13 years' registers	1·46		
	Inches.		
The total rainfall of the month	0·77		
The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground)	0·76		
The average fall of January from 48 years' registers ...	0·43		
The greatest fall in 24 hours	0·77	25th.	
	Days.		
The number of rainy days in the month	1		
The average number of rainy days in January from 24 years' registers	2		
	⊖		
The mean maximum equilibrium temperature of solar radiation during the month	130·9		
The mean difference of sun and air temperatures	54·0		
The greatest sun temperature	135·5	8th.	
The greatest excess of sun over air temperature	59·0	27th and 29th.	
The mean temperature of the nocturnal radiation thermometer on woollen cloth	48·7		
The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground	8·1		
The greatest depression of the nocturnal radiation thermometer below the minimum air temperature	11·4	29th.	
	Miles.		
The mean movement of the wind per day	63·4		
The greatest movement of the wind in one day	131·0	25th.	
The greatest movement of the wind in one hour	14·0	24th	10 to 11 and 11 to noon.
The number of hours with winds from each of the 8 points—			

N. 204, N.E. 44, E. 5, S.E. 4, S. 29, S.W. 130, W. 105, N.W. 114, Calm 109.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park Street Observatory). The barometer is about 8 feet higher at Alipore, and, other things being equal, reads therefore ·003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 2·5° lower; and finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0·6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

C. LITTLE,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;
Calcutta, the 7th February 1890.

Meteorological Report of the Province o

Meteorological Division.	District.	Representative stations.	Station Observations.															
			Air Pressure.					Temperature.						Humidity.		Cloud.		
			Highest, 8 A.M., barometer reading of month.	Lowest, 8 A.M., barometer reading of month.	Mean, 8 A.M., for month.	Mean, reduced to sea-level.	Variation from normal mean.	Highest of month.	Lowest of month.	Mean daily maximum temperature	Mean daily minimum temperature.	Mean daily temperature.	Variation from normal mean.	Mean, 8 A.M., humidity.	Variation from normal mean.	Mean cloud amount, 8 A.M.	Variation from normal mean, 8 A.M.	Rainfall.
Orissa.	Pooree	Pooree	30·089	29·859	30·029*	30·042*	—	?	52·5	?	59·5	?	—	82	—	0·5	—	0·1(
		Gopalpore	30·091	29·844	29·990	30·032	—·015	84·2	55·0	80·2	62·5	71·3	+0·6	72	—	0·1	—	Nil
		False Point	30·090	29·844	29·991	30·013	—·079	85·9	50 0	79 1	57·8	68·4	—0·5	87	—3	0·8	—1·6	0·1(
	Cuttack	Cuttack	30·045	29·795	29·948	30·034	—·052	88 9	50·9	83·5	58·5	71·0	—1·3	73	—5	1 2	—0·3	Nil
	Balasore	Balasore	30·072	29·809	29·970	30·032	—·064	86·4	46·9	80·4	54·9	67·7	+0·1	82*	—	0·1	—	Nil
South-West Bengal.	South-West Midnapore and South 24-Pergunnahs.	Saugor Island	30 088	29 843	29·989	30·016	—·071	81·7	51·7	70·0	60·4	65·2	+0 3	90	+2	0·6	—1·7	Nil
	Midnapore	Midnapore	29·964	29·705	29·866	30·025	—·081	87·3	46·1	81·2	55·3	68·3	+1·8	73	—	0 4	—	Nil
	24-Pergunnahs, Howrah, and Hooghly.	Calcutta	30·092	29·845	29·993	30·015	—·079	81·5	47 8	76·9	56·4	66 7	+0·6	87	+3	0·6	—1·3	0·77
	Burdwan	Burdwan	30·020	29·713	29·908	30·015	—·089	85·5	46·7	80·0	55·9	68·0	+1·6	75	0	0·4	—1·2	0·18
	Bankoora	Bankoora	29·787	29·519	29 691	30·013	—·077	80·0	46·2	79·1	54·9	67·0	+1·1	76	—	0·2	—	0·00
	West Burdwan and Beerbhoom.	Ranigunge	29·803	29·503	29·682	30·035	—·075	85·5	46 7	79 6	55·2	67 4	+1·5	74	—	0·4	—	0·07
	Moorshedabad	Berhampore	30·050	29 773	29·938	30·009	—·090	81·6	47·1	77 2	55·2	66 2	+1·2	92	+12	0·7	—1·0	0·12
	Nuddea	Krishnagore	30 076	29·824	29·967	30 037	—·057	84 5	47·8	78 7	54·0	66 3	+2·0	86	—	0·8	—	Nil
	Jessore and Khoolna	Jessore	30·074	29·811	29·969	30·004	—·081	81·7	48·4	78·1	57·3	67·7	+2·1	93	+10	1·4	—0·7	1·55
East Bengal.	Chittagong	Chittagong	30·007	29·813	29·911	30·006	—·079	81·1	50·2	78·6	57·0	68·3	+1 8	90	+2	1·7	+0·1	0·70
	Chittagong Hill Tracts	Demagri						Observations not received.										
		Barrisal	30·071	29·888	29·989	30·002	—·067	79 3	48·1	76·9	57·6	67·3	+2 8	99	—	0 6	—	3·04
	Backergunge	Noakholly	30·072	29·838	29·965*	30·008*	—	81·3	46·0	78·1	55 2	66·7	—	89	—	0·2	—	0·40
	Noakholly	Furreedpore	30 064	29 849	29·970	30 012	—·062	74·7	49 0	73 4	56 5	64 9	+1·1	94	—	0·8	—	0·21
	Furreedpore	Dacca	30·057	29·853	29 965	29 993	—·090	81·1	48 2	78·5	56·6	67·6	+1·1	89	+7	1 2	—0·4	1·30
	Dacca	Commillah	30·071	29·844	29 977	30·014	—·059	80 9	48·1	78·1*	56 2	67 2*	+2 5	87	—	0·6	—	0·74
	Tipperah	Mymensingh	30·053	29·836	29 947	30·008	—·069	77·9	48 8	75·1‡	57 4	66 5‡	+3·2	92	—	1·8	—	1·63
	Mymensingh	Bogra	30 011	29·852	29·920	29·957	—·073	80·8	45·5	76·5	54 1	65 3	+0·1	89	—	0·3	—	0·79
North Bengal.	Bogra	Pubna	30·045	29·930	29·949	29 998	—·080	81·4	37·9	77·1	53 5	65·3	+2·0	94	—	0·7	—	0·25
	Pubna	Serajgunge	30 037	29·781	29·931	30·005	—·066	80·1	44·9	76·0	54 6	65 6	+3 4	86	—	0·2	—	0·03
	Rajshahye	Rampore Beauleah.	30·044	29·820	29·939	30·026	—	80·0	42·0	77·5	52·3	64·9	—	84	—	0·5	—	Nil
	Maldah	Maldah	29 994	29·781	29·890†	30·0 1†	—·073	80·1	47 9	76 3	52·5	64 5	+1·8	87	—	1·3	—	0·60
	Dinagepore	Dinagepore	30·010	29 787	29 896	30·010	—·067	80 0	41·2	76·1	52·4	64·3	+2·9	91	—	0·5	—	0 51
	Rungpore	Rungpore	29·827	29·623	29·721	30 026	—·069	?	44·0	?	53·9	?	?	91*	—	1·0	—	0·19
	Julpigoree and Cooch Behar.	Julpigoree																
	Darjeeling Hill Tracts	Darjeeling	23·031	22·797	22 935	—	—	53 9	29·1	53·4*	35·7	44·5*	+5·0	83	+9	5·7	+0·6	1·10
North Behar.	Purneah and North Bhagulpore.	Purneah	30·015	29·750	29 882	30·017	—·079	77 7	40·5	74·3	49·9	62·1	+0·8	92	+7	0·7	—0·7	0·02
	Mozufferpore	Mozufferpore						Observations discontinued.										
	Durbhunga	Durbhunga	29·982	29·700	29·852	30·031	—·075	78·9	45·8	75 5	54·2	64·8	+2·8	86	+3	0·8	—0·4	0·23
	Chumparun	Motiharı	29·919	29·652	29·788	30·033	—·054	77·2§	41·0	73·8§	49 3	61·4§	+1·9	87	—	1·2	—	1·07
	Sarun	Chupra	29·939	29·693	29 821	30 028	—·052	78·3	43·1	75 9	52·1	64·4	+3·7	83	—	0 7	—	Nil
South Behar.	Shahabad	Dehree	29·781	29·515	29 671	30 051	—·064	81·8	44 0	77·1	52 3	64 7	+3·5	75	—	0·4	—	Nil
		Buxar	29 911	29·634	29 7·2	3 1 012	—·065	81 4	41 9	75 9	50 5	63·3	+1 8	75	—	0·9	—	0·03
		Arrah	29·950	29·671	29 8.91	30 0391	—·043	80 2	41·9	76·0	50 2	63·1	+2·7	82	—	1·5	—	Nil
	Gya	Gya	29·744	29·460	29·638	30·042	—·070	82 6	47·9	77·1	52·8	65·0	+1·5	74	+9	0·9	—1·3	Nil
	Patna	Bankipore	29·971	29·699	29·847	30·037	—·080	78·9	43·3	75·2	52·2	63 7	+2·6	78	—1	0·8	—1·3	0 03
	South Bhagulpore and Monghyr.	Bhagulpore	29·966	29 0 6	29·813	30 015	—·070	79·1	42·5	76·2	52 1	64·1	+2·3	84	—	0·6	—	Nil
	Sonthal Pergunnahs	Naya Doomka	29·598	29·320	29·464	30·027	—	80·9	42·4	77·1	53 4	64·7	—	79	—	0·1	—	0·02
Chutia Nagpur.	Hazaribagh	Hazaribagh	28·049	27·788	27·932	30·150	—·061	80·7	42·0	74·1	51·6	62·8	+1·2	59	—1	0·4	—1·5	Nil
	Lohardugga, Manbhoom	Ranchee	27·912	27·670	27·820	30·040	—·066	82·0	37·0	74·4	49·7	62 0	+0·7	65	—	0·3	—	0·01
	Singbhoom	Chyebassa	29·356	29·092	29·215*	30·050*	—	85·8	44·0	80·2	52·1	66·1	—	69	—	0·2	—	Nil
Assam	Assam	Sibsagar	29·844	29·626	29 741	30·090	—·035	73·6	42·2	69·8	52·6	61·2	+1·4	99	+8	7·7	+2·2	2·88
		Dhubri	29 904	29·779	29 807	30·023	—·084	79 3	50·6	73 4	55·6	64·5	+1·0	91	0	2·2	+0 3	0·94
		Silchar	30·000	29·795	29·911	30·023	—·069	83·8	48·5	78 0	55·8	67 3	+2·8	91	+2	4·6	+1·1	1·45

* Means of 30 days.
† „ 28 „
‡ „ 29 „
§ „ 21 „

gal for the month of January 1890.

DISTRICT OBSERVATIONS.												
RAINFALL.												
Of month.					Since 15th May 1889.					Representative stations.	DISTRICT.	METEOROLOGICAL DIVISION.
trict.	Normal mean.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district.	Normal mean.	Variation.	Mean number of rainy days.	Normal mean number of rainy days.			
0·07	0·81	−0·24	0·8	1·0	74·95	55·63	+19·32	96 8	83·3	Pooree ... } Gopalpore ... } False Point ... }	Pooree	Orissa.
0·15	0·36	−0·21	0·5	1 0	66·39	51·98	+14·41	93·4	79·7	Cuttack ...	Cuttack	
0·07	0·44	−0·37	0·2	1·0	49·96	53·31	−3·35	81·3	77·2	Balasore ..	Balasore	
0·14	0·43	−0·29	0·7	1·1	58·57	62 37	−3·80	100 2	85·7	Saugor Island ..	South-West Midnapore and South 24-Pergunnahs.	South-West Bengal.
0·10	0·50	−0·40	0·7	1 2	46 39	51·57	−5·18	86·1	72·3	Midnapore ...	Midnapore	
0·73	0·50	+0·22	1·0	1·3	54·10	51·66	+2·44	92·1	90·3	Calcutta ...	24-Pergunnahs, Howrah, and Hooghly.	
0·06	0·39	−0·33	0·7	1·1	43·89	46·71	−2 82	81 2	75 9	Burdwan ...	Burdwan	
0·05	0·41	−0·36	0·5	1·3	55·03	52·28	+3·05	82·0	82·5	Bankoora ...	Bankoora	
0·02	0·45	−0·43	0·5	1·5	52·46	51·02	+0·84	85·0	83·9	Ranigunge ...	West Burdwan and Beerbhoom.	
0 02	0·45	−0·43	0·2	1·2	51·17	50·55	+0 62	82·1	79·2	Berhampore ...	Moorshedabad	
0·12	0·35	−0 23	0·8	1·1	51·61	49·14	+2·47	88·0	78 2	Krishnagore ..	Nuddea	
1·36	0·50	+0 86	1·4	1·3	54·75	53 22	+1·53	97·0	84·0	Jessore ...	Jessore and Khoolna ...	
0 33	0·70	−0·37	0·5	1·3	100·35	113 78	−13·43	111·5	107·9	Chittagong ...	Chittagong	East Bengal.
0·04	0·07	−0·03	0·5	1·4	65·17	81·60	−16·43	98·5	114·1	Demagri ...	Chittagong Hill Tracts	
0 59	0 71	−0·12	2·0	1·3	78·41	77·01	+1·40	103·9	105·8	Barrisal ...	Backergunge	
0·53	0 70	−0·17	3·0	1·6	90 82	107 11	−16·29	113·5	108·1	Noakholly ..	Noakholly	
1·90	0·45	+1·45	2·0	1·3	62·22	55·72	+6·50	85·2	86·8	Furreedpore ..	Furreedpore	
1·60	0·42	−1·18	2·0	1·5	76 19	59·60	+16·59	107 0	91·3	Dacca ...	Dacca	
1·17	0·65	+0·52	2·0	1·5	56·62	69·31	−12·69	95 1	96·7	Commillah ...	Tipperah	
1 15	0·38	+0·77	1·8	1·2	68·78	67 31	+1 47	107 0	89·0	Mymensingh ...	Mymensingh	
0·80	0·37	+0·43	2·0	1·1	65·61	57·23	+8·38	103 7	77 8	Bogra ...	Bogra	North Bengal.
0·30	0·40	−0·10	1·5	1·4	55·37	53·35	+2·02	103·5	81·3	Serajgunge ...	Pubna	
0·05	0·50	−0·45	0·7	1·0	54·35	55·88	+0·47	90·3	77·1	Rampore Beauleah.	Rajshahye	
Nil	0·47	−0·47	0·0	1·6	39·76	54·22	−14·16	73 5	63·8	Maldah ...	Maldah	
0·12	0·38	−0·26	0 6	1·3	57·49	57·40	+0·09	83·5	78·2	Dinagepore ...	Dinagepore	
0·71	0·48	+0·23	2·3	0·9	85·87	73 81	+12·04	87 7	76 5	Rungpore ...	Rungpore	
0·60	0·46	+0·14	2·4	1·3	117·73	111·25	+6·48	105·4	97·1	Julpigoree ...	Julpigoree and Cooch Behar.	
0·70	0·88	−0·18	4 8	2·7	133·45	121·37	+12·08	127 6	113·7	Darjeeling ...	Darjeeling Hill Tracts.	
0·29	0·50	−0·21	0·6	1·2	75 00	58 08	+16·32	75·6	70·1	Purneah ...	Purneah and North Bhagulpore.	North Behar.
0·17	0·66	−0·49	1·3	1·7	48·83	43 54	+5·29	71·1	57·9	Mozufferpore ...	Mozufferpore	
0 27	0·64	−0 37	1·3	1·4	52·11	44·72	+7 39	67·0	57·9	Durbhunga ...	Durbhunga	
0·41	0·67	−0·26	1·5	1·4	63·06	46·79	+17·17	69 0	54·2	Motihari ...	Chumparun	
Nil	0·67	−0·67	0·0	1·7	40·13	42·98	−2·85	58·4	57 8	Chupra ...	Sarun	
Nil	0·69	−0·69	0·0	2·0	40·07	40·08	−0 01	68·4	61 1	Dehree ... } Buxar ... } Arrah ... }	Shahabad	South Behar.
Nil	0·65	−0·65	0·0	2·0	37·07	41·62	−4·55	63 8	57·8	Gya ...	Gya	
Nil	0·57	−0·57	0·0	1·8	43·49	41·32	+2·17	62·9	62·3	Bankipore ...	Patna	
Nil	0·5	−0 56	0·0	1·7	42·43	43·17	−0·74	69·4	66·3	Bhagulpore ...	South Bhagulpore and Monghyr.	
Nil	0·37	−0·37	0·0	1·1	54·15	50·70	+3·36	83·1	75·9	Naya Doomka...	Sonthal Pergunnahs ...	
Nil	0·60	−0·60	0·0	1·6	43·03	50·46	−7·43	85·8	81·2	Hazaribagh ...	Hazaribagh	Chutia Nagpur.
Nil	0·84	−0 84	0·0	2·5	44·34	49·13	−4·79	82·1	80·3	Ranchee ...	Lohardugga, ...	
0·03	0·48	−0·45	0·6	1·6	38·36	46·92	−8·56	97·1	84 0		Manbhoom	
Nil	0·73	−0·73	0·0	1·8	48·70	51·58	−2·82	100·0	92·3	Chyebassa ...	Singbhoom	
.....	.....	... ..	.....	.....	.....	.....	.....	.....	.....	Sibsagar... ...	Assam ...	Assam.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dhubri		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Silchar		

Table of Rainfall recorded at Station

Meteorological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Pooree	Pooree	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Khurdah	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Banpur	...	.	..				...	...	...	...	...	...	...	...	..	...	...	...	...	...
		False Point	...	...	...	...	...	.	...	..	...	...	...	...	...	..	...	...	...	...	...	...
		Gop	...	...	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...
		Pipli																				
	Cuttack	Jaxatsingpore	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Banki	.	...	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Cuttack	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kendrapara	..	.	.	...	.	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...
		Jajpore	...	...	...	...	.	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Dharmsalla	...	..	...	...	..		..	..	...	...	...	...	...	...	.	...	...	...	...	...
		Salipore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Balasore	Chandbali	...	...	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...
		Bhuddruck	...	...	...	..	..	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..
		Soorah	..	...	..	...		...	..	...	...	...	..	...	...	...	...	...	...	...	...	...
		Balasore	...		...	...	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...
		Jellasore	...	...	...	..	..	.	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Baripodah	...	...	...	.	...	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...
SOUTH WEST BENGAL.	Midnapore	Contai	...	..	.	...	...		...	..	...	...	...	...	...	...	...	...	...	...	...	...
		Saugor Island	...	...	...	.	...	...	...	..	..	...	...	...	...	...	..	...	...	...	...	...
		Tumlook	..	...	..	...	...	...	...	..	..	...	...	...	...	...	.	..	...	...	...	...
		Midnapore	...	..	..	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Ghatal	...	...	.		.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Kukrahaty	.	...	.	.	..	..	..	...	.	...	...	...	...	...	...	...	...	...	..	...
		Bhagwanpore	...	..	..	...	...	.		..	...	...	...	...	...	...	.	...	...	...	...	...
		Garbeta	..	...	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...
	24-Pergunnahs	Diamond Harbour.	...	...	...	..	...	...	...	...	..	...	...	...	...	...	..	...	...	...	...	...
		Canning Town	...	..	..	...	..	...		...	..	...	...	...	...	...	...	...	...	...	...	...
		Alipore Jail	.	...	..	...	...	.	..	...	...	..	...	...	...	...	...	...	...	...	...	..
		Barrackpore	.	...	..	.	..	..	...	...	...	..	..	...	...	...	...	...	...	...	...	..
		Dum-Dum	.	...	...	.		...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Barasat	..	...	...	.	..	...	...	.	.	...	...	...	...	...	..	...	...	...	...	...
		Gunnerhat	...	...	...	...	...	...	...	.	.	...	...	...	...	...	...	...	...	...	...	..
	Howrah	Howrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...
		Mohesreka (*Oolooberiah*).	...	...	...	...	...	.	...			...	...	...	...	...	...		...	...	...	...
	Hooghly	Serampore	...	...	...	...	..	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...
		Hooghly	...	...	..	.		..	...	..	...	.	...	...	...	...	...	...	...	...	...	..
		Johnabad	...	.	...	...	..	...				.										
	Burdwan	Culna	.	...	...	...	...	...	..	.	..	...	...	...	...	...	...	...	...	...	...	0·1
		Burdwan	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Cutwa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Ranegunge	.	...	...	...	..	...	...	...	...	..	...	...	...	...	...	...	...	...	...	0·0
		Mankur	...	..	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Bankoora	Bankoora	...	..	...	...	...	...	...	..	...	...	...	...	..	...	...	...	...	...	...	..
		Bishenpore	...	..	..	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...
		Maliara	..	...	..	...	.	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...
		Khatra	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Indas	...	...	..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kotalpore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Anda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gangajalghati	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Raipore	..	...	..		...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	..
		Sonamukhi	...	...	..	...	.	.	...	..	...	...	...	...	...	...	...	...	...	...	...	..
	Beerbhoom	Bh. Soory	...	...	..	...	...	...	...	...	..	...	...	...	...	...	...	..	...	...	...	..
		Hetampore	..	...	.	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Rampore Haut	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Bolpur	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Murarai	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Nuddea	Ranaghat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Kishnaghur	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Chooadanga	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Meherpore	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Koushten	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Khoolna	Satkhira	...	...	...	...	..	...	...	...	...	...	...	..	...	...	...	...	...	...	...	..
		Bagirhat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Khoolna	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Nakipur	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	..
		Rampal	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	..
	Jessore	Narail	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Jessore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Jhenidah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0
		Magoorah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Bongong	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Moorshedabad	Kandi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0
		Berhampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Lalbagh	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Azimgunge	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Jungipore	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Lalgola	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Jungunga	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Akhriganj	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	0·10	
		Patkabari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
EAST BENGAL	Chittagong	Cox's Pavar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Chittagong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Kutubdia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Satkanya	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·08	
	Chittagong Hill Tracts.	Rangamati	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
		Ruma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

Bengal in January 1890.

23	25	24	25	26	27	28	29	30	31	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January 1890 up to 31st Jan. 1890.	Average rainfall from 1st January up to 31st January.	Station.	District.	Meteorological division.
...	...	...	0·08	...	...	...	...	...	...	1	0·8	0·08	0·26	0·08	0·08	0·26	Pooree ...	Pooree ...	
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·27	Nil	Nil	0·27	Khurdah.		
...	...	...	...	...	...	...	...	...	...	Nil	0·5	Nil	0·08	Nil	Nil	0·08	Banpur.		
...	...	...	...	...	...	...	...	...	...	2	1·3	0·20	0·58	0·15	0·20	0·58	False Point.		
...	...	0·05	0·15	...	...	...	...	...	...	Nil	?	Nil	?	Nil		?	*Gop.*		
...	...	...	...	...	...	...	...	...	...		?		?			?	*Pipli.*		
			0·52	...	...	...	...	...	...	1	0·7	0·52	0·35	0·52	0·52	0·35	Jagatsingpore.	Cuttack.	
...	...	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·22	Nil	Nil	0·22	Banki.		
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·40	Nil	Nil	0·40	Cuttack.		
...	...	...	0·21	...	...	...	...	...	...	1	0·7	0·21	0·44	0·21	0·21	0·44	Kendrapara.		
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·43	Nil	Nil	0·43	Jajpore.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Dharmsala.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Salipore.*		
...	...	...	0·40	...	...	...	...	...	...	1	0·8	0·40	0·48	0·40	0·40	0·48	Chandbali ...	Balasore.	
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·39	Nil	Nil	0·39	Bhuddruck.		
...	...	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·25	Nil	Nil	0·25	Sorah.		
...	...	...	...	...	...	...	...	...	...	Nil	0·9	Nil	0·73	Nil	Nil	0·73	Balasore.		
...	...	...	...	...	...	...	...	...	...	Nil	1·1	Nil	0·72	Nil	Nil	0·72	Jellasore.		
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·26	Nil	Nil	0·26	Baripodah.		
...	...	...	0·05	...	...	...	...	...	...	1	0·8	0·05	0·31	0·05	0·05	0·31	Contai ...	Midnapore ...	SOUTH-WEST BENGAL.
...	...	...	..	...	...	...	...	...	...	Nil	1·1	Nil	0·34	Nil	Nil	0·34	Saugor Island.		
...	...	...	0·20	...	...	...	...	...	...	1	0·8	0·20	0·38	0·20	0·20	0·38	Tumlook.		
...	...	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·72	Nil	Nil	0·72	Midnapore.		
...	...	...	0·11	...	...	...	...	...	...	1	1·4	0·11	0·51	0·11	0·11	0·51	Ghatal.		
...	...	...	0·19	...	...	...	...	...	...	1	?	0·19	?	0·19	0·19	?	*Kukrahaty.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Bhagwanpore.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	0·60	Nil	Nil	0·60	*Garbeta.*		
			0·38	...	...	...	...	...	...	1	1·4	0·38	0·05	0·38	0·38	0·05	Diamond Harbour.	24-Pergunnahs	
...	...	...	...	...	...	...	...	...	...	1	?	0·05	?	0·05	0·05	?	*Canning Town.*		
			0·05	...	...	...	...	...	...	1	1·4	1·07	0·71	1·07	1·07	0·71	Alipore Jail.		
...	...	...	1·07	...	...	...	...	...	...	1	1·2	0·33	0·45	0·33	0·33	0·45	Barrackpore.		
...	...	...	0·33	...	...	...	...	...	...	1	1·3	0·85	0·52	0·85	0·85	0·52	Dum-Dum.		
...	...	...	0·85	...	...	...	...	...	...	1	1·2	1·10	0·59	1·10	1·10	0·59	Baraset.		
...	...	...	1·10	...	...	...	...	...	...	1	0·9	1·49	0·42	1·49	1·49	0·42	Buseerhat.		
...	...	...	1·49	...	...	...	...	...	...										
			0·52	...					...	1	2·0	0·52	0·59	0·52	0·52	0·59	Howrah ...	Howrah.	
...	...	...	0·10						...	1	0·8	0·40	0·5.	0·40	0·10	0·51	Mohesreka (*Oolooberiah*).		
			0·35	...	...		...	..		1	1·5	0·36	0·42	0·36	0·36	0·42	Serampore ...	Hooghly	
...	...	...	0 6·	...	...		...	...		1	1·2	0·61	0·45	0·61	0·61	0·45	Hooghly.		
..	...	...	0 45	..	...	...	...	...		1	1·3	0·45	0 39	0·45	0·15	0·39	Johanabad.		
...	...	...		...		...	...	...	...	Nil	0·9	Nil	0·46	Nil	Nil	0·46	Culna ...	Burdwan	
										2	1·3	0·18	0 34	0·12	0·18	0 34	Burdwan.		
...	...	...	0·09	...	...				..	Nil	1·1	Nil	0 45	Nil	Nil	0·45	Cutwa.		
...	...	...		..	..		...			2	1·4	0 07	0·33	0·05	0·07	0·33	Kanegunge.		
...	...	...	0·02	...	...	...	...	...	...	1	?	0·09	?	0·09	0·09	?	*Mankur.*		
			...	...	...	..	...	...	...	1	1·4	0·07	0·37	0·07	0·07	0·37	Bankoora ...	Bankoora	
			0 07	...	...	...	...	...	...	Nil	1·3	Nil	0·38	Nil	Nil	0·38	Bishonpore.		
...	...	...	...	..	..	...	...	...	...	1	0·9	0·11	0·35	0·11	0·11	0 33	Malara.		
...	...	0·11	...	..	..	...	...	...	...	Nil	1·6	Nil	0·41	Nil	Nil	0·44	Khatra.		
...	...	...	...	...	..	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	Indas.		
...	...	...	...	.	..	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	Kotulpore.		
...	...	...	..	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	Anda.		
...	...	...	..	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	Gangajalghati.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	0·36	Nil	Nil	0 36	*Kaipore.*		
...	...	...	0·11	...	...	...	...	...	...	1	?	0·11	?	0·11	0·11	?	*Sonamukhi.*		
...	...	...	...	...	...	...	...	...	...	Nil	1·9	Nil	0·46	Nil	Nil	0·46	Bh. Soory ...	Beerbhoom.	
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0 51	Nil	Nil	0·51	Hetampore.		
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·53	Nil	Nil	0·53	Rampore Haut		
...	...	...	...	...	...	...	...	...	...	1	?	0·07	?	0·07	0·07	?	*Bolpur.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Murarai.*		
			0·30	...	...	...	...	..	..	1	0·7	0·30	0·46	0·30	0·30	0·46	Ranaghat ...	Nuddea	
...	...	...	...	...	...	...	...	...	...	Nil	1·1	Nil	0·42	Nil	Nil	0·42	Kishnaghur.		
...	...	...	...	...	...	...	...	...	...	1	1·2	0·05	0·31	0·05	0·05	0·31	Choondanga.		
...	...	...	...	...	...	...	...	...	...	1	0·9	0·10	0·31	0 10	0·10	0·31	Meherpore.		
...	...	...	...	...	...	...	...	...	...	1	1·4	0·15	0·38	0·15	0·15	0·38	Kooshtea.		
			2·03	...	...	...	...	...	...	1	1·3	2·03	0·40	2·03	2·03	0·40	Satkhira ..	Khoolna	
			0·08	...	...	...	...	...	...	2	1·0	1·48	0·69	0·98	1·48	0·69	Bagirhat.		
			0·79	...	...	...	...	...	...	2	1·5	1·04	0·60	0·70	1·04	0·60	Khoolna.		
			...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Nakipur.*		
			0·37	...	...	...	...	...	...	1	?	0·37	?	0·37	0·37	?	*Rampal.*		
			2·51	...	...	...	...	...	...	2	1·5	2·54	0·68	2·51	2·54	0 68	Narail ...	Jessore.	
			1·55	...	...	...	...	...	...	1	1·0	1·55	0·51	1·55	1·55	0·51	Jessore.		
			..	...	...	...	...	...	...	1	1·.	0·18	0·34	0·18	0·18	0·34	Jhenidah.		
			0·17	...	...	...	...	...	...	2	1·1	0·42	0·31	0·25	0·42	0 31	Magoorah.		
			1·03	...	...	...	...	...	...	1	0·7	1·03	0·33	1·03	1·03	0·33	Bongong.		
			...	...	...	...	...	...	...	Nil	1·1	Nil	0·42	Nil	Nil	0·42	Kandi ...	Moorshedabad	
			...	...	...	...	...	...	...	1	1·5	0·12	0·44	0·12	0·12	0·44	Berhampore.		
			...	...	...	...	...	...	...	Nil	0·7	Nil	0·50	Nil	Nil	0·50	Lalbagh.		
			...	...	...	...	...	...	...	Nil	1·4	Nil	0·56	Nil	Nil	0·56	Azimgunge.		
			...	...	...	...	...	...	...	Nil	1·5	Nil	0·44	N	Nil	0·44	Jungipore.		
			...	...	...	...	...	...	...	Nil	1·2	Nil	0·61	Nil	Nil	0·61	Lalgola.		
			...	...	...	...	...	...	...	1	?	0·04	?	0·04	0·04	?	Jaigunge.		
			...	...	...	...	...	...	...	1	?	0·25	?	0·25	0·25	?	*Akhriganj.*		
			...	...	...	...	...	...	...	1	?	0·10	?	0·10	0·10	?	*Patkabari.*		
			...	...	...	...	...	...	...	Nil	1·3	Nil	0·77	Nil	Nil	0·77	Cox's Bazar ...	Chittagong ...	EAST BENGAL.
			...	0·66	...	...	...	...	...	1	1·3	0·66	0·51	0·66	0·66	0·51	Chittagong.		
			...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Kutubdia.*		
			...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Satkanya.*		
			...	...	...	...	...	...	...	1	1·6	0·08	0·58	0·08	0·08	0·56	Rangamati ...	Chittagong Hill Tracts.	
			...	...	...	...	...	...	...	Nil	1·1	Nil	0·68	Nil	Nil	0·68	Runa.		

Table of Rainfall recorded at Stations

Orological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ST BENGAL —*concld.*	Backergunge...	Patuakhally ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Perozepore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·65
		Burrisal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·09
		Bhola ...	...	..	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	...	0·25
		Gournaidi ...	...	..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bauphal ...	...	...	..	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
	Noakholly ...	Noakholly ...	...	.	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	...	0·19
		Fenny ...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	0·15
		Harishpore ..	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	..
		Ramganj ...	...	.	..	...	..	...	...	..	..	...	..	...	...	...	...	...	...	...	...	...
	Furreedpore ..	Madaripore ...	...	...	...	...	...	...	...	..	...	.	...	...	...	...	...	...	...	...	...	0·69
		Furreedpore .		...	..	...	...	...	.	...	...	...	..	...	...	...	...	...	...	...	1·80	...
		Goalundo ...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	1·55	...
	Dacca ..	Munshigunge	...	...	..	..	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	0·6
		Dacca ..	...	..	...	...	...	...	...		...	...	..	...	...	...	...	...	...	...	...	0·2
		Narainguuge	...	...	..	..	...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	0·1
		Manickgunge	...	...	...	...	..	...	...	...	...	..	...	..	...	...	...	...	...	...	...	0·5
		Joydebpore ...		..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	1·1
	Hill Tipperah	Agartola ...	...	...	...	.	...	...	..	..	...	...	...	...	...	.	...	...	...	...	...	0·1
	Tipperah ...	Comilla ...	...	...	..	...	..	...	...	..	..	..	...	...	...	...	...	...	...	...	...	0·4
		Chandpore ...	...	...	...	...	...	...	...	.	..	..	...	...	...	...	...	...	...	...	...	0·5
		Brahmunberia	...	...	...	...	...	...	...	.	..	...	...	..	...	...	...	..	...	...	...	1·1
		Ramchandra-pore.	..	..	..	..	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...	0·2
		Nasirnagar ...	...	...	..	...	...	...	...	..	..	...	..	-	...	...	...	...	...	...	...	0·3
		Daudkandi ...	..	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	0·7
		Kasba ...	.	.	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	
		Laksham ...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	0·3
	Mymensingh .	Kishoregunge	...	...	...	...	...	...	..	...	..	...	...	..	...	...	...	...	...	...	...	..
		Atia (*Tangail*)	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	...	...	..	0·8
		Mymensingh	...	..	...	...	...	...	...	.	..	..	..	..	...	...	...	...	...	...	..	1·1
		Jamalpore ...	...	...	...	...	...	...	...	.	..	...	..	..	...	...	...	...	...	...	...	0·3
		Netrokona ...	...	...	...	...	.	...	.	.	...	...	..	..	...	...	.	...	...	...	...	0·2
		Subornakhally	...	...	...	...	...	...	...	..	...	...	..	..	...	...	...	...	...	...	...	..
		Durgapore ...	...	...	...	...	...	...	...	..	...	4	...	.	..	..	...	...	...	...	...	..
		Sherpore Town	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·3
		Dewanganj ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·1
ORTH BENGAL	Pubna ...	Pubna ...	..	...	...	...	...	...	.	...	...	..	...	...	..	...	...	...	...	...	..	0·7
		Serajgunge .	...	..	...	...	...	.	...	..	.	...	...	...	...	..	...	...	...	...	...	0·6
	Bogra ..	Sherpore ...	.	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nowkhilla ...	...	.	...	...	...	..	...	...	..	..	...	.	..	..	...	...	...	...	...	1·1
		Bogra ...	...	...	...	...	...	...	...	...	...	...	...	..	..	..	...	...	...	...	...	0·2
		Panchbibi ...	...	...	..	...	.	...	...	...	..	...	...	..	.	...	...	...	...	...	...	0·2
	Rajshahye ...	Beanleah ...	...	...	...	...	...	...	...	...	..	...	...	...	...	..	...	..	...	...	...	0·1
		Nattore ...	...	...	...	...	..	...	...	.	...	..	..	...	..	...	...	...	...	...	...	.
		Naogaon ...	...	...	...	...	...	...	...	..	...	..	..	...	...	...	...	...	...	...	...	..
		Lalpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	..
		Manda ...	...	...	...	..	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...
	Maldah ...	Maldah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Chanchal ...	...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	..
		Gajol ...	...	...	...	..	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Sibganj ...	...	...	...	..	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	..
	Dinagepore ...	Mohadebpore	...	...	...	...	...	..	...	...	.	...	...	...	...	...	...	...	...	...	...	..
		Churamon ...	...	...	.	..	...	...	...	.	...	...	...	..	...	..	...	...	...	...	...	..
		Rangunge ...	...	...	...	...	..	...	...	...	...	...	...	..	...	...	...	...	...	...	...	..
		Dinagepore ...	...	...	...	...	...	..	...	...	...	..	...	...	...	...	...	...	...	...	...	..
		Baloorghat ...	...	...	...	...	...	.	.	...	...	...	...	..	...	...	...	...	...	...	...	..
		Thakurgaon...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Rungpore ..	Bhawanigunge (*Gyabanda*).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·
		Rungpore ...	...	...	...	...	...	0·09	...	...	...	...	...	...	...	...	...	...	...	...	...	0·
		Kurigram ...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Bagdogra .. (*Nilphamari*).	...	...	...	...	...	..	...	..	...	..	...	.	..	...	...	...	...	...	...	..
		Ulipore ...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	..
	Julpigoree ...	Julpigoree ...	...	...	...	..	...	..	0·05	...	...	...	...	...	...	...	...	..	...	...	...	..
		Alipore Doar	...	...	...	...	..	...	...	0·20	..	...	...	...	...	..	...	...	...	...	...	..
		Falacotta ...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·
		Debiganj ...	...	...	...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	0·
		Bhogolpore (*Nagrakatta*).	..	...	...	...	...	0·12	0·22	0·08	...	...	...	..	...	...	...	...	...	...	0·06	0·
	Cooch Behar...	Dinhatta ...	...	..	..	...	...	0·19	..	...	...	...	..	...	...	...	...	...	...	...	...	0·
		Cooch Behar...	...	...	..	..	...	...	0·05	...	...	...	...	..	...	...	...	...	...	...	...	.
		Mickligunge...	..	...	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	.
		Matabhanga...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
	Darjeeling Hill	Buxa ...	..	...	...	...	...	...	0·10	0·41	...	...	..	0·20	0·05	0·15	...	...	...	0·03	0·27	.
		Siliguri ...	...	...	...	...	...	..	...	0·03	...	...	...	...	...	..	...	...	...	...	...	0·
		Darjeeling ...	...	...	...	...	...	...	...	0·07	0·13	...	...	...	...	...	...	...	...	...	...	0·
		Kalimpong ...	...	...	...	...	...	...	..	0·16	...	...	...	...	...	...	...	...	...	...	...	0·
		Kurseong ...	...	..	...	...	...	...	0·12	0·16	0·15	...	...	...	...	...	...	...	...	...	0·70	.
NORTH BEHAR	Purneah ..	Kissengunge	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	.
		Arrareah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
		Purneah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
		Gondwara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
		Balarampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
		Matiari ...	...	...	..	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	.
		Kaliaganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
	North Bhagulpore.	Maddapore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
		Soopool ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
		Protabganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.

Bengal in January 1890—*continued.*

22	23	24	25	26	27	28	29	30	31	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January 1890 up to 31st Jan. 1890.	Average rainfall from 1st January up to 31st January.	Station.	District.	Meteorological division.
...	...	...	0·46	...	...	...	...	...	...	1	1·5	0·46	0·77	0·46	0·46	0·77	Patuakhally	Backergunge.	EAST BENGAL—*concld.*
...	...	...	0·43	...	...	...	...	...	...	2	1·1	0·48	0·71	0·43	0·48	0·71	Perozepore.		
...	...	...	0·50	...	...	...	...	...	...	2	1·4	0·59	0·69	0·50	0·59	0·69	Burrisal.		
...	...	...	0·41	...	...	...	...	...	...	3	1·3	0·83	0·59	0·41	0·83	0·59	Bhola.		
17	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Gournaddi.*		
...	...	...	0·23	...	...	...	...	...	...	1	?	0·23	?	0·23	0·23	?	*Bauphal.*		
...	...	...	0·12	0·02	...	...	...	...	...	4	1·0	0·41	0·54	0·19	0·41	0·55	Nonkholly ...	Nonkholly.	
08	...	...	0·20	...	...	...	...	...	...	2	1·5	0·65	0·70	0·15	0·65	0·79	Feuny.		
...	...	...	0·36	...	...	...	...	...	...	1	?	0·36	?	0·36	0·36	?	*Harishpore.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Ramganj.*		
...	...	...	1·13	...	...	...	...	...	...	3	1·3	2·12	0·61	1·13	2·12	0·61	Madaripore .	Furreedpore.	
30	...	...	...	...	...	...	...	...	...	1	1·4	1·80	0·34	1·80	1·80	0·34	Furreedpore.		
...	...	...	...	...	...	...	...	...	...	2	1·2	1·76	0·40	1·55	1·76	0·40	Goalundo.		
...	...	...	0·21	...	...	...	...	...	...										
...	...	...	0·58	...	...	...	...	...	...	2	1·6	1·18	0·54	0·60	1·18	0·54	Munshigunge.	Dacca.	
...	...	...	2·54	...	...	...	...	...	...	2	1·3	2·76	0·30	2·54	2·76	0·30	Dacca.		
...	...	...	0·34	...	...	...	...	...	...	2	1·2	0·78	0·39	0·44	0·78	0·39	Naraingunge.		
...	...	...	1·17	...	...	...	...	...	...	2	1·6	1·68	0·14	1·17	1·68	0·44	Manickgunge		
...	...	...	0·78	...	...	...	...	...	...	2	?	1·94	?	1·46	1·94	?	*Joydebpore.*		
...	...	...	0·12	...	...	...	...	...	...	2	1·4	0·30	0·83	0·18	0·30	0·83	Agartola ..	Hill Tipperah.	
...	...	...	0·35	...	...	...	...	...	...	2	2·1	0·80	0·60	0·15	0·80	0·60	Comilla .	Tipperah.	
...	...	...	0·6	...	...	...	...	...	...	2	1·1	1·15	0·53	0·60	1·15	0·53	Chandpore.		
...	...	...	1·25	...	...	...	...	...	...	2	1·6	2·44	0·77	1·25	2·14	0·77	Brahmunberia.		
...	...	...	0·30	...	...	...	...	...	...	2	?	0·68	?	0·39	0·68	?	*Ramchandra-pore.*		
...	...	...	1·50	...	...	...	...	...	...	2	?	1·80	?	1·50	1·80	?	*Nasirnagar.*		
...	...	...	0·72	...	...	...	...	...	...	2	?	1·44	?	0·72	1·44	?	*Daudkandi.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Kasba.*		
...	...	...	0·09	...	...	...	...	...	...	2	?	0·39	?	0·30	0·39	?	*Laksham.*		
...	...	...	1·24	...	...	...	...	...	...	1	1·0	1·24	0·57	1·24	1·24	0·57	Kishoregunge	Mymensingh.	
...	...	...	0·85	...	...	...	...	...	...	2	1·2	1·69	0·39	0·85	1·69	0·39	Atia (*Tangail*).		
...	...	...	0·22	...	...	...	...	...	...	2	1·3	1·38	0·35	1·16	1·38	0·35	Mymensingh.		
...	...	...	0·3	...	...	...	...	...	...	2	0·9	0·87	0·43	0·53	0·87	0·4	Jamalpore.		
...	...	...	0·35	...	...	...	...	...	...	2	1·1	0·55	0·19	0·35	0·55	0·19	Netrokona.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Subarnakhally.*		
...	...	...	...	...	...	...	...	...	...	1	?	0·30	?	0·30	0·30	?	*Durgapore*		
...	...	0·30	...	...	...	...	...	...	...	3	?	1·08	?	0·44	1·08	?	*Sherepore Town*		
...	...	0·54	0·44	...	...	...	...	...	...	3	?	0·77	?	0·41	0·77	?	*Dewangunj.*		
...	...	0·20	0·41	...	...	...	...	...	...										
...	...	...	...	...	...	...	...	...	...	1	1·4	0·33	0·39	0·33	0·33	0·33	Pubna ...	Pubna ...	NORTH BENGAL
...	...	...	0·17	...	...	...	...	...	...	2	1·3	0·25	0·45	0·17	0·25	0·45	Serajgunge.		
...	...	...	0·01	...	...	...	...	...	...	1	1·2	0·01	0·35	0·01	0·01	0·35	Sherpore .	Bogra.	
...	...	...	0·14	...	...	...	...	...	...	2	1·4	1·48	0·36	1·14	1·48	0·36	Nowkhilla.		
...	...	...	0·50	...	...	...	...	...	...	2	0·9	0·70	0·43	0·50	0·70	0·43	Bogra.		
...	...	...	0·02	0·70	...	...	...	...	...	3	0·8	1·02	0·32	0·70	1·02	0·32	Panchbibi.		
...	...	...	...	...	...	...	...	...	...	1	1·0	0·14	0·29	0·14	0·14	0·29	Beauleah ..	Rajshahye.	
...	...	...	...	...	...	...	...	...	...	Nil	0·9	Nil	0·09	Nil	Nil	0·09	Nattore.		
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·03	Nil	Nil	0·06	*Naogaon.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Lalpore.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Manda.*		
...	...	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·64	Nil	Nil	0·64	Maldah ..	Maldah.	
...	...	...	...	...	...	...	...	...	...	Nil	1·7	Nil	0·51	Nil	Nil	0·51	Chanchal.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Gajol.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Sibganj.*		
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·52	Nil	Nil	0·52	Mohadebpore .	Dinagep re.	
...	...	...	...	...	...	...	...	...	...	Nil	1·0	Nil	0·37	Nil	Nil	0·37	Churamon.		
...	...	...	0·12	...	...	...	...	...	...	1	1·6	0·12	0·37	0·12	0·12	0·37	Raigange.		
...	...	...	0·49	...	...	...	...	...	...	1	1·0	0·49	0·28	0·49	0·49	0·28	Dinagepore.		
...	...	...	...	...	...	...	...	...	...	1	1·4	0·01	0·55	0·01	0·01	0·05	Balcorghat		
...	...	...	0·01	...	...	...	...	...	...	1	?	0·34	?	0·34	0·34	?	*Thakurgaon.*		
...	...	...	0·34	...	...	...	...	...	...										
...	...	...	0·02	0·64	...	...	...	...	...	3	0·8	0·84	0·34	0·64	0·84	0·34	Bhawanikunge (*Gyabanda*),	Rungpore.	
...	...	...	0·2	0·20	...	...	...	...	...	4	0·9	0·57	0·44	0·20	0·57	0·44	Rungpore.		
...	...	...	0·05	...	...	...	...	...	...	1	0·9	0·65	0·51	0·65	0·65	0·51	Kurigram.		
...	...	...	0·80	...	...	...	...	...	...	1	0·8	0·80	0·50	0·80	0·80	0·50	Bagdogra. (*Nilphamari*,)		
...	...	...	0·10	...	...	...	...	...	...	1	?	0·10	?	0·10	0·10	?	*Ulipore.*		
...	...	...	0·13	...	...	...	...	...	...	2	1·5	0·18	0·54	0·13	0·18	0·54	Julpigoree ...	Julpigoree.	
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Alipore Doar.*		
...	...	...	0·0	...	...	...	...	...	...	3	?	0·80	?	0·50	0·80	?	*Falacotta.*		
...	...	...	0·81	...	...	...	...	...	...	2	?	1·02	?	0·81	1·02	?	*Debiganj.*		
...	...	...	...	...	...	...	...	...	...	5	?	0·71	?	0·23	0·71	?	*Bhagotpore* (*Nagrakatta.*)		
...	...	...	0·44	0·16	...	...	...	...	...	4	1·0	0·83	0·54	0·44	0·83	0·54	Dinhatta		
...	...	...	0·80	...	...	...	...	...	...	2	1·2	0·55	0·43	0·50	0·55	0·43	Cooch Behar...	Cooch Behar.	
...	...	...	1·00	0·03	...	...	...	...	...	2	0·9	1·03	0·27	1·00	1·03	0·27	Mickligunge.		
...	...	0·37	0·03	...	...	...	...	...	...	2	1·6	0·40	0·34	0·37	0·40	0·34	Matabhanga.		
...	...	...	...	0·03	0·04	...	...	...	...	9	3·5	1·28	1·12	0·41	1·28	1·12	Buxa ...	Darjeeling.	
...	...	...	0·02	0·24	...	...	...	...	...	4	1·7	0·31	0·82	0·24	0·31	0·82	Siliguri.		
...	...	...	...	...	...	...	...	...	...	3	2·8	0·40	0·69	1·24	0·40	0·69	Darjeeling.		
...	...	...	...	0·43	...	...	...	...	...	3	2·9	0·79	1·24	0·43	0·79	1·24	Kalimpong.		
...	...	0·05	0·60	...	...	...	...	...	...	6	?	1·98	?	0·70	1·98	?	Kurseong.		
...	...	...	1·30	...	...	...	...	...	...	1	1·3	1·30	0·62	1·30	1·30	0·62	Kissengunge ...	Purneah .	NORTH BEN
...	...	...	0·14	...	...	...	...	...	...	1	0·9	0·14	0·51	0·14	0·14	0·51	Arrareah.		
...	...	...	0·02	...	...	...	...	...	...	1	1·5	0·02	0·47	0·02	0·02	0·47	Purneah.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Gondwara.*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Balarampore*		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Matiari.*		
...	...	...	0·20	...	...	...	...	...	...	1	?	0·20	?	0·20	0·20	?	*Kaliaganj.*		
...	...	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·47	Nil	Nil	0·47	Maddapore ..	North Bhaugal-pore	
...	...	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·47	Nil	Nil	0·47	Soopool.		
...	...	...	0·31	...	...	...	...	...	...	1	?	0·31	?	0·31	0·31	?	*Protabganj.*		

Table of Rainfall recorded at Stations in

eorological ivision.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
TH BEHAR *concld.*	Durbhunga ...	Tajpore ...	..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Durbhunga ...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Madhubani ...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...
		Bahera ...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Roshera ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mozufferpore	Sitamarhi ...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Mozufferpore	...	...	..	..	..	...	...	...	...	...	...	...	...	...	...	..	...	...	...	..
		Hajipore ...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Paru ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Mahua ...	...	...	..	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...
		Sinhar ...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	..	...	...	...	...
		Pupri ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...
	Chumparun ...	Motihari ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bettiah ...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
		Bagaha ...	...	...	...	...	...	...	...	...	...	...	...	. .	...	...	...	...	...	...	...	...
		Burhurwa ...	..	.	...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...
	Sarun ..	Gopalgunge ..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...
		Sewan ...	..	...	...	..	...	...	..	...	...	...	...	..	...	...	..	...	...	...	...	...
		Chupra ...	..	.	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
TH BEHAR	Shahabad ...	Buxar ...	...	..	...	..	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	..
		Dehree ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bhuboosh ...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Sasseram ...	.	..	...	..	...	..	..	...	...	...	...	...	...	...	.	...	...	...	...	...
		Arrah ...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..	...	...	...	...	...
		Mohaniah ...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Gya ..	Aurungabad...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	.	...	...	...	...	...
		Gya ...	...	..	...	...	...	...	...	...	.	...	...	...	...	...	.	..	...	...	...	...
		Nowadah ...	...	..	...	...	...	...	.	...	.	...	...	...	...	...	...	...	..	...	...	...
		Jehanabad ...	...	...	...	...	...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...
		Arwal ...	.	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Daudnagar ...	...	...		...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	..
		Sheerghati ..		...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Rajauli ...	...	.	.	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Pakri Barawan.		..	...	...	..	...	...	...	..	..	...	...	...	...	...	...	...	...	...	...
	Patna ..	Patna ...	.	..	.	.	...	...	..	...	..	...	...	...	...	...	...	...	..	...	...	...
		Dinapore ...	..	...	...	.	.	.	..	...	...	..	..	...	...	...	..	...	...	...	...	...
		Behar ...		...	...	...	...		.	...	...	...	...	...	.	...		...	...	...	...	...
		Barrh ...	..	.	..	...	..	.	...	...	...	...	...	...	..	...	...	...	...	...	...	...
		Bickram ...		...			...	..	...	...	...	...	...	...	..	...	...	..	..	...	...	...
		Hilsa ...	...	...		..	...	..	.	...	...	...	...	...	..	...	...	.	..	...	...	...
	Monghyr ...	Begoosserai ...	..	..	...	...	.	.	...	.	..	...	...	...	...	...	...	...	...	...	...	...
		Monghyr ...	...	..	...	...	...	...	...	...	...	..	...	...	...	...	...	..	...	...	...	...
		Jamui ...	..	.	...	...	...	.	...		...	.	.	...	...	...	...	..	...	...	...	...
		Gogri ..	...	..	.	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Sheikpura ...	.	...	.	...	...	.	..	...	...	...	...	...	...	...	...	...	...	...	...	...
	South Bhagulpore.	Bhagulpore ...	...	.	.		.	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...
		Banka ...	..	..	...	.	...	.	.	.	..	...	...	...	...	...	...	...	..	...	...	...
		Kolgong ...	...	...	.	...	...	.	...	.	...	.	...	...	...	...	...	...	...	...	...	...
		Bangaon ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Southal Pergunnahs.	Rajmehal ...	...	...	...	..	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
		Godda ..	.	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Pakour ..	...	..	...	..	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	0·02
		Nya Doomka	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Deoghur ...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jamtara ...	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...
		Mohagama ...	..	..	...	...	..	..	..	...	..	...	...	...	...	...	...	...	...	...	...	...
		Nanihat ...	...	..	...	...	...	...	...													
UTIA NAGPUR.	Hazaribagh ...	Pachamba (*Giridi*).	...	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...
		Hazaribagh ...	.	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Semtagurah ..	.	...	.	.	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Mahudi Hills	...	.	...	...	.	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Jhoomrah Hills	...	...	..	...	...	.	..	...	...	...	...	...	...	...	...	...	...	..	...	...
		Barhi ...	...	..	..	...	..	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chatra ...	...	...	...	...	..	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...
		Karagdeha ...	...	...	..	...	.	..	.	...	...	...	...	...	...	...	...	...	...	..	...	...
		Ramghar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...
	Lohardugga...	Lohardugga ...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ranchi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Palamow ...		.	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Silli ...	.	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Balumat ...	...	...	...	..	..	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...
		Hoseinabad...		..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Garwah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Singbhoom ...	Chyebassa ...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chakradharpore.	...	...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ghatsila ...	...	...	..	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Baharagura...	...	...	..	...	..	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...
	Manbhoom ..	Purulia ...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...
		Gobindpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Raghunathpore.	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Barrabhoom...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
		Jhalda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chas ..	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

l for the month of January 1890 —*concluded.*

23	24	25	26	27	28	29	30	31	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January 1890 up to 31st Jan. 1890.	Average rainfall from 1st January up to 31st January.	Station.	District.	Meteorological division.
.....	...	0·13	...	...	...	...	...	...	1	1·4	0·13	0·64	0·13	0·13	0·64	Tajpore ...	Durbhunga ...	North Behar —*concld.*
.....	...	0·23	...	...	...	...	...	...	1	1·4	0·23	0·52	0·23	0·23	0·52	Durbhunga.		
.....	...	0·41	0·04	...	...	...	...	...	2	1·4	0·45	0·74	0·41	0·45	0·74	Madhubani.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Bahera.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Rosheru.*		
.....	...	0·33	0·06	...	...	...	...	...	2	1·2	0·39	0·53	0·33	0·39	0·53	Sitamarhi ...	Mozufferpore.	
.....	...	...	0·06	...	...	...	...	...	1	1·7	0·06	0·89	0·06	0·06	0·89	Mozufferpore.		
.....	...	...	0·05	...	...	...	...	...	1	2·1	0·05	0·65	0·05	0·05	0·65	Hajipore.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Parn.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Mahua.*		
.....	...	0·30	0·10	...	...	...	...	...	2	?	0·49	?	0·30	0·49	?	*Sikhar.*		
.....	0·24	0·30	...	...	...	...	...	...	2	?	0·54	?	0·30	0·54	?	*Pupri.*		
.....	...	0·54	...	...	...	...	...	...	1	1·6	0·54	0·47	0·54	0·54	0·17	Motihari ...	Chumparun.	
.....	...	0·21	0·06	...	...	...	...	...	2	1·2	0·28	0·69	0·22	0·28	0·09	Bettiah.		
.....	...	0·37	...	...	...	...	...	...	1	?	0·37	?	0·37	0·37	?	*Bagaha.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Burhurwa.*		
.....	...	...	...	...	...	...	...	...	Nil	1·6	Nil	0·77	Nil	Nil	0·77	Gopalgunge ..	Sarun.	
.....	...	...	...	...	...	...	...	...	Nil	2·2	Nil	0·75	Nil	Nil	0·75	Sewan.		
.....	...	...	...	...	...	...	...	...	Nil	1·7	Nil	0·71	Nil	Nil	0·71	Chuprah.		
.....	...	...	...	...	...	...	...	...	Nil	2·2	Nil	0·79	Nil	Nil	0·79	Buxar ...	Shahabad ...	South Behar.
.....	...	...	...	...	...	...	...	...	Nil	2·5	Nil	0·62	Nil	Nil	0·62	Dehree.		
.....	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·68	Nil	Nil	0·68	Bhuboosh.		
.....	...	...	...	...	...	...	...	...	Nil	1·8	Nil	0·50	Nil	Nil	0·50	Sasseram.		
.....	...	...	...	...	...	...	...	...	Nil	2·2	Nil	0·83	Nil	Nil	0·83	Arrah.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Mohaniah.*		
.....	...	...	...	...	...	...	...	...	Nil	1·8	Nil	0·61	Nil	Nil	0·61	Aurungabad ..	Gya.	
.....	...	...	...	...	...	...	...	...	Nil	2·4	Nil	0·73	Nil	Nil	0·73	Gya.		
.....	...	...	...	...	...	...	...	...	Nil	1·6	Nil	0·70	Nil	Nil	0·70	Nowadah.		
.....	...	...	...	...	...	...	...	...	Nil	2·1	Nil	0·72	Nil	Nil	0·72	Jehanabad.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Arwal.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Daudnagar.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Sheerghati.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Rajauli.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Pakri Barawan.*		
.....	...	...	...	...	...	...	...	...	Nil	2·4	Nil	0·69	Nil	Nil	0·69	Patna ...	Patna.	
.....	...	...	...	...	...	...	...	...	Nil	1·5	Nil	0·29	Nil	Nil	0·65	Dinapore.		
.....	...	...	...	...	...	...	...	...	Nil	2·0	Nil	0·67	Nil	Nil	0·67	Behar.		
.....	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·47	Nil	Nil	0·47	Barrh.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Bickram.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Hilsa.*		
.....	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·36	Nil	Nil	0·66	Begooserai ...	Monghyr.	
.....	...	...	...	...	...	...	...	...	Nil	1·9	Nil	0·45	Nil	Nil	0·45	Monghyr.		
.....	...	...	...	...	...	...	...	...	Nil	1·6	Nil	0·71	Nil	Nil	0·71	Jamui.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Gogri.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Sheikpura.*		
.....	...	...	...	...	...	...	...	...	Nil	1·9	Nil	0·50	Nil	Nil	0·50	Bhagulpore ...	South Bhagulpore.	
.....	...	...	...	...	...	...	...	...	Nil	1·7	Nil	0·59	Nil	Nil	0·59	Banka.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Kolgong.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Bangaon.*		
.....	...	...	...	...	...	...	...	...	Nil	0·8	Nil	0·19	Nil	Nil	0·19	Rajmehal ...	Sonthal Pergunnahs.	
.....	...	...	...	...	...	...	...	...	Nil	1·1	Nil	0·35	Nil	Nil	0·35	Godda.		
.....	...	...	...	...	...	...	...	...	Nil	0·9	Nil	0·30	Nil	Nil	0·30	Pakour.		
.....	...	...	...	...	...	...	...	...	1	1·7	0·02	0·55	0·02	0·02	0·55	Nya Doomka.		
.....	...	...	...	...	...	...	...	...	Nil	1·5	Nil	0·43	Nil	Nil	0·43	Deoghur.		
.....	...	...	...	...	...	...	...	...	Nil	0·9	Nil	0·45	Nil	Nil	0·45	Jamtara.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Mohagama.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Nanihat.*		
.....	...	...	...	...	...	...	...	...	Nil	1·5	Nil	0·39	Nil	Nil	0·39	Pachamba ... (*Giridi*).	Hazaribagh ...	Chutia Nagpur.
.....	...	...	...	...	...	...	...	...	Nil	2·3	Nil	0·55	Nil	Nil	0·55	Hazaribagh.		
.....	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·51	Nil	Nil	0·51	Semtagurah.		
.....	...	...	...	...	...	...	...	...	Nil	1·5	Nil	0·83	Nil	Nil	0·83	Mahudi Hills.		
.....	...	...	...	...	...	...	...	...	Nil	1·3	Nil	0·49	Nil	Nil	0·49	Jhoomrah Hills		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Barki.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Chatra.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Karaguleha.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Ramghar.*		
.....	...	...	...	...	...	...	...	...	Nil	3·3	Nil	0·84	Nil	Nil	0·84	Lohardugga ...	Lohardugga.	
.....	...	...	...	...	...	...	...	...	Nil	1·9	Nil	0·79	Nil	Nil	0·79	Ranchi.		
.....	...	...	...	...	...	...	...	...	Nil	2·0	Nil	0·77	Nil	Nil	0·77	Palamow.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Silli.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Balumat.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Hoseinabad.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Garwah.*		
.....	...	...	...	...	...	...	...	...	Nil	1·8	Nil	0·73	Nil	Nil	0·73	Chyebassa ...	Singbhoom.	
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Chakradharpore.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Ghatsila.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Baharagura.*		
.....	...	0·00	...	...	...	...	...	...	1	1·8	0·06	0·42	0·06	0·06	0·42	Purulia ...	Manbhoom.	
.....	...	...	...	...	...	...	...	...	Nil	1·4	Nil	0·51	Nil	Nil	0·51	Gobindpore.		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Raghunathpore.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Barrabhoom.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Jhalda.*		
.....	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Chas.*		

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, DURING THE MONTH OF JANUARY 1890.

THE normal meteorology of January in Bengal is very similar to that of the two previous cold-weather months, except that usually the cold weather conditions are more strongly developed in this month than in any other part of this season. Fairly strong northerly winds with practically cloudless skies, and with low temperature and humidity, rather high pressure, and an almost complete absence of rain obtain for the greater part of the month, unless these normal conditions are disturbed and almost reversed by the formation or appearance of barometric depressions over Northern India, which subsequently drift in a southerly or south-easterly direction through Central India and the North-West Provinces into Chutia Nagpur, Behar and Bengal. These disturbances give moist southerly and south-easterly winds to Bengal with heavily clouded skies and damp rainy weather, the day temperature remaining low, but the night temperature increasing largely. The heaviness of the rainfall brought up by these depressions varies considerably, but the rainfall is usually largest in Behar.

Practically the whole of the rainfall in January is brought about by these disturbances, and the amount is usually small, averaging from about a third of an inch in Orissa up to nearly two thirds of an inch in North Behar and Chutia Nagpur.

Meteorology of the month.—The chief features in the meteorology of January 1890 have been—

1. Pressure has been rather largely below the normal over the whole province, the defect usually ranging from six to eight-hundredths of an inch, and being comparatively small in the south of Orissa and largest in Western and Central Bengal.

2. The average temperatures for the month have been in excess of the normal in all districts, the excess being comparatively small in Orissa, where it is only about half a degree, while in the other districts and in Assam it varies from about one and-a-half to two and-a-half degrees.

3. Humidity has been above the normal by small amounts at almost all stations.

4. Cloud-proportion has been below the normal at almost all stations in Bengal and considerably above it in Assam.

5. The number of barometric depressions from Northern India which have passed through Bengal during January have been small, and all except one have been of such feeble nature as to scarcely call for any record. A very slight disturbance passed apparently along the line of the hills to the north of the province, giving a few showers of rain in and near the hills on the 7th and 8th of January. A second, and also a very feeble, disturbance passed through South-West and East Bengal on the 19th and 20th of January, giving rather numerous showers in these two districts and a few showers in North Bengal. The third barometric depression which occurred near the end of the month was decidedly influential and of very much greater importance than the other two. It was first formed or was first noticed in North-Western India on the 22nd, and then travelled in a south-easterly direction, reaching Bengal on the 24th and 25th of January, and on the 26th it had advanced over Burma, giving heavy rain in its advance; and from this storm moderate rain was received in all districts except parts of North Bengal and North Behar, and except the whole of South Behar and Chutia Nagpur.

6. By these actions rainfall has been fairly abundant and considerably above the normal amount in East Bengal, of about the normal amount in South-West Bengal and North Bengal, and decidedly deficient in North Behar. In Orissa the falls have been so small that rain may be said to have been practically absent, while in South Behar and Chutia Nagpur the rainfall has been entirely absent.

The weather conditions for the month therefore call for few explanatory remarks, for, except during the three brief periods mentioned in the fifth of the above clauses, weather has been generally of typical north-east monsoon character. Skies have therefore been generally almost cloudless during the greater part of the month, and rainfall has been entirely confined to a few showers during the periods of disturbance above mentioned. Owing to the comparative absence of rain and of the usual cold-weather storms in Upper India, temperature has been above the normal, and the northerly winds have been at certain times rather unsteady; the average humidity has also been rather high, owing perhaps to the fact that at one period of the month rather moist southerly winds set in for some days. During the last period of disturbance, and to a much smaller extent in the two smaller disturbances, the normal conditions became partially reversed, and skies clouded over, while the night temperatures rose very considerably.

Pressure—Was at the commencement of the month decidedly below the normal, and the average defect for about the first twenty days was from about five to eight-hundredths of an inch. With the depression which then passed through the province, this defect increased, and on the 24th and 25th pressure became from about a fifth to a quarter of an inch below the normal over a considerable part of the province. With the disappearance of the depression pressure rose rapidly, and by about the 27th and 28th of the month it had become very high, but before the close again it had commenced to fall. The average pressure for the whole month has therefore been decidedly in defect, the usual defect equalling about six to eight-hundredths of an inch. On the whole, the distribution of this defect of pressure has been fairly equal, but, if anything, the defects have been largest in the centre of the province, and least in such districts as Orissa, North Behar, and in parts of Assam such as at Sibsagor, &c.

Temperature—Continued generally decidedly above the normal up till the last week in January, when, under the influence of the rainfall in the plains, and with a moderate fall of snow along the Himalayas, a wave of cold northerly winds set in over the province, causing a very sudden reduction of temperature. So rapid was the fall that at many stations a decrease of 5,° and in some cases of even 9° and 10,° in the mean temperature of the day occurred on the 26th, and from this date to the end of the month very cool weather obtained. For the whole month consequently temperature was above the normal, the mean excess in Bengal equalling 1·8°. In Assam the excess temperature has been almost the same, and it there equals 1·7°.

The actual oscillations and variations of the temperature for the month from the normal are best shown in the following table, where the variations from the normal of the average maximum, minimum and mean temperatures at nine typical stations in different districts of the province are given week by week :—

Stations.	Week ending 10th January 1890.			Week ending 17th January 1890.			Week ending 24th January 1890.			Week ending 31st January 1890.		
	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.
Cuttack	−1·6	−1·0	−1·3	−0·3	−0·9	−0·6	+1·1	+1·9	+1·5	−4·0	−4·8	−4·5
Calcutta	+0·8	+2·6	+1·6	+1·0	+0·9	+0·9	+2·2	+4·7	+3·4	−3·4	−3·5	−3·6
Dacca	+2·5	+3·6	+3·1	+0·6	+2·4	+1·6	+1·3	+3·1	+2·1	−3·0	−2·4	−2·7
Burdwan	+1·5	+3·2	+2·4	+2·2	+0·6	+1·5	+2·2	+5·6	+3·8	+1·6	−3·6	−1·0
Patna	+3·2	+4·4	+3·8	+3·4	+2·6	+3·0	+4·0	+6·1	+5·0	−0·4	−3·5	−1·9
Gya	+1·6	+1·4	+1·6	+3·0	+3·4	+2·8	+4·1	+3·6	+3·9	−2·4	−1·7	−2·0
Purneah	−0·2	+4·7	+2·3	+0·5	+2·6	+1·5	+0·6	+4·2	+2·5	−2·4	−4·6	−3·5
Hazaribagh	+1·3	+2·6	+1·9	+3·6	+1·7	+2·5	+4·8	+5·5	+5·2	−2·5	−5·0	−3·9
Darjeeling	+6·5	+2·0	+4·2	+8·9	+1·2	+4·8	+9·1	+1·7	+5·3	+10·5	−0·8	+4·6

Rainfall—On the whole, has been deficient in quantity; South Behar and Chutia Nagpur have been rainless, and Orissa almost so; while the falls in North Behar are little more than a third of the normal amount. In South-West and North Bengal the falls are practically normal, but in East Bengal they are nearly twice as large as usual. Even in South-West Bengal, though on the average a fair amount of rain has fallen, only a few districts have received good falls, and these are 24-Pergunnahs, Howrah, Hooghly, Jessore, and Khoolna. In East Bengal the districts receiving the largest fall have been Furreedpore, Dacca, Comillah, and Mymensingh; and in North Bengal the falls have been practically confined to the districts of Bogra, Rungpore, Julpigoree, Cooch Behar, Darjeeling Hills, and Pubna.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the month of January 1890 :—

Meteorological Divisions.	Temperature.						Rainfall.							
	Highest observed during month.	Lowest observed during month.	Averages for month.			Average mean of month above or below normal mean of month.	Of month.			Rainy days.			Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in month.	Normal average number in month.	Variation.	Average.	Normal average.
Orissa*	88·9	46·9	80·8	58·4	69·6	+0·6	0·09	0·38	−0·29	0·4	1·0	−0·6	62·10	53·46
South-West Bengal	87·3	43·8	78·5	56·1	67·3	+1·4	0·44	0·45	−0·01	0·8	1·2	0·4	52·81	51·94
East Bengal	81·3	46·0	77·0	56·8	66·9	+2·1	1·03	0·56	+0·47	1·8	1·4	+0·4	76·56	74·28
North Bengal*	81·4	37·9	76·7	53·2	65·0	+2·0	0·42	0·43	−0·01	1·4	1·2	+0·2	73·54	70·43
North Behar	78·3	40·5	74·9	51·4	63·2	+2·3	0·23	0·60	−0·37	0·9	1·5	−0·6	57·89	48·79
South Behar	82·6	41·9	76·4	51·8	64·1	+2·4	Nil	0·56	−0·56	0·0	1·7	−1·7	44·16	43·86
Chutia Nagpur	82·0°	37·9°	74·3°	50·6°	62·4°	+2·0°	Nil	0·66	−0·66	0·0	1·9	−1·9	43·08	49·57
Assam	83·8	42·2	74·0	54·7	64·3	+1·7								

* Pooree, Julpigoree and Chyebassa not included.

Meteorological Office, Bengal,
The 11th February 1890.

A. Pedler,
Meteorological Reporter to the Govt. of Bengal.

SUPPLEMENT TO THE CALCUTTA GAZETTE, FEBRUARY 12, 1890.

Meteorological Report of the Province of Bengal

Meteorological Division.	District.	Representative station.	STATION OBSERVATIONS. Air pressure. Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Wind. Prevailing direction.	Mean wind velocity.	Temperature. Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	Mean, 8 A.M., temperature
Orissa.	Pooree	Pooree ...	30·083	30·096	—	Calm	86	81·6	2, 6, 7 Feb.	56·9	1, 3 Feb.	81·2	61·2°	71·2°	—	65
		Gopalpore	30·071	30·093	+·078	NNW	283	79·7	6th ,,	56·0	1st ,,	78·8	62·0	70·4	−2·8	67·2
		False Point ...	30·083	30·105	+·044	NW	137	80·9	4th ,,	50·5	1st ,,	79·3	56·2	67·8	−3·3	63·0
	Cuttack	Cuttack ...	30·029	30·114	+·059	Calm	21	87·9	7th ,,	53·9	1st ,,	85·3	60·3	72·8	−1·8	63 8
	Balasore	Balasore ..	30·052	30 114	+·052	NNW	79·3	82·4	4th ,,	48·4	1st ,,	81·0	53·3	67·2	−2·4	66·5
South-West Bengal.	South-West Midnapore / South 24-Pergunnahs	Sangor Island	30·084	30·111	+·053	NNW & NE	178 0	78·2	2nd ,,	55·3	2nd ,,	76 8	57·8	67·3	−2 8	61 6
	Midnapore	Midnapore ...	29 958	30·118	+·045	N	21·1	84·3	5th ,,	51·2	1st, 3rd ,,	82·0	53·9	68·0	−0·8	60·6
	24-Pergunnahs ... ... / Howrah ... .. / Hooghly	Calcutta .	30·090	30·113	+·048	Calm	51·0	78 5	5th ,,	51 8	1st ,,	77·3	53 2	65·3	−2·4	59·0
	Burdwan	Burdwan	30 005	30 111	+ 042	Calm	22·7	81·0	7th ,,	48·3	3rd & 4th Feb.	79·7	50·6	65·2	−2·6	56·4
	Bankoora	Bankoora ...	29·776	30·100	+·042	Calm & W	38·0	80·9	5th ,,	50·3	2nd ,,	80·1	51·7	65 8	−1 7	56·9
	Beerbhoom ... ... / West Burdwan	Ranegunge	29·780	30·138	+·055	WNW	46·4	81·7	5th, 6th ,,	50·2	1st, 3rd ,,	80·8	51·1	65·9	−1·4	56·1
	Moorshedabad	Berhampore...	30·039	30·111	+ 044	WNW	39·1	78·6	5th & 7th Feb.	47·6	6th ,,	77·6	49·4	63·5	−2·7	54·4
	Nuddea	Krishnaghur...	30 005	30·135	+·074	NNW	59·2	79·8	5th, 7th ,,	44·9	7th ,,	79·2	46 9	63·0	−2·4	57·2
	Jessore ... ... / Khoolna	Jessore ..	30·073	30·108	+·055	Calm	23·8	78·3	7th ,,	40·9	7th ,,	77 6	51·9	64·8	−2·2	55·8
East Bengal.	Chittagong	Chittagong	29·991	30 087	+·025	NW	51·0	81·1	1st, 2nd ,,	51·2	7th ,,	80 1	52·6	66 4	−1·1	59·1
	Chittagong Hill Tracts	Demagiri	Observations not received.													
	Backergunge	Barrisal ..	30·074	30·087	+·056	Northerly	35·3	77·3	5th, 7th Feb.	50·1	7th ,,	76·7	52 0	64·4	−2 6	59·7
	Noakholly	Noakholly ...	30·055	30·101	—	N	32·7	79·0	1st, 2nd, 6th Feb.	47·0	5th, 6th ,,	78·4	48·4	63·4	—	62·(
	Furreedpore	Furreedpore...	30·008	30 110	+·054	Calm & N	44·0	74·0	1st & 3rd Feb	49·5	6th, 7th ,,	73·7	51·0	62·4	−2·9	57·(
	Dacca	Dacca ..	30·061	30 086	+·031	Northerly	59·3*	80·1	1st ,,	48·2	7th ,,	78·1	50 7	64·4	−3·0	58·(
	Tipperah	Commillah ..	30·070	30·107	+·059	NW	21·8	80·4	1st ,,	48·1	6th ,,	78 7*	49·8	64·2*	−2·6	59 (
	Mymensingh	Mymensingh	30·037	30·098	+·039	N	39·5	77·1	1st ,,	48·1	6th ,,	75·9	49·6	62·7	−1·4	55·(
North Bengal.	Bogra	Bogra	30·009	30·077	+·049	W	36·1	78·3	7th ,,	47·0	3rd, 5th ,,	77·3	48 2	62·8	−0·9	55·(
	Pubna	Serajgunge ..	30·045	30·005	+ 049	Westerly	18·0	78·5	7th ,,	44·9	5th ,,	77·7	47·5	62·6	−1·4	55
	Rajshahye	Rampore Beauleah.	30·030	30·104	+·.60	N	31·7	77·9	1st ,,	45·9	5th ,,	76·4	48 1	62·2	−1·0	56
	Maldah	Maldah ...	30·042	30·129	—	NW	61·3	78 6	7th ,,	42·7	5th ,,	77·4	44·5	61·0	—	57·
	Dinagepore	Dinagepore	29 973	30·103	+ 037	W	28·0	78·1	1st & 7th Feb	41·9	5th ,,	77 2	46·1	61·7	−0·6	51·
	Rungpore	Rungpore	29 978	30 114	+·074	Calm & E	17·0	77·8	7th ,,	44·0	2nd ,,	76·7	45·3	61·0	+0·5	53·
	Julpigoree ... ... / Cooch Behar	Julpigoree ...	30·702	30 101	+·060	N	48·1	?	?	46 5	2nd ,,	?	48·1	?	?	53·
	Darjeeling Hill Tracts ...	Darjeeling	22·091	—	—	SE	63·0	53·4	5th—7th Feb.	33·5	4th ,,	53·3?	34·8	44·1?	+7·0	39·
North Bhagulpore	Purneah ... ... / North Bhagulpore ...	Purneah ..	29·975	30·114	+·057	Westerly	44·4	75·7	7th ,,	42·0	5th ,,	74 8	43·6	59·2	−2·7	40·
	Mozufferpore	Mozufferpore	Observations suspended.													
	Durbhunga	Durbhunga .	29·939	30·120	+·054	WSW	57·4	77·4	7th Feb.	?	?	75·0	?	?	?	54
	Chumperun	Motihari ...	29·878	30·125	+ 078	SW	98·9	76·2	7th ,,	41·9	4th ,,	74 1	43·6	58·9	−1·2	50
	Sarun	Chupra .	Observations incomplete.													
South Behar.	Shahabad ... ... / Dehree .. / Buxar .. / Arrah* ..		29·702	30·145	+·070	SW	130·4	79·8	7th ,,	47·5	6th ,,	77 7	49·6	63·7	+0·9	54
			29·877	30 139	+·062	W NW	69·4	78 9	7th ,,	43·9	2 & 5 ,,	76 5	46·2	61·3	−0·7	53
			29·920	30·132	+·061	Calm	66·5	77·9	4th ,,	42·6	6th ,,	75·7	44·2	59·9	−1·6	51
	Gya	Gya ..	29·734	30·140	+·060	S	103·8	79·5	7th ,,	50·6	6th ,,	77·6	51·8	64·7	−0·9	56
	Patna	Bankipore ...	29 934	30·132	+·058	SW	37·4	76·9	4th ,,	45·4	2nd ,,	75·1	46·6	60·8	−1·4	55
	South Bhagulpore ... / Monghyr	Bhagulpore ...	29·936	30·110	+·054	Calm	10·0*	78·1	6th ,,	43·0	6th ,,	76·0	46·2	61·1	−1·9	52
	Sonthal Pergunnah ...	Doomka ..	29·594	30·133	—	NW	57·0	79·4	7th ,,	44·0	6th ,,	77·5	46·5	62·0	—	56
Chutia Nagpur.	Hazaribagh	Hazaribagh	28·048	30·145	+·046	Westerly	146·4	78 9	7th ,,	40·8	1st, 2nd ,,	75 7	49·8	62 7	−0·2	57
	Lohardugga ... ... / Manbhoom	Ranchee ..	27·898	30 126	+·042	Calm	93·7	79·5	7th ,,	46·6	1st, 5th ,,	76·4	49·3	62·8	−0·6	57
	Singbhoom	Chyebassa ...	29·310	30·141	—	South-westerly.	20·6	83·2	4th ,,	47·5	1st ,,	81·0	50·6	65·8	—	56

* Means of six days.

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the ... The *humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The num... are the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the ... stations in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

the week ending Friday, the 7th of February 1890.

at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	OF WEEK. Mean for district.	OF WEEK. Normal mean.	DISTRICT OBSERVATIONS. RAINFALL. Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since 1st May 1889. Mean for district.	Since 1st May 1889. Normal mean.	Since 1st May 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
84	0	Nil	Nil	0·15	Nil	0·15	−0·15	74·94	55·78	+19·16	0·0	0·3	Pooree ...	Pooree	Orissa.
72	0·1	Nil											Gopalpore ...		
88	0·9	Nil											False Point		
75	4·3	Nil	Nil	0·21	Nil	0·21	−0·21	66·39	52 19	+14·20	0·0	0·4	Cuttack	Cuttack	
73	0·4	Nil	Nil	0·33	Nil	0·33	−0·33	49·96	53·64	−3·68	0·0	0·0	Balasore	Balasore	
93	0	Nil	Nil	0·57	Nil	0·57	−0·57	58·57	62·94	−4·37	0·0	0·7	Sangor Island	South-West Midnapore	South-West Bengal.
														South 24-Parganas	
84	0	Nil	Nil	0·43	Nil	0·43	−0·43	46·39	52 00	−5·61	0·0	0·5	Midnapore	Midnapore	
78	0	Nil	Nil	0·51	Nil	0·51	−0·51	54·16	53·17	+1·93	0·0	0·7	Calcutta	24-Parganas	
														Howrah	
														Hooghly	
84	0	Nil	Nil	0·42	Nil	0·42	−0·42	43·89	47·13	−3·24	0·0	0·7	Burdwan	Burdwan	
82	0	Nil	Nil	0·12	Nil	0·12	−0·12	55·93	52·40	+3·53	0·0	0·5	Bankoora	Bankoora	
80	0	Nil	Nil	0·30	Nil	0·30	−0·30	52·46	51·92	+0 54	0·0	0·6	Raneegunge	Beerbhoom	
														West Burdwan ...	
84	0	Nil	N l	0·28	Nil	0·28	−0·28	51·17	50·83	+0·34	0·0	0·6	Berhampore	Moorshedabad ...	
75	0	Nil	Nil	0·38	Nil	0·38	−0·38	51·61	49·52	+2·09	0·0	0·0	Krishnaghur	Nuddea	
91	0	Nil	Nil	0·39	Nil	0·39	−0·39	54·75	53 61	+1·14	0·0	0·6	Jessore	Jessore	
														Khoolna	
76	0	Nil	Nil	0·12	Nil	0·12	−0·12	100 35	113·90	−13·55	0·0	0·5	Chittagong	Chittagong	Eastern Bengal.
			Nil	0 19	Nil	0·19	−0·19	65·17	81·79	−16·62	0·0	0·5	Demagiri	Chittagong Hill Tracts	
85	0	Nil	Nil	0·30	Nil	0·30	−0·30	78·41	77·31	+1·10	0·0	0 6	Barrisal	Backergunge	
75	0	Nil	Nil	0·30	Nil	0 30	−0·30	90·82	107·41	−16 59	0·0	0·6	Noakholly	Noakholly	
96	0	Nil	Nil	0·37	Nil	0·37	−0·37	62·22	56·09	+6·13	0·0	0·6	Furreedpore	Furreedpore	
77	0	Nil	Nil	0·35	Nil	0·35	−0·35	76·19	59·95	+16·24	0·0	0·6	Dacca	Dacca	
77	0	Nil	N l	0·23	Nil	0·23	−0·23	56·62	69·54	−12·92	0·0	0·5	Commillah	Tipperah	
96	0·1	Nil	Nil	0·26	Nil	0·26	−0·26	88·78	67·57	+21 21	0 0	0 5	Mymensingh	Mymensingh	
78	0	Nil	N l	0 19	Nil	0·19	−0·19	65·02	57·42	+8·20	0·0	0·4	Bogra	Bogra	North Bengal.
81	0	Nil	Nil	0·30	Nil	0·30	−0·30	55·37	53·65	+1·72	0·0	0 5	Serajgunge	Pubna	
74	0	Nil	Nil	0·23	Nil	0·23	−0·23	54·35	54·11	+0 24	0·0	0 6	Rampore Beauleah	Rajshahye	
91	0	Nil	Nil	0·18	Nil	0·18	−0 18	39·76	54 40	−14 64	0 0	0·3	Maldah	Maldah	
85	0	Nil	Nil	0 06	Nil	0·06	−0·06	57·49	57·46	+0 03	0·0	0·4	Dinagepore	Dinagepore	
85	0	Nil	Nil	0·06	Nil	0·06	−0·06	85 87	73·89	+11·98	0·0	0·3	Rungpore	Rungpore	
83	0	Nil		0·03	Nil	0·03	−0·03	117·73	111·28	+6 45	0·0	0·1	Julpigoree	Julpigoree	
88	2·3	Nil	Ni	0·12	Nil	0·12	−0·12	133·46	121·49	+11·97	0·0	0·5	Darjeeling	Cooch Behar	
														Darjeeling Hill Tract	
83	0	Nil	Nil	0·12	Nil	0·12	−0·12	75·00	58·80	+16·20	0·0	0·4	Purneah	Purneah	
			Nil	0·11	Nil	0·11	−0·11	48·83	43 65	+5·18	0·0	0 3	Mozufferpore	North Bhagulpore ...	
83	0·1	Nil	Nil	0 11	Nil	0·11	−0·11	52·11	44 83	+7·28	0·0	0·3	Durbhunga	Mozufferpore	North Bengal.
83	1·4	Nil	Nil	0·13	Nil	0·13	−0·13	63·96	46·02	+17·04	0·0	0·4	Motihari	Durbhunga	
			Nil	0·06	Nil	0·06	−0·06	40·13	43·04	−2·91	0 0	0 3	Chupra	Chumparun	
83	0	Nil												Sarun	
83	0·7	Nil	Nil	0·14	Nil	0·14	−0·14	46·07	41·22	−0·15	0·0	0·4	Dehree	Shahabad	South Bengal.
85	0 5	Nil											Buxar		
													Arrah		
81	0	Nil	Nil	0 18	Nil	0·18	−0·18	37·07	41·80	−4·73	0·0	0·4	Gya	Gya	
81	0·4	Nil	Nil	0·19	Nil	0·19	−0·19	43·49	41 51	+1·98	0·0	0·4	Bankipore	Patna	
81	0	Nil	Nil	0·18	Nil	0·18	−0 18	42·43	43·35	−0·92	0·0	0·4	Bhagulpore	South Bhagulpore	
81	0	Nil	Nil	0 22	Nil	0·22	−0·22	54·15	51·01	+3·14	0·0	0·4	Doomka	Monghyr	
	0	Nil	Nil	0·12	Nil	0·12	−0·12	44·03	50·58	−7·55	0·0	0·4	Hazaribagh	Sontha Pergunnahs	Chutia Nagpore.
	0	Nil	Nil	0 23	Nil	0 23	−0·23	44·54	49·36	−5·02	0·0	0·7	Ranchi	Hazaribagh ...	
			Nil	0·44	Nil	0·44	−0·44	38·36	47 36	−9·00	0·0	0·7		Lohardugga ...	
	0	Nil	Nil	0·37	Nil	0·37	−0·37	48·76	51·93	−3·19	0·0	0·8	Chyobassa	Manbhoom ...	
														Singbhoom ...	

ears. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
king cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
ars. The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at the subdivisional

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 7th of February 1890.

Meteorological division.	District.	Station.	Rainfall. Saturday, 1st February.	Sunday, 2nd February.	Monday, 3rd February.	Tuesday, 4th February.	Wednesday, 5th February.	Thursday, 6th February.	Friday, 7th February.	Total: Number of rainy days.	Total: Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 16th May 1889.	Average rainfall from 16th May to date.
Orissa ...	Pooree ...	Pooree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	80·71	51·5
		Khurdah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	76·57	50·6
		Banpur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	65·50	49·9
		Palse Point ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	77·00	64·1
		Gop ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Pipli ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	Cuttack ...	Jagatsingpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	74·40	47·7
		Banki ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	52·43	49·6
		Cuttack ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	75·18	50·6
		Kendrapara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	72·24	53·3
		Jajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	57·64	53·8
		Dharmsala ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·25	?
		Salipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	?
	Balasore ...	Chandbali ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	55·04	52·2
		Bhuddruck ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·54	57·66	52·2
		Sorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	46·05	51·3
		Balasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	46·61	58·3
		Jellasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	39·50	54·3
		Baripodah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	54·79	53·8
South-West Bengal.	Midnapore ...	Contai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·58	55·18	61·1
		Sangor Island ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·57	56·74	67·0
		Tumlook ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·67	49·00	51·1
		Midnapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	46·26	49·3
		Ghattal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	43·30	54·1
		Kukrahaty ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·84	?
		Bhagwanpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·72	
		Garbetta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	
	24-Pergunnahs ...	Diamond Harbour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·55	63·79	59·1
		Canning Town ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·85	
		Alipore Jail ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	53·87	56·1
		Barrackpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·74	53·13	50·1
		Dum-Dum ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	65·43	52·1
		Baraset ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·56	58·71	50·1
		Busserhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	62·41	54·1
	Howrah ...	Howrah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	59·04	52·1
		Mohesreka ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	55·04	52·1
		(*Colaberiah.*)													
	Hooghly ...	Serampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	55·61	50·1
		Hooghly ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·64	37·53	48·1
		Jehanabad ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·60	41·61	55·1
	Burdwan ...	Culna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	41·32	44·1
		Burdwan ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	47·25	48·1
		Cutwa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·45	43·11	48·1
		Raneegunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	55·90	49·1
		Mankur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·80	
	Bankoora ...	Bankoora ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	50·86	51·1
		Bishenpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 02	57·49	52·1
		Maliara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11		51·1
		Khatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	65·01	54·1
		Indas ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	
		Kotalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	
		Anda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·44	
		Gangajalghati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·17	
		Raipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	
		Sonamukhi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·44	
	Beerbhoom ...	Bh. Soory ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	59·06	5·1
		Hetampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 20	47·07	5·1
		Rampore Haut ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 23	47·78	5·1
		Bolpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·04	
		Murarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	
	Nuddea ...	Ranaghat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	50·10	4·1
		Kishnaghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	43·95	4·1
		Chooadanga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	49·80	5·1
		Meherpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	53·15	4·1
		Kooshtea ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	56·00	4·1
	Khoolna ...	Satkhira ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38	54·54	5·1
		Bagirhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·47	55·48	5·1
		Khoolna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	56·82	5·1
		Nakipur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Rampal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Jessore ...	Narail ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	52·01	
		Jessore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	63·00	
		Jhenidah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	59·74	
		Magoorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	56·90	
		Bongong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·47	47·64	
	Moorshedabad ...	Kandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	58·38	
		Berhampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	46·28	
		Lalbagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	47·13	
		Asmgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	?	
		Jungipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	55·01	
		Lalgola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	59·02	
		Jingunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·20	
		Akhriganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·06	
		Patkabari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
Bengal	Chittagong ...	Cox's Bazar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·05	122·50	
		Chittagong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	77·08	
		Kumbdia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113·09	
		Sitkanya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	63·66	
	Chittagong Hill Tracts.	Rangamati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	63·12	
		Ruma ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	67·20	
	Backergunge ...	Patuakhally ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	67·66	
		Perozepore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	72·64	
		Burrisal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	73·21	
		Bhola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	80·09	

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 7th of February 1890—contd.

Meteorological Division.	District.	Station.	Rainfall.							Total		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
			Saturday, 1st February 1890.	Sunday, 2nd February.	Monday, 3rd February.	Tuesday, 4th February.	Wednesday, 5th February.	Thursday, 6th February.	Friday, 7th February.	Number of rainy days.	Rainfall of week.				
...T BENGAL—concld.		*Gournadi* ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	61·31	?
		Bauphal ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	93·12	?
	Noakholly ...	Noakholly	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	102·58	108·05
		Feuny	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	70·03	107 07
		Hariskpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	81·32	?
		Ramganj .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	86·75	?
	Furreedpore	Madaripore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	62·98	55·83
		Furreedpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 35	65 60	50·61
		Goalundo	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·49	58·05	53·43
	Dacca ...	Munshigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·42	77·51	70·50
		Dacca ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	76·45	58·69
		Narainguuge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	81·14	60 19
		Manickgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	69·07	50·28
		Joydebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	68·55	?
	Hill Tipperah	Agartola ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	44·38	61 76
	Tipperah ..	Comilla ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	62·07	76·36
		Chandpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	65·97	76·01
		Brahmunberia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	53·12	61·93
		Ramchandrapore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·82	?
		Nasirnagar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	32·39	?
		Daudkandi ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·73	?
		Kasba ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	62 44	?
		Laksham ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·48	?
	Mymensingh	Kishoregunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	70·80	70·38
		Atia (*Tangail*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	62·60	65·78
		Mymensingh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	97 93	74·32
		Jamalpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	60·01	64·53
		Netrokona ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	128·47	73·84
		Subornakhali	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·43	?
		Durgapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	150·28	?
		ShereporeTown	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	88·17	?
		Dewanganj ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·08	?
NORTH BENGAL	Pubna ...	Pubna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	80·20	53·98
		Serajgunge ..	.....	.....	.....	.....	.....	.....	.....	Nil	N	Nil	0·30	60·51	53·16
	Bogra ..	Sherepore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	62·07	57·51
		Nowkhilla ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 07	62·44	54·27
		Bogra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	77·33	61·00
		Panchbibi .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	65·98	55·81
	Rajshahye ...	Beauleah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	60·34	53·29
		Nattore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	58·81	55 23
		Naogaon ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	57·87	51·43
		Lalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30·72	?
		Manda ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·27	?
	Maldah ..	Maldah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·17	50·53	51·81
		Chanchal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	28·96	56·91
		Gajol ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30·79	?
		Sibganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·77	?
	Dinagepore ..	Mohadebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	53·63	56 4
		Churamon ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	51·82	52·56
		Raigunge ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·04	52·37	57·85
		Dinagepore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 15	68·33	63·85
		Balooghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	61·20	51·03
		Thakoorgaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·81	?
	Rungpore ..	Bhawanigunge (*Gyabanda*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	58·30	61·74
		Rungpore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	74·98	74·03
		Kurigram ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 03	91·62	73·37
		Bagdogra (*Nilphamari*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	68·49	85·26
		Ulipore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	79·10	?
	Jalpigoree ...	Julpigoree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 05	123·45	117·06
		Alipore Door	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	179·58	?
		Fallacotta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	128·23	?
		Debiganj ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	90·04	?
		Bhagalpore (Nagrakatta).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	139·22	?
	Cooch Behar.	Dinhatta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	98·83	96·31
		Cooch Behar..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	125·89	118·37
		Mekiligunge..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	122·40	103·74
		Mathbhanga...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	118·03	111·86
	Darjeeling Hill.	Buxa ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	102·37	102·91
		Silliguri ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	121·02	103·45
		Darjeeling ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	128·27	108·91
		Kalimpong ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	92·15	84·02
		Kurseong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	170·23	?
ORTH BEHAR	Purneah ...	Kissengunge...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	103·67	70·50
		Arraresh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	70·[illegible]	63·84
		Purneah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	63·47	61·74
		Gondwara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Balarampore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Matiari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Kaliaganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	North Bhagulpore.	Maddapore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	60·85	49·84
		Scopool ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·09	67·26	48·27
		Protabganj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	88·16	?
	Durbhunga ...	Lajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 10	42·57	43 33
		Durbhunga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	50·24	45·97
		Madhubani ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	63·56	45·19
		Rahera ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·96	?
		Koshera ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	25·84	?
	Mozufferpore	Sitamarhi ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	55·47	43·26
		Mozufferpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	48·47	45 60
		Hajipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	42·57	42 21
		Pare ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	37·09	?
		Mahua ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41·03	?
		Sitahar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Pupri ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·14	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 7th of February 1890—concld.

Meteorological Division.	District.	Station.	Rainfall. Saturday, 1st February.	Sunday, 2nd February.	Monday, 3rd February.	Tuesday, 4th February.	Wednesday, 5th February.	Thursday, 6th February.	Friday, 7th February.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
North Behar —concluded.	Chumparun...	Motihari ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	75·33	44·0
		Bettiah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	53·67	48·3
		Bagaha ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	70·24	?
		Barbursa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·70	?
	Sarun ...	Gopalgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	35·43	43·5
		Sewan ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·07	41·20	44·0
		Chuppah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	40·74	40·7
South Behar	Shahabad	Buxar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	47·44	38·7
		Dehree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	42·66	40·0
		Bhaboosh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	38·16	41·0
		Sasseram ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	29·41	40·6
		Arrah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	42·69	40·1
		Mohaniah .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Gya ..	Aurungabad...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	35·42	43·0
		Gya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	39·85	42·5
		Nowadah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	39·59	40·4
		Jehanabad ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·11	33·40	40·5
		Arwal .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34·34	
		Daudnagar .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	26·00	
		Sherghati .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	29·29	
		Rafiganj .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17·92	
		PakriBarawan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·90	
	Patna ...	Patna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·12	51·49	42·1
		Dinapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	45·53	41·1
		Behar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	41·08	42·5
		Barh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·16	35·81	39·1
		Bakram ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		41·28	
		Hilsa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	36·21	
	Monghyr ...	Begoosrai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·21	47·62	40·1
		Monghyr ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	41·67	40·1
		Jamui ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	39·48	41·1
		Goorr ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·19	
		Sheikpura ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·32	
	South Bhagulpore.	Bhagulpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·13	45·06	42·1
		Banka ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	38·34	45·1
		Kurgaon ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·97	
		Bangaon ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Sonthal Pergunnahs.	Rajmohal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	50·90	52·1
		Godda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	49·04	47·1
		Pakour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	73·59	55·1
		Nya Doomka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	50·77	53·1
		Deoghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	40·10	51·1
		Jamtara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·14	45·21	49·1
		Mohagama ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	50·41	
		Nanaat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·87	
Chutia Nagpur.	Hazaribagh ...	Pachamba (*Giridi*).	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	38·90	47·1
		Hazaribagh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	49·10	47·1
		Samtagurah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil	36·24	46·1
		Manudi Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	Nil		48·1
		Jhoomra Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	43·00	52·1
		Barhi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·36	
		Chatra ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41·04	
		Karegdeha ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·35	
		Ramghar ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		
	Lohardugga...	Lohardugga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·01	45·24	51·1
		Ranchi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·44	53·61	52·1
		Palamow .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	34·16	43·1
		Silli ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33·80	
		Rahumat ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Hossainabad .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·40	
		Garwah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28·77	
	Singbhoom ..	Chyebassa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	48·76	52·1
		Chakradhar-pore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·80	
		Ghatsilla ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	N	?	58·70	
		Baharagura...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	N	?	53·80	
	Manbhoom ...	Purulia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	43·53	42·1
		Gobindpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	33·19	45·1
		Kashinath-pore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·01	
		Barrabhoom	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·32	
		Jhalda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·42	
		Oaus ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·56	

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 11th February* 1890.

SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 7TH FEBRUARY 1890.

DURING the previous week two disturbances had passed through the province, giving fairly general rain to most of the stations in the plains, while along the line of hills to the north and north-west of the province snow had fallen. A cold wave of northerly winds had thus set in over the province, and the general conditions were those of the north-east monsoon or cold weather in a pronounced form. The effects of the disturbances above noted have continued during the week under review, and normal cold-weather conditions have obtained almost throughout this period. Skies have consequently been almost cloudless, temperature and humidity have been low, pressure has been high, and no rain has fallen. Just towards the close of the week, however, the cool northerly current was beginning to fall off in force, and light southerly winds and calms were reported at some of the coast stations, so that the tendency at the end of the week was for temperature and humidity to rise; but on the whole the conditions for the week were typical for the cold weather.

Pressure.—The pressure changes during the week have not been of any particular importance. There was a slight but distinct rise on the 1st February, which continued on the 2nd, but on the 3rd a slight fall set in, which became more rapid on the 4th, though it had ceased on the 5th, when pressure commenced to rise again, the rise continuing on the 6th, while on the 7th pressure was falling again. These slight oscillations are, however, only characteristic of fine settled weather. For the whole week the mean pressure has been in excess of the normal by about 0·04 inch to 0·07 inch, the excess being fairly equally distributed, though on the whole it has been largest in North Behar

Temperature—Has on the whole been generally rising slowly during the week, but there have been the usual oscillations from day to day Taking the general mean temperature of the whole province into consideration, there has been an increase of about 1° to 2° above the temperature of the previous week When compared with the normal, however, the temperatures recorded during the past week have been distinctly low, and the defects vary in the different districts from about half a degree up to two and-a-half degrees; the mean defect in temperature of the whole province for the week equalling 1·6 degrees.

The actual temperatures during the week, the range from day to night, and their variation from the normal values are best seen in the following table, where the average maximum, minimum and mean temperatures at nine typical stations in different districts of the province are given, together with the normal values. From these figures it will be seen that the night temperatures have generally been in much larger defect than those of the day, and that the mean minimum temperatures of the week have been decidedly low.

The lowest temperature recorded during the week was 41·9° at Motihari :—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 7th February 1890.

	Normal mean maximum temperature for the week ending 7th February.	Actual mean maximum temperature for the week ending 7th February 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 7th February.	Actual mean minimum temperature for the week ending 7th February 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 7th February.	Actual mean daily temperature for the week ending 7th February 1890.	Variation of actual mean from the normal.
Cuttack	87·7	85·3	−2·4	61·4	60·3	−1·1	74·5	72·8	−1·7
Calcutta	79·2	77·3	−1·9	56·5	53·2	−3·3	67·8	65·3	−2·5
Dacca	80·0	78·1	−1·9	54·9	50·7	−4·2	67·4	64·4	−3·0
Burdwan	80·9	79·7	−1·2	54·9	50·6	−4·3	67·9	65·2	−2·7
Patna	75·1	75·1	0	49·7	46·6	−3·1	62·4	60·8	−1·6
Gya	78·8	77·6	−1·2	53·1	51·8	−1·3	66·0	64·7	−1·3
Purneah	76·2	74·8	−1·4	48·2	44·6	−4·6	62·2	59·2	−3·0
Hazaribagh	75·3	75·7	+0·4	51·0	49·8	−1·2	63·2	62·7	−0·5
Darjeeling	42·6	53·3?	+10·7?	31·3	34·8	+3·5	37·0	44·1?	+7·1?

Rainfall—Has been entirely absent from the province throughout the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 7th of February 1890*:—

Meteorological Divisions.	Temperature						Rainfall.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average	Normal average.
Orissa	87·9	48 4	81·1	58·6	69·9	- 2·6	Nil	0·24	—0 24	0·0	0·4	—0·4	Nil	0·24	62·10	53·76
South-West Bengal ...	84·3	44 9	79·0	51·8	65 4	—2·1	Nil	0·39	—0·39	0·0	0·6	—0·6	Nil	0·39	52 81	52·33
East Bengal	81·1	47·0	77·4	50·0	64·0	—2·3	Nil	0·28	—0·28	0·0	0·6	—0·6	Nil	0·28	76 56	74·26
North Bengal*	78·6	42·7	77·1	46·6	61 9	—0·7	Nil	0·12	—0 12	0·0	0 4	—0·4	Nil	0·12	73·54	70 55
North Behar	77·4	41·9	74·5	43·6	59·1	—2·9	Nil	0·11	—0·11	0·0	0 4	—0 4	Nil	0·11	57·89	48·90
South Behar	79·8	42·6	76·7	47·2	61·9	—0·9	Nil	0·17	—0·17	0·0	0·5	—0·5	Nil	0·17	44·16	44·98
Chutia Nagpur	79 5°	46·6°	76·1°	49 6°	62 8°	—0·4°	Nil	0·23	—0 23	0·0	0·6	—0·6	Nil	0·23	43·08	49·80

* Chupra, Cuyebasse and Julpigoree not included.

Meteorological Office, Bengal;
The 11th February 1890.

A. Pedler,
Meteorological Reporter to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from 2nd to 8th February 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature.				Hygrometry.				Wind.		Rain.	Weather.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1890.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Feb.	2nd	131·2	9·6	30·091	63·9	76·4	24·1	52·3	55·9	0·346	48·8	61	W by S and variable	54	Nil	Clear, ≏.
,,	3rd	132·5	9·9	·055	64·2	77·3	23·7	53·6	56·5	·356	49·6	63	N and NNW ...	62	,,	Clear, ≏.
,,	4th	130·5	9·2	·012	64·9	78·5	25·2	53·3	57·6	·381	51·4	66	W and variable ...	39	,,	Clear, ≏.
,,	5th	132·1	9·6	·027	65·7	78·0	23·7	54·3	58·2	·392	52·2	64	SW by W and variable.	57	,,	Clear, ≏.
,,	6th	130·8	9·3	·046	64·7	77·6	24·7	52·9	57·3	·374	50·9	65	NNE, calm and variable.	38	,,	Clear, ≏, ≡.
,,	7th	134·3	9·6	·002	66·3	80·8	26·3	54·5	59·8	·432	54·9	70	SW, NNW, and calm	37	,,	Clear, ≏, ≡.
,,	8th	137·5	9·4	·037	67·6	80·8	22·6	58·2	61·2	·456	56·4	67	NNW and NNE ...	44	,,	Clear, ≏, ≡.

	Inches.
The mean pressure of the seven days	30·039
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...	29·970
	Hours.
The total number of hours of bright sunshine	66·6
The maximum possible number of hours of sunshine	78·2
	°
The mean temperature of the seven days	65·3
The average temperature of the corresponding period for 24 years, S.-G.'s Office	70·3
The extreme variation of temperature	28·5
The maximum temperature	80·8
	Miles.
The highest velocity of the wind in one hour	7
	lbs.
The highest pressure of wind on one square foot	Not measurable.
	%
The mean relative humidity	65
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office	69
	Inches.
The total fall of rain from 2nd to 8th February 1890	Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	0·20
The total fall from 1st January to 8th February 1890	0·77
The average fall of the corresponding period for 24 years, S.-G.'s Office ...	0·65

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the New Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

≏ dew, ≡ fog.

C. Little,

For Meteorological Reporter to the Govt. of India.

Meteorological Office, Govt. of India;
Calcutta, the 10th February 1890.

Abstract of the Results of the Barometric and Thermometric Observations taken at 10 a.m. at the Meteorological Office, Chowringhee, in the month of January 1890.

	Inches.	Date.
The mean pressure at 10 A.M. during the month	30·092	
	°	
The mean temperature at 10 A.M. during the month ...	70·5	
The highest temperature during the month ...	82·9	19th and 24th.
The lowest temperature during the month ...	48·4	28th.
The absolute range of temperature during the month ...	34·5	
The mean daily range of temperature during the month	21·1	
The greatest range of temperature in one day during the month	26·0	28th
	%	
The mean 10 A.M. humidity during the month ...	67	
	Inches.	
The mean 10 A.M. vapour tension during the month ...	·506	
The total rainfall of the month	1·02	
The greatest fall in 24 hours	1·02	25th.
	Days.	
The number of rainy days in the month	1	

C. LITTLE,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA,
The 3rd February 1890.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 2nd to 8th February 1890.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature. Daily mean.	Maximum.	Range.	Minimum.	Hygrometry. Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	Rainfall
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Feb. 1890 ...	2nd ...	30·178	65·4	78·3	25·9	52·4	69·6	58·7	·348	49·0	48	Nil
" " ...	3rd ...	·148	65·2	77·9	25·5	52·4	70·1	58·7	·344	48·6	46	.....
" " ...	4th ...	·104	67·0	79·9	25·9	54·0	72·6	59·7	·343	48·6	42	.....
" " ...	5th ...	·116	67·4	79·9	25·0	54·9	71·4	57·7	·296	44·6	40	.....
" " ...	6th ...	·139	66·8	79·7	25·8	53·9	71·6	57·7	·293	44·4	38	.....
" " ...	7th ...	·193	69·0	82·1	26·2	55·9	71·6	66·2	·572	62·8	74	.....
" " ...	8th ...	·102	70·4	81·9	23·0	58·9	72·6	67·1	·591	63·7	74	.....

	Inches.
The mean 10 A.M. pressure of the seven days	30·125
	°
The mean temperature of the seven days	67·3
The extreme variation of temperature	29·7
The maximum temperature	82·1
	%
The mean 10 A.M. relative humidity of the seven days	52
	Inches.
The total fall of rain from 2nd to 8th February 1890	Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. LITTLE,
For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;
The 10th February 1890.

MEMORANDUM.

THE returns from the principal Municipalities in Bengal, for the week ending 25th January 1890, present the following results :—

1. The birth-rate in these Municipalities stood at 22·8 per 1,000 of population, against very nearly the same proportion, viz., 23·1 per 1,000, during the preceding week ending 18th January, and the death-rate 18·5, against 21·8 per 1,000, indicating a retrogression in the registration of the latter events.

2. The highest proportions of births and deaths were returned from the following Municipalities :—

Births.	Ratio per *mille.*	*Deaths.*	Ratio per *mille.*
Ranaghat ...	47·9	Poori	62·9
Mozufferpore	47·6	Jessore	49·0
Serampore	41·2	Comillah	42·4
Durbhanga	39·3	Hughli and Chinsurah ...	36·1
Darjiling	37·0	Chittagong	30·5
Santipore	36·8		
Monghyr	35·3		
Narainganj ...	33·1		
Hughli and Chinsurah	32·8		
Rampore Beauleah	31·5		

3. The following figures represent the rates of mortality from the principal diseases under record, during the week under notice, contrasted with similar information for the preceding week ending 18th January :—

	Ratio per *mille* during the weeks ending—	
	25th January 1890.	18th January 1890.
Cholera	1·8	2·3
Small-pox .	·3	·6
Fever .	7·9	8·9
Bowel-complaints	3·3	3·1
Injury .	·5	·3
Other causes	4·7	6·6

indicating chiefly that there was a decrease of mortality from fever and the unspecified diseases coming under the head of "Other causes."

4. Of the diseases mentioned above, cholera, fever, bowel-complaints, and "Other causes" proved conspicuously fatal in the following Municipalities :—

Cholera.	Ratio per *mille.*	*Fever.*	Ratio per *mille.*	*Bowel-complaints.*	Ratio per *mille.*	*Other causes.*	Ratio per *mille.*
Comillah ...	23·1	Jessore ...	24·5	Poori ...	14·6	Comillah ...	19·3
Hughli and Chinsurah ...	9·8			Mozufferpore ...	13·2	Gya ...	10·2
Howrah ...	8·0						

The mortality from small-pox in the Poori Municipality, although still high, was considerably below that of the preceding week ending 18th January, viz., 10·5, against 18·9 per 1,000 of population.

5. Under the heads of *Sex*, *Class* and *Age*, the mortality of the week stood as follows :—

According to Sex.	Ratio per *mille.*	*According to Class.*	Ratio per *mille.*	*According to Age.*	Ratio per *mille.*
Males	29·3	Christians	44·8	Under 1 year ...	139·3
Females	16·6	Hindus	17·9	1 and under 5 years ...	16·2
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population ...	125	Mahomedans ...	19·8	5 „ 10 „ ...	13·7
				10 „ 15 „ ...	10·3
				15 „ 20 „ ...	9·6
				20 „ 30 „ ...	11·8
				30 „ 40 „ ...	13·1
				40 „ 50 „ ...	10·4
				50 „ 60 „ ...	17·4
				60 years and upwards ...	59·3

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

The 10th February 1890.

1	2	3			4			5			6	7							8						9	10		11		12
DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—																		
												Disease.														Sex.				
					Number of—			Ratio per 1,000 of Population per annum.				Deaths from—							Ratio per 1,000 of Population per annum.											
		Males.	Females	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	Deaths.		Ratio per 1,000 of Population per annum.		Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population.
																											Males.	Females.	Males.	Females.	
Burdwan ...	Burdwan	18,063	16,017	34,080	4	6	10	6·1	9·2	15·3	66	...	..	7	4	...	4	15	...	...	10·7	6·1	..	6·1	22·9	36·6	8	7	23·0	22·7	104
Midnapore ...	Midnapore ...	16,927	16,633	33,560	4	4	8	6·2	6·2	12·4	100	..	...	...	4	...	4	8	...	...	...	6·2	...	6·2	12·4	15·5	6	2	18·4	6·3	300
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	10	10	20	16·4	16·4	32·9	100	6	...	9	3	...	4	22	9·8	...	14·8	4·9	...	6·6	36·1	32·8	10	12	32·8	39·4	82
Serampore ...	Serampore ...	13,559	12,937	26,496	13	9	21	23·5	17·7	41·2	133	2	..	5	2	1	3	13	3·9	...	9·8	3·9	2·0	5·9	25·5	41·2	11	2	42·2	8·0	525
	Utterpara	3,046	2,464	5,510	3	...	3	28·3	..	28·3	No female birth.	...	...	1	1	...	...	2	...	...	9·4	9·4	..	...	18·9	47·2	1	1	17·1	21·1	81
Howrah ..	Howrah	53,153	37,660	90,813	14	13	27	8·0	7·4	15·5	107	14	...	8	9	...	2	33	8·0	...	4·6	5·2	...	1·1	18·9	26·9	22	11	21·5	15·2	140
	Bali	7,836	6,979	14,815	3	3	6	10·5	10·5	21·1	100	...	...	2	1	..	1	4	...	..	7·0	3·5	...	3·5	14·0	21·1	2	2	13·3	14·9	93
Nuddea ..	Kishnaghur ...	13,263	14,214	27,477	9	5	14	17·0	9·5	26·5	180	..	...	5	...	...	2	7	...	...	9·5	...	...	3·7	13·2	1·9	4	3	15·7	11·0	136
	Ranaghat	4,928	4,655	8,583	3	5	8	18·0	29·9	47·9	60	..	...	2	1	...	...	3	...	...	12·0	6·0	...	..	18·0	47·9	1	2	12·9	22·3	54
	Santipore	13,708	15,979	29,687	10	11	21	17·5	19 3	36·8	90	2	..	7	1	...	...	10	3·5	...	12·3	1·7	...	...	17·5	12·3	8	2	30·3	6·5	500
Jessore ...	Jessore	4,830	3,665	8,495	...	1	1	...	6·1	6·1	No male birth.	2	...	4	2	...	...	8	12·2	...	24·5	12·2	...	...	49·0	49·0	4	4	43·1	56·8	77
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	5	7	12	13·1	18·4	31·5	71	...	...	3	...	...	1	4	...	...	7·9	..	...	2·6	10·5	31·5	1	3	4·8	17·3	33
Darjiling ...	Darjiling	4,579	2,439	7,018	4	1	5	29·6	7·4	37·0	400	.	..	2	...	...	1	3	...	...	14·8	...	..	7·4	22·2	37·0	1	2	11·4	42·6	26
Dacca ...	Dacca	42,782	37,379	80,161	9	11	20	5·8	7·1	13 0	81	...	.	12	6	1	6	25	...	...	7·8	3·9	·6	3·9	16·2	21·4	14	11	17·0	15·3	113
	Naraingunj ...	7,605	4,956	12,561	7	1	8	29·0	4·1	33·1	700	..	..	2	2	...	3	7	...	...	8·3	8·3	...	12·4	29·0	58·0	5	2	34·2	21·0	162
Chittagong ...	Chittagong ...	13,340	8,790	22,130	3	4	7	7 0	9·4	16·4	75	...	...	2	4	3	4	13	...	...	4·7	9·4	7 0	9·4	30·5	37·6	7	6	27·3	35·5	77
Tipperah ...	Comillah	8,153	5,353	13,506	1	3	4	3·9	11·5	15·4	33	6	...	...	...	...	5	11	23·1	...	...	...	...	19·3	42·4	34·7	6	5	38·3	48·6	79
Patna	Patna City ...	78,762	81,475	160,237	18	18	36	5·8	5·8	11·7	100	1	...	7	7	...	4	19	·3	...	2·3	2·3	...	1·3	6·2	8 1	9	10	5·9	6·4	83
Gya	Gya	38,290	37,831	76,121	22	19	41	15·0	13·0	25·0	115	...	...	21	...	...	15	36	...	...	14·3	...	...	10·2	24·6	23·2	24	12	32·6	16·5	200
Shahabad ..	Arrah	20,960	22,505	43,465	11	14	25	13 2	16 7	29·9	78	..	...	6	2	...	...	8	...	...	7·2	2·4	...	...	9·6	20·3	4	4	9·9	9·2	100
Mozufferpore .	Mozufferpore ...	23,084	19,658	42,742	6	12	18	15·9	31·7	47·6	50		...	4	5	...	2	11	..	...	10·6	13·2	...	5·3	29·1	13·4	4	7	9·0	18·5	50
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	26	24	50	20·4	18·9	39·3	108	1		14	...	...	11	26	·8	..	11·0	...	...	5·6	20·4	22 8	13	13	20·0	20·9	100
Saran	Chupra	25,116	26,554	51,670	14	15	29	14·1	15 1	29 2	93	...	1	7	3	3	5	19	...	1·0	7·0	3·0	3·0	5·0	19·1	10·1	12	7	24·8	13·7	184
Bhagulpore ...	Bhagulpore ...	29,640	27,813	57,453	11	7	18	10·0	6 3	16·3	157	...	....	10	..	...	6	16	...	..	9·1	...	...	5·4	14·5	19·9	7	9	12·3	16·8	77
Monghyr ..	Monghyr	28,154	29,366	57,520	13	26	39	11·8	23·5	35·3	50	...	...	7	3	...	8	18	...	...	6·3	2·7	...	7·2	16·3	19·0	9	9	16·6	15·9	106
Purneah ...	Purneah	8,463	6,553	15,016	2	3	5	6·9	10·4	17·3	66	...	...	5	1	...	1	7	...	...	17·3	3·4	...	3·4	24·2	...	5	2	30·7	15·9	200
Poori	Poori	13,247	11,537	24,784	5	4	9	10·5	8·4	18·9	125	3	5	9	7	2	4	30	6·3	10·5	18·9	14 6	4·2	8·4	62·9	65·0	17	13	66·7	58·6	114
	Total ...	550,986	510,588	1,061,574	229	236	465	11·2	11·8	22·8	97	37	6	161	68	10	96	378	1·8	3	7·9	3·3	·5	4·7	18·5	21·5	215	163	20·3	16·6	125

DISTRICTS.	NAMES OF MUNICIPALITIES.	Class. Deaths among—					Class. Ratio per 1,000 of Population per annum.					Age. Deaths.										Age. Ratio per 1,000 of Population per annum.									
		Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	1	8	6	...	...	388·1	17·6	30·4	...	...	2	2	1	...	...	4	2	1	1	2	157·6	46·1	22·3	...	...	26·3	19·1	11·8	21·2	70·2
Midnapore ..	Midnapore ..	1	7	...	...	...	233·2	14·0	...	...	...	1	1	...	1	...	1	2	...	1	1	70·0	23·1	...	17·1	...	7·1	18·8	...	25·2	28·4
Hugh'i ...	Hughli and Chinsurah	1	17	4	...	...	226·1	35·0	33·7	...	...	3	1	1	1	1	4	1	2	1	7	194·3	23·4	18·0	21·0	20·7	33·5	9·1	24·9	20·0	175·6
Serampore ...	Serampore ..	...	10	3	..	...	..	20·6	166·3	...	...	2	1	1	1	1	1	4	1	...	1	146·5	28·8	20·7	23·4	23·8	9·7	41·8	15·4	...	37·4
	Utterpara	...	2	...	...	...	...	19·5	...	.	..	...	...		...	...	...	...	1	...	1	...	...	...	...	...	...	...	74·2	...	200·0
Howrah ...	Howrah	1	21	11	...	...	27·5	16·0	27·9	...	..	2	5	3	2	3	4	3	6	2	3	50·4	46·9	24·8	15·8	21·3	9·2	8·1	26·5	18·9	41·6
	Bali	...	4	...	...	.	...	15·5	...	...	...	1	...	...	1	...	...	1	...	...	1	143·6	...	...	43·8	...	...	18·6	...	...	71·0
Nudden ...	Kishnaghur ...	...	4	3	...	...	.	11·2	18·9	...	...	2	...	1	...	...	...	2	...	...	2	209·7	...	15·1	...	...	...	24·3	...	...	60·2
	Ranaghat	...	3	...	...	...		21·3	...	...	..	1	...	1	...	1	...	.	...	...	...	251·2	...	46·6	...	83·5	...	...	...	...	...
	Santipore	...	8	2	...	..	.	20·1	11·6	...	...	1	1	1	1	...	1	2	...	1	2	61·5	17·9	13·8	17·9	...	10·6	24·0	...	22·6	53·0
Jessore ...	Jessore	...	4	4	...	...	...	46·1	54·4	..	...	2	...	...	2	...	1	2	...	1	...	536·1	...	...	156·4	...	25·8	68·0	...	92·4	...
Rajshahye ...	Rampore Beauleah	...	4	..	...	...	...	21·0	...	...	...	2	...	...	...	...	...	...	...	...	2	256·2	...	...	...	...	...	...	...	...	108·0
Darjiling ...	Darjiling	1	2	...	...	...	325·0	22·6	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	75·1	215·1	307·7
Dacca	Dacca	...	10	15	...	...	...	12·9	19·8	...	...	4	1	1	3	2	6	3	...	1	4	109·6	7·1	5·2	19·6	14·2	20·4	13·4	...	11·0	37·3
	Narsinganj ..	...	2	5	...	...	...	16·4	42·3	...	...	2	1	...	...	...	...	3	...	...	1	372·8	45·6	...	...	...	...	72·9	...	...	79·8
Chittagong ...	Chittagong ..	1	3	9	...	...	65·3	26·9	30·6	...	...	6	...	1	...	...	3	1	...	1	1	554·2	...	20·8	...	...	33·7	15·6	...	47·9	65·3
Tipperah ...	Comillah	...	2	9	...	...	...	17·5	63·3	...	...	5	...	...	...	...	1	1	...	1	3	875·4	...	...	...	...	18·8	26·1	...	64·9	250·1
Patna	Patna City ..	...	14	5	...	...	...	6·1	6·4	...	...	1	3	2	...	1	4	2	3	...	3	12·1	10·7	6·2	...	4·7	7·2	4·5	8·3	...	11·3
Gya ...	Gya ...	...	27	9	...	...	...	23·4	29·1	..	...	8	4	1	...	1	5	3	3	3	8	232·4	32·7	7·4	...	9·9	17·7	12·3	16·0	23·7	80·8
Shahabad ...	Arrah	..	5	3	...	...	...	8·4	13·6	...	...	3	...	1	1	...	...	...	...	...	3	121·1	...	10·1	11·8	...	...	...	...	...	54·1
Mozufferpore ..	Mozufferpore ...	...	8	3	...	..	...	13·9	12·5	...	..	2	...	1	...	. .	1	1	1	1	4	108·9	...	11·6	...	...	6·1	7·5	10·4	16·0	85·5
Durbhanga ...	Durbhanga ...	...	20	6	...	...	...	21·5	17·8	...	...	5	...	5	2	1	...	...	1	4	8	166·7	...	33·2	18·7	12·9	...	...	7·0	47·4	130·2
Sarun	Chupra	...	16	3	...	...	...	21·0	13·1	...	...	2	...	2	...	...	4	3	...	3	5	73·7	...	17·5	...	...	22·6	20·0	...	37·7	76·4
Bhagulpore ...	Bhagulpore ...	...	11	5	...	...	...	14·4	15·1	...	...	5		2	4	...	...	1	2	...	2	217·8	...	17·7	33·1	...	...	5·6	16·5	...	28·9
Monghyr ...	Monghyr	...	15	3	...	...	...	17·4	12·4	...	...	5	4	2	...	...	2	...	...	...	5	175·1	33·4	14·7	...	...	10·1	...	..	...	72·5
Purneah ...	Purneah	...	3	4	...	...	...	17·0	36·7	...	...	1	...	1	...	...	2	1	...	1	1	183·7	...	32·9	...	...	31·7	18·2	...	55·5	64·4
Poori ...	Poori	...	30	...	...	...	...	63·6	...	...	...	...	5	1	...	4	4	6	3	3	4	...	144·7	23·2	...	111·9	32·4	77·0	46·9	69·6	115·2
	TOTAL ...	6	330	112	...	...	44·5	17·9	19·8	...	...	68	29	29	19	15	48	44	25	26	75	159·3	16·2	13·7	10·3	9·6	11·8	13·1	10·4	17·4	59·3

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

PUBLIC WORKS DEPARTMENT, BENGAL.

IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1889-90.

Areas leased for Irrigation up to the end of November 1889.

CIRCLE.	DISTRICT.	CANAL.	Estimated full discharge.	Average discharge in month.	Discharge utilised.	Approximate area of land irrigated during the year up to the end of the month.	Approximate area of land under irrigation up to the same date last year.	DETAILS OF AREAS LEASED.								RAINFALL, 1889-90.		RAINFALL, 1888-89.		REMARKS.
								Five years, all crops.	Five years, kharif.	ANNUAL LEASES.										
										Kharif.	Rabi.	Sugar-cane.	Bhadoi.	Hot-weather.	Total.	Grand Total.	During month.	Up to end of month.	During month.	Up to end of month.	
			C. ft.	C. ft.	C. ft.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Inches.	Inches.	Inches.	Inches.	
ORISSA ...	Cuttack ...	Taldunda, 1st Reach.	1,342	414	228	10,483	9,832	.....	10,483	.....	384	12	.....	.....	396	10,879	11·90	72·09	11·90	69·45	
		Taldunda, 2nd Reach.	566	286																	
		Machgong ...	776	132	73	27,748	27,021	.....	27,748	.....	222	14	.....	.....	236	27,984	9·10	65·45	5·80	48·52	
		Kendrapara ...	1,067	357·24	146·86	48,088	47,803	.....	51,379	42	3,983	36	.....	.....	4,061	55,440	11·78	75·31	1·90	48·84	
		Gobri ...	372·82	42 14	12 33	1,876	1,717	.....	2,224	.....	215	3	.....	.....	218	2,442	11·01	65·07	2·58	37·02	
		Gobri Extension	648	64·70	10·64	1,940	2,345	.....	2,024	.....	7	.....	.....	.....	7	2,031	10·31	70·93	2·13	46·55	
		Pattamoondi ...	885	74·20	9·50	7,616	9,2 3	.....	9,523	80	543	.....	.....	.....	623	10,446	No gauge fixed.				
		High Level, Range I.	608	159·25	69·98	18,343	18,498	.....	17,188	.....	450	3	.....	.....	483	17,671	10·60	72·68	0·86	38·45	
		High Level, Range II.	727·16	62·71	79·65	2,370	2,444	.....	2,331	.....	61	.....	.....	.....	61	2,442	.....	.....	.....	.....	
	Balasore ...	High Level, Range III.	727·16	208·13	208·13	35,749	20,898	.....	34,399	.....	.....	88	.....	.....	88	34,487	9·50	49·48	1·71	51·12	
		Total ...	.....	.....	.....	154,113	139,751	.....	157,649	122	5,895	156	.....	.....	6,173	163,822	.....	.....	.....	.....	
	Total of the corresponding period of last year.		.....	.....	.....	.....	.....	.....	123,421	124	2,627	169	.....	.....	2,920	131,341	.....	.....	.....	.....	
SOUTH-WESTERN.	Midnapore ...	Midnapore ...	1,411	372	149	61,732	49,769	.....	60,695	.....	11	.....	.....	.....	11	60,676	3·93	46·91	0·03	61·58	Whole month discharging.
		Panchkoorah ...	522	8	.....	3,493	4,619	.....	4,343	.....	369	.....	.....	.....	369	4,715	1·67	51·21	0·26	55·42	9 days discharging.
	Howrah ...	Tidal Reaches, Ranges I and II.	.....	.....	.....	357	389	.....	318	.....	.....	.....	.....	.....	.....	319	.....	.....	.....	.....	
		Total ...	.....	.....	.....	65,582	54,777	.....	65,329	.....	380	.....	.....	.....	380	65,709	.....	.....	.....	.....	
	Total of the corresponding period of last year.		.....	.....	.....	.....	.....	.....	55,009	44	1,136	.....	.....	.....	1,180	56,189	.....	.....	.....	.....	
BOSE ...	Shahabad ...	Western Main ...	4,342	1,584	40	19,623	20,727	15,312	.....	2,707*	1,937	159	38	284	5,125	20,437	2·43	47·36	0·01	39·73	* These are correct figures. (*Vide* Superintending Engineer's memo. No. 5490, dated 27th December 1889.) † Less area due to transfer to five years' leases.
		Buxar	1,226	430	255	76,864	77,153	47,420	.....	20,694*	1,253	2,041	552	3,380	28,220	75,640					
		Arrah	2,000	906	670	136,639	147,443	91,460	.....	26,687†	4,439	2,220	211	8,373	41,930	133,460	0·20	41·30	0·58	37·07	
	Patna and Gya.	Eastern Main ...	1,466	573	188	1,331	1,647	1,091	.....	703	15	13	2	.....	732	1,823	0·30	45·97	0·68	41·83	
		Patna				53,407	57,934	37,424	.....	18,543	1,427	271	287	.....	20,488	57,911					
		Total ...	.....	.....	.....	287,864	304,904	192,727	.....	69,293	9,121	4,704	1,390	12,037	96,545	289,272	.....	.....	.....	.....	
	Total of the corresponding period of last year.		.....	.....	.....	.....	.....	191,557	.....	66,316	35,081	3,123	330	9,054	113,904	305,461	.....	.....	.....	.....	
	Grand Total ...		.....	.....	.....	507,559	499,432	192,727	222,979	69,415	15,396	4,860	1,390	12,037	103,098	518,803	.....	.....	.....	.....	
	Grand Total of the corresponding period of last year		.....	.....	.....	.....	.....	191,557	183,430	66,484	38,844	3,292	330	9,054	118,004	492,991	.....	.....	.....	.....	

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 8th February 1890, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 8th February 1890.			Week ending Saturday, the 9th February 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,807	3,45,095	5,900	1,576	4,07,000	7,006
Jute	179	1,35,490	2,320	110	82,150	1,480
Firewood	112	69,925	1,080	97	44,300	674
Other articles	979	2,40,465	3,510	1,113	2,24,430	3,297
Total ...	3,077	7,90,885	12,810	2,896	7,57,880	12,457

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 1st February 1890, on 1,525½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
...ffic for the week ...	*247,965	*2,85,017 11 0	24,72,428 30	5,73,894 12 6	20,375 4 0	8,79,287 11 6	65,622½	86,687½	152,310½
...le of railway	.....	186 13 4	.....	376 3 3	13 5 8	576 0 3	.....	.....	....
...ous 4 weeks of half-	952,143	10,81,922 9 0	91,60,669 30	20,90,098 2 0	71,080 10 0	32,42,597 5 0	236,037½	326,886½	562,923½
...otal for 5 weeks ...	1,200,108	13,66,340 4 0	1,16,33,098 20	26,63,992 14 6	91,461 14 0	41,21,795 0 6	301,658	413,576	715,234
Comparison.									
...corresponding week ...ious year ... ...f railway correspond- ...k of previous year .. ...orresponding date of ...s year	270,790	3,34,076 0 4	27,88,780 10	6,28,252 3 9	14,989 8 4	9,78,217 12 [illegible]	68,330	99,318	167,648
	... ..	210 9 4	.....	411 13 4	9 13 3	641 3 11	.....	.....	.....
	1,150,104	13,77,073 14 1	1,33,41,809 30	29,52,069 7 9	71,069 0 2	44,00,811 15 [illegible]	311,032	471,464	782,496

...rease in coaching traffic is due to figures for the corresponding period of 1889 having included earnings on account of troop extra trains, and of "Magh Mela."

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

...'s for week ending February 1889.		Receipts for week ending 1st February 1890.			Total receipts from 1st April 1888 to 2nd February 1889.			Total receipts from 1st April 1889 to 1st February 1890.			Total increase in 1890.	Total decrease in 1890.
Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
9,78,218	641	1,525½	8,79,283	576	1,525½	3,09,40,537	550	1,525½	3,06,82,862	547	.....	2,57,675

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 1st February 1890, on 57½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles Ru		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Tot
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	11,838	6,113 0 0	39,861 10	2,509 15 0	52 9 0	8,675 8 0	1,807	587	2,
Or per mile of railway	207	106 13 11	697 0	43 14 1	0 14 9	151 10 9	.....	.....	...
For previous 4 weeks of half-year	47,282	24,471 6 0	1,21,219 10	8,423 12 0	179 15 0	33,075 1 0	6,254	2,862	9,
Total for 5 weeks ...	59,120	30,585 6 0	1,61,080 20	10,933 11 0	232 8 0	41,750 9 0	8,061	3,449	11,
Comparison.									
Total for corresponding week of previous year	11,792½	6,331 7 7	22,959 30	1,654 8 0	29 5 9	8,015 5 4	1,078	416	2,
Per mile of railway corresponding week of previous year ...	206	110 11 0	401 20	28 14 10	0 8 3	140 2 1	.....	.....	...
Total to corresponding date of previous year	57,830½	30,563 4 0	1,55,197 10	8,541 12 0	161 1 6	39,266 1 6	9,087	2,887	11,

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 2nd February 1889.			Receipts for week ending 1st February 1890.			Total receipts from 1st April 1888 to 2nd February 1889.			Total receipts from 1st April 1889 to 1st February 1890.			Total increase in 1890.	Total decrease 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	
57½	8,015	140	57½	8,676	152	57½	4,08,024	152	57½	4,24,182	169	16,158	.....

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 1st February 1890, on 22¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles	
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
Total traffic for the week ...	10,518	4,875 9 0	13,359 20	474 0 0	8 0 0	5,357 9 0	898	70
Or per mile of railway ...	.....	219 2 1	.....	21 4 10	0 5 9	240 12 8	.....	.....
For previous 4 weeks of half-year	69,123	17,429 8 0	40,104 0	1,532 8 0	25 15 0	18,987 15 0	3,221	249
Total for 5 weeks ...	88,641	22,305 1 0	53,463 20	2,006 8 0	33 15 0	24,345 8 0	4,119	319
Comparison.								
Total for corresponding week of previous year	19,700½	5,048 9 9	10,505 10	351 5 0	7 8 0	5,407 6 9	905	63
Per mile of railway corresponding week of previous year ...	.....	226 14 5	.....	15 12 8	0 5 5	243 0 6	.....	.....
Total to corresponding date of previous year	90,768	22,794 1 7	44,501 20	1,550 6 0	31 3 9	24,375 11 4	4,234	320

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Work Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 2nd February 1889.			Receipts for week ending 1st February 1890.			Total receipts from 1st April 1888 to 2nd February 1889.			Total receipts from 1st April 1889 to 1st February 1890.			Total increase in 1890.	T decr
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	
22¼	5,407	243	22¼	5,358	241	22¼	2,31,256	236	22¼	2,28,342	233	.....	

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 25th January 1890, on 86 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	15,780	5,960 0 0	34,250 0	3,430 0 0	80 0 0	9,470 0 0	2,414	1,130	3,544
Or per mile of railway	183	69 0 0	398 0	40 0 0	1 0 0	110 0 0	.....	.....	.....
For previous 3 weeks of half-year	45,520	16,920 0 0	96,850 0	10,010 0 0	620 0 0	27,580 0 0	6,440	2,368	8,808
Total for 4 weeks ...	61,300	22,880 0 0	1,31,100 0	13,470 0 0	700 0 0	37,050 0 0	8,854	3,498	12,352
Comparison.									
Total for corresponding period of previous year	15,189	4,836 0 0	10,884 0	1,250 0 0	94 0 0	6,180 0 0	2,482	622	3,104
Per mile of railway corresponding period of previous year	177	56 0 0	126 0	15 0 0	1 0 0	72 0 0	.....	.....	.....
Total to corresponding date of previous year	56,959	17,314 0 0	44,075 0	14,821 0 0	433 0 0	22,568 0 0	9,215	2,317	11,532

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for week ending 26th January 1889.			Receipts for week ending 25th January 1890.			Total receipts from 1st April 1888 to 25th January 1889.			Total receipts from 1st April 1889 to 25th January 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	6,180	72	86	9,470	110	86	2,46,042	67	86	*3,21,972	87	75,930	.....

* Audited up to week ending 14th December 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 1st February 1890, on 27¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	3,023	1,087 0 0	10,555 0	722 0 0	14 0 0	1,832 0 0	509	254	763
Or per mile of railway	111	40 0 0	387 0	26 0 0	1 0 0	67 0 0	.....	.....	.....
For previous 3 weeks of half-year	10,781	3,762 0 0	54,882 0	3,314 0 0	51 0 0	7,117 0 0	1,818	907	2,725
Total for 4 weeks ...	13,804	4,839 0 0	65,437 0	4,036 0 0	65 0 0	8,940 0 0	2,327	1,161	3,488
Comparison.									
Total for corresponding week of previous year	3,223	1,179 0 0	10,080 0	945 0 0	14 0 0	2,138 0 0	509	635	1,144
Per mile of railway corresponding week of previous year ..	118	43 0 0	590 0	35 0 0	1 0 0	79 0 0	.....	.....	.....
Total to corresponding date of previous year	14,954	5,282 0 0	74,769 0	3,882 0 0	85 0 0	9,449 0 0	2,399	2,638	5,037

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

Receipts for week ending 2nd February 1889.			Receipts for week ending 1st February 1890.			Total receipts from 1st April 1888 to 2nd February 1889.			Total receipts from 1st April 1889 to 1st February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27¼	2,138	79	27¼	1,923	67	27¼	84,690	74	27¼	84,507	74	.....	183

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 1st February 1890, on 273 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	43,941	19,435 0 0	2,00,381 0	32,691 0 0	5,578 0 0	57,704 0 0	6,435	9,318	15,753
Per mile of railway	161	71 0 0	1,004 0	120 0 0	3 0 0	194 0 0*	.....	.....	.....
For previous 3 weeks of half-year	102,270	71,962 0 0	8,40,269 0	94,122 0 0	18,000 0 0	1,84,084 0 0	21,516	29,932	51,448
Total for 4 weeks ...	206,211	91,397 0 0	11,30,650 0	1,26,813 0 0	23,578 0 0	2,41,788 0 0	27,951	39,250	67,201
COMPARISON.									
Total for corresponding week of previous year	35,857	14,026 0 0	1,19,895 0	11,605 0 0	2,915 0 0	28,616 0 0	6,004	5,108	11,112
Per mile of railway corresponding week of previous year ...	131	52 0 0	439 0	42 0 0	1 0 0	95 0 0*	.....	.....	.....
Total to corresponding date of previous year	177,494	84,941 0 0	6,29,346 0	57,782 0 0	14,401 0 0	1,37,124 0 0	25,933	25,706	51,639

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

Receipts for week ending 2nd February 1889			Receipts for week ending 1st February 1890.			Total receipts from 1st April 1888 to 2nd February 1889.			Total receipts from 1st April 1889 to 1st February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
273	28,616	105	273	57,704	211	264·68	13,66,627	125	273	17,25,108	150	3,38,481	.....

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.
Approximate earnings for week ending 18th January 1890	8,031
Corresponding week last year	8,321
Decrease	290
Receipts from 1st to 18th January 1890	17,513
From 1st to 19th January 1889	16,338
Increase	1,175
	Miles.
Miles open week ending 18th January 1890	51
Corresponding week last year	51
	Rs. A. P.
Receipts per mile open week ending 18th January 1890	157 7 6
Corresponding week last year	163 2 7
Decrease	5 11 1

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APPENDIX TO

The Calcutta Gazette

WEDNESDAY, FEBRUARY 12, 1890.

[Second Publication.]

PUBLIC WORKS DEPARTMENT,—MARINE.

NOTIFICATION.

No. 23 Marine, dated Calcutta, the 30th January 1890.

UNDER the powers conferred upon him by section 36 of the Indian Steam-ships Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to Engineers of sea-going steam-ships.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates of competency granted to persons who pass requisite examinations.

1. Certificates of competency will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose Examiners have been appointed, and arrangements have been made for holding the examinations periodically at the Port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint

Examinations continued till all the candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the candidates who have then presented themselves and whose names appear upon the Port Officer's list on the day of examination are examined.

Application how to be made.

3. The application for examination is to be made on Form Exn. 3, which must be filled up at the Port Office. The Form Exn. 3 properly filled in, together with the Candidate's Indentures of Apprenticeship, testimonials, and discharges, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials required.

4. Applicants will be required to produce, in addition to the usual Forms of Discharge, satisfactory testimonials as to sobriety, experience, ability, and general good conduct for at least the 12 months immediately preceding the date of application to be examined, and without producing them no person will be examined. If the service has been on shore, the testimonial must be signed by an Employer; if at sea, by the Master and Chief Engineer.

5. In cases where a testimonial from the Chief Engineer, or from the Master, is for any sufficient reason not obtainable, one may be submitted from the Superintending Engineer in place of that of the Chief Engineer, and one from the Managing Owner or Secretary or Chairman of a large Company in place of that of the Master, but in every such instance the testimonial must declare that the facts stated are in accordance with the reports made by the Chief Engineer or the Master, as the case may be, or else that the facts are within the writer's personal knowledge.

6. As such testimonials may have to be verified before the Candidate can be examined, it is desirable that they should be handed in, together with the Form Exn. 3, as early as possible.

Testimonials of Foreigners

7. The testimonials of servitude of Foreigners and of British Seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits: and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificate as to age.

8. Should any doubt exist as to the age of a Candidate, he will be required to produce a Certificate of Birth or Baptism.

Foreigners to know English.

9. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel.

Verification of services, &c., by Articles.

10. Services which cannot be verified by proper entries in the Articles of the Ships in which the Candidates have served cannot be counted.

Service on a lake or river.

11. In addition to the required workshop time, service on a lake or river, in a steamer in which the aggregate piston area of the propelling engines proper amounts to at least 2,000 (two thousand) circular inches will be accepted towards qualifying a candidate to be examined for a certificate of competency as follows:—

Two months of river or lake service, in a capacity not lower than that of Third Engineer, may be deemed equivalent to one month of sea service, provided that,

For a Second Class Certificate, not less than three months of the qualifying service must be actual sea service, and that,

For a First Class Certificate, at least six months of the qualifying service must have been at sea in a grade not below that of Third Engineer, where an engineer of a lower grade is carried. During the last 18 months of this service the candidate must have been in possession of a Second Class Engineer's Certificate of competency.

Assistant Engineer.

12. Service entered upon a ship's Articles as having been performed in the capacity of Assistant Engineer must be supported by proof of the Candidate having acted as Second, Third, or Fourth Engineer, as the case may be.

Service in home or coasting trade.

13. The service required by the Regulations to qualify a candidate for examination is to be regarded as referring to service in the Foreign Trade only. Service in the Home or Coasting Trade must amount to at least half as much again as that required by the Regulations to make up for the time spent in Port, *e.g.*, for every twelve months' service under the Regulations, eighteen months' service in the Home or Coasting Trade will be required. In all cases the length of service is deemed to commence on the date of signing of the articles of agreement, and to end on the date of discharge.

Service as Engineer only accepted as qualifying service.

14. Service in the engine-room (afterwards referred to) for qualifying a candidate to be examined for a Second-class Engineer's Certificate must be only in those capacities which afford opportunities of obtaining practical experience as an engineer; and service in the capacity of fireman, stoker, donkeyman, greaser, winchman, labourer, engineer's steward, or any other capacity than that of engineer taking watch on engines and boilers for propelling will not be accepted

Service as Third and Fourth Engineers

15. Service as Third and Fourth Engineer in Foreign-going steamers, where more than three or four engineers, as the case may be, are carried, their names being all entered on the Articles in their respective ratings, may be accepted equally with service as Second Engineer to qualify a Candidate for examination for a First-class Engineer's Certificate, provided he has, during the whole of such service, been in possession of a Second class Engineer's Certificate (Imperial, or under Order in Council), and provided also that he was regularly in charge of a watch. In the case of Fourth Engineers, however, eighteen months of such service must be proved for every twelve months required by the Regulations.

16. Service in a capacity below that of Fourth Engineer cannot be accepted as qualifying for any class of certificate unless the testimonials of the candidate explicitly certify that during such service he has been taking regular watch in the engine-room, and that the Chief Engineer or Superintending Engineer considers him properly qualified by that experience to act as Chief Engineer of a Foreign-going steamer of 99 horse-power nominal. *In any case the applicant must prove that he has had the responsible charge of the engines or boilers on regular watch for at least twelve months of sea service, of which for not less than six months he must have been in charge of the propelling engines and rated on the articles not lower than Fourth Engineer.* Service below the grade of Fourth Engineer.

17. Having "responsible charge" will be understood to imply, in regard to the engines, that the applicant, for the time specified, was, on regular watch, the person responsible for carrying out the orders of the engine-room telegraph, and, in regard to the boilers, that he was, similarly for the period specified, the person responsible for regulating the feeds.

18. When the workshop service has been performed in a place *where steam-engines are not made*, and the class of work done is similar to that required in engine-making, the service may be accepted with an additional year in the engine-room; that is, three years' workshop service and two years in the engine-room, of which one year must have been at sea. The approval of the Government must be obtained in every such case before the authority to receive a certificate is issued by the Examiners. Workshop service.

19. When the workshop service has been performed in a place *where engines are made*, and the department in which the applicant has been principally engaged is not "*fitting*" or "*erecting*," if the nature of the service be such as is useful training for an Engineer, the Government may, on proper representation of the circumstances, see fit to accept the service as qualifying along with subsequent experience, but in every such case the applicant must prove additional engine-room service as required above. The approval of the Government must likewise be obtained.

20. If a candidate has served in the Engine Room with a Second class Certificate in the capacity of a Second Engineer in Foreign-going Steam-Ships under 100 horse-power, or in Home Trade Passenger Steam-Ships, which are not required by law to carry a certificated Second Engineer, his service may be accepted without reference to the vessel's horse-power, provided he has been on the ship's articles as Second Engineer, and produces certificates of discharge as Second Engineer, for the required period. Service as Second Engineer where certificate not required

21. The Government may see fit to allow an applicant who, in consequence of service abroad, has been unable to obtain a Second-class Certificate, to be examined for a First-class Certificate, although he has not obtained a Certificate of the lower grade, provided he is able to satisfy them as to the satisfactory character of his services. First-class certificates without second.

22. In such cases (para. 21) or in cases where the candidate is already in possession of a Certificate of Service, should he fail to pass the examination for the higher grade, but passes the examination for the lower grade, he may receive a Certificate accordingly, but no part of the fee will be returned. Unsuccessful candidates may in certain cases receive certificates for inferior grade.

23. A candidate who under the above regulation (para. 21) has been permitted to be examined for a First-class Certificate without first obtaining a Second-class Certificate of Competency, and who fails in his examination in practical knowledge, may not be re-examined for a Certificate of the higher grade until he has served 12 months as Second Engineer with a Second-class Engineer's certificate of competency as required by the Regulations. Consequence of failure in such cases.

24. If the candidate fails altogether, *i.e.*, both in the examination for the lower as well as for the higher grade of Certificate (para. 21), he may be re-examined for a *Second-class Certificate only*, subject to the usual regulations relating to failure.

If after passing examination services are found to have been insufficient.

25. If after a Candidate has passed his Examination it is discovered on further investigation, *e.g.*, by verification on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for which he has passed, it will not be granted to him; but if the Government are satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, the Certificate may be issued to him, or he may be allowed to go up for re-examination without payment of further fee, when he has performed the amount of service in which he was deficient as the Government may direct.

Certificate of lower grade may be granted on certain conditions.

26. If, in such a case, the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate may be placed to his credit.

May have to be re-examined for certificate of higher grade.

27. In such a case when the applicant has by further service made up the time in which he was found to be short, he may be required, before he can receive the higher certificate, to be re-examined in all the subjects.

Qualifications for Certificates of Competency.

Qualification of candidate for Second class Engineer's Certificate.

28. SECOND-CLASS ENGINEER.—A candidate for a Second-class Engineer's certificate must be not less than 21 years of age;

(*a*) He must have served an apprenticeship to an Engineer for three years in England or five in India at least, and prove that during the period of his apprenticeship he has been employed on the making and repairing of engines:—Or if he has not served an apprenticeship, he must prove that for not less than three years in England or five in India he has been employed as a journeyman mechanic in some factory or workshop* on the making or repairing of engines.† In either case he must also have served one year at sea in the Engine Room as an Engineer on regular Watch in the Foreign, Home or Coasting Trade‡; or

(*b*) He must have served at least four years at sea in the Engine Room as an Engineer on regular Watch in the Foreign, Home or Coasting Trade.

(*c*) He must be able to give a description of boilers, and the methods of staying them, together with the use and management of the different valves, cocks, pipes, and connections.

(*d*) He must understand how to correct defects from accident, decay, &c., and the means of repairing such defects.

(*e*) He must understand the use of the barometer, thermometer, and salinometer, and the principles on which they are constructed.

(*f*) He must state the causes, effects, and usual remedies for incrustation and corrosion.

(*g*) He must be able to state how a temporary or permanent repair could be effected in case of derangement of a part of the machinery, or total break-down.

(*h*) He must write a legible hand, and understand the first five rules of arithmetic, and decimals, and their application to questions about consumption of stores, and full capacities of tanks and bunkers, the duty of pumps, and the direct strains in engines and boilers.

(*i*) He must be able to pass a creditable examination as to the various constructions of paddle and screw engines in general use; as to the details of the different working parts, external and internal, and the use of each part.

* No period of service in a drawing office can be allowed to count for more than six months workshop time.

† These may be either land or marine engines.

‡ *See* paragraph 13 as to service in Home or Coasting Trade.

29. FIRST-CLASS ENGINEER.—A candidate for a First-class Engineer's Certificate must be not less than 22 years of age. Qualification of candidate for First-class Engineer's certificate.

30. In addition to the qualification required for a Second-class Engineer—

(*a*) He must either possess, or be entitled to, a First-class Engineer's certificate of service; or, in the event of his not being so possessed or entitled, he must have served for one year at sea as Second Engineer with a Second-class Engineer's Certificate of Competency, or for two years at sea as Second Engineer with a Second-class Engineer's Certificate of Service: or having served one year at sea as Second Engineer with a Second-class Engineer's certificate of Service, he must show, in addition, at least six months' service as Chief Engineer in a vessel required by law to carry at least one Engineer holding a certificate. (*See also paragraph* 15 *as regards service as Third and Fourth Engineer.*)

The Examiner should therefore be satisfied that an applicant for a First-class Engineer's Certificate has not only been *in possession* of a Second-class Certificate for the periods above stated, but that he has actually *served* for such periods in the Engine Room at sea with a Second-class Certificate in the capacities referred to, and that his name has been entered in the articles of agreement accordingly. (*See also para* 21.)

(*b*) He will be required to make an intelligible hand sketch, or a working drawing of some one or more of the principal parts of a steam-engine; and to mark in, without a copy, all the necessary dimensions in figures, so that the sketch or drawing could be worked from.*

(*c*) He must also be able to take off and calculate indicator diagrams

(*d*) He must be able to calculate safety-valve pressures and the strength of the boiler shell, stays, and riveting.

(*e*) He must be able to state the general proportions borne by the principal parts of the machinery to each other, and to calculate the direct stress, the torsional stress, and the bending stress in round bars, and the direct stress and the bending stress in rectangular bars with given loads.

(*f*) He must be able to explain the method of testing and altering the setting of the slide valves, and to sketch about what difference any alteration in the slide valve will make in the indicator diagram, and also the method of testing the fairness of shafts and of adjusting them.

(*g*) He must be conversant with surface condensation, superheating, and the working of steam expansively.

(*h*) His knowledge of arithmetic must include the mensuration of superficies and solids and the extraction of the square root, and the application of these rules to questions relating to the power, duty, and economy of engines and boilers, and to the stresses in rods, shafts, and levers of the engine.

Service in the Royal Navy.

31. Engineers and Assistant Engineers of the Royal Navy are at liberty to apply for Certificates of Service, and to be examined for Certificates of Competency in the Mercantile Marine; but they must submit their applications in the manner directed by the Lords Commissioners of the Admiralty. Engineers.

32. As regards the grades of Certificates of Competency for which Officers of the Royal Navy can be examined, the rule is—"First-class Assistant," or "Assistant Engineers" of the Royal Navy may be examined for Second-class Engineers' Certificates of "Competency"; "Engineers" of the Royal Navy for First-class Certificates of Competency. Grades.

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* *See* Appendix B.

Temporary service in the Royal Navy.

33. Temporary active service as Engineer in the Royal Navy counts in applications for Certificates of Competency in the same way and to the same extent only as in the case of the service of Mercantile Marine Engineers, that is to say, so much of the applicant's time as is spent in active service at sea, or in a ship commissioned for sea service, counts as "sea service;" and so much of the applicant's time as is spent in active service on boardship in harbour, and not commissioned for sea, counts as workshop time—*See* paragraph 28, sub-section (*a*).

Engineer Artificer.

34 Service performed in the capacity of Engineer Artificer may count to qualify a Candidate for examination for a Second-class Engineer's Certificate of Competency in the Mercantile Marine. If the service has been on shore, it will count only as workshop time. If in the Engine Room at sea, the Candidate must prove that during such service he had charge of an Engine Room watch.

Fees.

Fees to be paid by applicants for examination. (Exn. 17.)

35. Candidates for examination, in making their Application on Form Exn. 3, will be required to pay the Examination fees before any step is taken, whether by inquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them, but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be.

36. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

37. If a candidate fails in his examination, *no part of the fee he has paid will be returned to him.*

38. The fees are as follow:—

Second-class Engineer's Certificate ...	Rs.	12
First-class Engineer's Certificate ...	„	24
First-class Engineer's Certificate if candidate is already in possession of a Second-class Certificate of competency granted by the Board of Trade, or by the Government of a British possession under Section 8 of the Merchant Shipping (Colonial) Act, 1869 ...	Rs.	12
Renewal of any certificate	„	5

General Rules as to Examinations.

Candidates not to take books, &c., into examination room.

39. All books necessary for the use of candidates under examination will be provided by the Government, and applicants are not permitted to take into the examination room any book, paper, document, or memoranda of any description whatever.

40. Candidates will be allowed in the time allotted to cancel any part of their work, and when required additional papers will be supplied by the Examiners, but they will not be allowed to work out the problems on a slate or on waste paper. The additional sheets must be attached to, and form part of, the examination papers.

41. Candidates for First-class Certificates have to pass an examination in Rough Working Drawing, which may, at the candidates' option, be either hand sketches clearly dimensioned and complete in the necessary *views* and *sections*, or drawings to a scale. Drawing boards and T squares will be provided by the Government, but the applicants will have to bring with them any drawing instruments they may require.*

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* *See* Appendix B.

42. In the event of any candidate being discovered copying from another, or affording any assistance or giving any information to another, or communicating in any way with another during the time of examination, he will be regarded as having failed in his examination, and will be turned back for three months, in the same manner as if he had failed in the practical part of the examination ; and no part of the fees he may have paid for examination will be returned to him. This penalty also applies to any breach of paragraph 34. Punishment for breaking rules.

43. If a candidate leaves the room before answering any question which has been given to him, he cannot afterwards be permitted to answer it, but the Examiners may substitute other data or another question. Leaving examination room.

44. All applicants presenting themselves for examination will be required to give written answers to ten questions selected from Form Exn. 15*a*.,* "Elementary Questions for the first examinations of Engineers for certificates of competency, and of Masters and Mates for certificates in steam." These questions are intended to furnish a record to some extent of the candidate's knowledge at the time of his examination, and also to induce the candidates to pay more attention to their handwriting and spelling. Questions from Form Exn. 15*a*.

45. The Form Exn. 15*b*., on which these answers will be written, contains also some questions as to the experience of the applicant, to be answered by him in writing.

46. Examiners may add to their *viva voce* questions on the practical management of steam-engines and boilers any of those contained in Exn. 15*a*.

47. If at the expiration of the time allowed the candidate has worked out and answered correctly the whole of the questions set to him, and given satisfactory answers in the *viva voce* examination, he will be declared to have passed.

48. If at the expiration of the time allowed he has not worked out the whole of the questions set to him, but if the result of the *viva voce* examination taken in connection with the answers to such of the questions as he has worked out is sufficient to satisfy the Examiners that the applicant is competent to take charge of engines of 100 nominal horse power or upwards, he will be declared to have passed.

49. In other cases he will be declared to have failed.

50. A report of the examination, and the examination papers, will be forwarded to the Port Officer on the Form (Exn. 15). Exn. 15.)

51. If the candidate passes, he will receive the Form Exn. 16, upon which the Government will issue the certificate to the candidate, whose testimonials, &c., will be returned at the same time. Notification of having passed will be given to successful candidates. (Exn. 16.)

Failure.

52. If the applicant fails in practical knowledge, he may not present himself for re-examination until he can produce proofs of THREE MONTHS' further service at sea as Engineer from the date of failure. If he fails in arithmetic or drawing only, he may come up again at any time.

General.

53. Certificates of Competency shall be made and issued by the Government in the forms hereunto annexed.

54. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

55. No application from the holder of a certificate granted by the Government of any other British Possession or by the Board of Trade to be examined for a certificate of the same legal value shall be entertained.

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* *See* Appendix A.

APPENDIX A.

Form Exn. 15a.

Elementary Questions for the First Examinations of Engineers for Certificates of Competency and of Master and Mates for certificates in steam.

TO ENGINEER EXAMINERS.

EXAMINERS will require all candidates to fill up a form, Exn. 15*b*., of which a copy is enclosed, and they will forward the same to the Port Officer for transmission to the Government along with the report of the examination.

It is intended to issue questions of a more advanced character for first-class candidates, but in the meantime the questions for both classes of Engineers and also for Masters and Mates passing a Voluntary Examination in steam will be taken from the same book of "Elementary Questions," and candidates for first-class certificates are expected to show their superiority by giving answers more complete than those of the other candidates.

The arithmetical questions for Engineers and the *viva voce* examinations for all candidates will be continued as heretofore, and failure in the elementary questions will be treated as failure in arithmetic.

The numbers of the questions for each examination will be selected by the examiners, and they are not to be communicated to the candidate until his examination commences.

Masters and Mates may cancel questions A, B, and C, but they should fill up the form for questions D, E, F, and G, as evidence of their practical knowledge.

Exn. 15b.

Port . Class for which examined

Date Candidate's name

A. Where and how long did you serve in works at the making or at the repairing of Engines, and in what capacities?

B. How long have you served as fireman or trimmer?

C. How long have you served in the engine-room at sea, and in what capacities?

D. With what descriptions of Engines have you served at sea—Paddle or Screw or both, Jet Condensing, Surface Condensing, or Non-condensing Engines, Compounds, Trunks, Inverted Cylinders, or Horizontal Engines? What size were the engines?

E. With what descriptions of Boilers have you served at sea—Rectangular or Cylindrical, Wet-bottomed or Dry-bottomed, Multitubular, Sectional or Flue Boilers?

F. What Engine defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

G. What Boiler defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

For the questions to be answered on the following pages, *see* the book of Elementary Questions. The questions need not be written; only the answers to them.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

ELEMENTARY QUESTIONS.

1.

What parts of an engine are generally made of wrought-iron?

2.

What parts of an engine are generally made of cast-iron?

3.

For what parts of an engine is steel sometimes used?

4.

What parts of an engine are generally made of brass or gun-metal?

5.

Where is "white metal" sometimes used? On account of what property possessed by it is it adopted? What objection is there to its more general use?

6.

For what parts is Muntz metal sometimes used? Is it malleable? For what properties is it valued?

7.

What difference is there in the composition of cast-iron, of wrought-iron, and of steel?

8.

How can cast-iron, wrought-iron, and steel be distinguished from each other?

9.

What are the different properties of cast-iron, of wrought-iron and of steel?

10.

What is meant by the terms "breaking stress," "proof stress," "safe working stress"?

11.

What is the cohesive strength or breaking stress of good ordinary wrought-iron?

12.

Tempering steel: how is it done, and in what order do the colours come?

13.

What is case-hardening?

14.

Which of the common metals or alloys can be forged, and which of them are brittle or "short"?

15.

What is meant by "welding"? Which of the common metals can be welded?

16.

The expansion of metals by heat: give examples of this in the engine and in the boiler.

17.

In the construction of cylindrical marine boilers, for what parts have the plates to be worked hot? When the material is steel, what precautionary treatment of these plates is afterwards necessary?

18.

What is double riveting? In what parts of cylindrical marine boilers is double riveting employed? In which of the shell seams is it most necessary?

19.

What is "caulking," and how are seams prepared for caulking?

20.

Describe the different ways of fastening the ends of the main stays of a boiler. What are the merits of, or objections to, the different plans?

21.

What strain per square inch is allowed on boiler stays?

22.

Describe a riveted stay, and state where such stays are commonly used.

23.

Where are thin plates to be looked for in a boiler as it wears, and how is the thinness to be detected?

24.

How are boiler tubes fixed? What are "stay tubes," and how are they secured?

25.

Where is it generally that boiler tubes leak? How is this defect raired? What are the causes of this leaking?

26.

What are the causes of cracked tube plates? Where are the cracks situated? How are they repaired?

27.

What is the difference between a "dry uptake" and a "wet uptake"? Which requires most repair? Why? Where have you seen a wet uptake?

28.

What is a superheater? What is its construction? What valves are on it? There is sometimes a gauge glass on it; what is that for?

29.

What parts of a marine tubular boiler are first injured by shortness of water?

30.

Where are angle irons sometimes used in the construction of a boiler, and where are flanged plates used?

31.

Priming: to what causes is it attributed? What means are applied to prevent it? What evils may be produced by it?

32.

Funnel draught: what makes it? What checks it?

33.

Flame is sometimes seen at the top of the funnel: what causes this appearance? Is it beneficial or is it detrimental? Why so?

34.

A blast pipe: what is its construction? Where is it placed? For what is it used?

35.

How many bottom blow-off cocks are generally fitted to each boiler, and why are they so fitted?

36.

Blow-off cocks are sometimes fitted with a spanner guard: for what purpose is this? Describe how the guard is formed?

37.

Test cocks or water-gauge cocks: where are they placed? At what heights? Must the cocks themselves be at those heights? What provision is made for cleaning these cocks should they ever become choked? When there are no test cocks how is the height of the water ascertained?

38.

What is a dead-weight safety valve? Of what are the rubbing surfaces formed? How is a lock-up valve arranged to admit of lifting it or of turning it round, and to prevent adding to the weight?

39.

About what area of safety valve is now required by the Board of Trade? What area was formerly required, and on what ground has that been altered? What is the effect of suddenly opening a safety valve when steam is up? To about what extent do safety valves rise when blowing off without being eased by hand?

40.

Spring-loaded safety valves: what advantages have they that are not possessed by dead-weight valves? What are the disadvantages as compared with dead-weight valves?

41.

Of what pieces does a glass water gauge mounting consist? How does it act? Where is it placed? At what height? Is it liable to derangement? How is its working tested?

42.

Glass water gauges have sometimes pipe connections top and bottom: what is the object of this arrangement? Should there be cocks at the extremities of these pipes?

43.

Describe a Bourdon's steam gauge. Some gauges have an inverted syphon pipe below them: what is its use?

44.

Why is a small cock sometimes put on the pipe leading to a steam gauge? Where should it be placed, and what error might be made by omitting to use it?

45.

Do steam gauges indicate the total pressure of the steam, or only a portion of that pressure? What is the pressure measured from?

46.

What is meant by the salting of the boiler? How is this prevented? What is the density of ordinary sea water? How is the density ascertained? What is the difference between the formation of scale and the salting of the boiler? What is the maximum density at which boilers should be worked at sea?

47.

Scum cocks and pipes: how are they arranged? Where are they placed? At what height in the boiler? When are they used? When must they be shut? Neglect of these cocks lead to what dangers?

48.

Scale: of what does it consist? Where is it most objectionable? How is it removed? How is its formation prevented? What evil effects are produced by it?

49.

What is a salinometer? Of what does it consist? How does it act? How is it graduated? Can it be used at any temperature indiscriminately?

50.

What harm may be done through the check valve of one of a set of boilers being defective while under way? How would you work to avoid this harm?

51.

How is the leak from a split tube stopped in a boiler at sea? Describe the operation?

52.

What is the use of dampers? Where are they fitted? When should they be used?

53.

When there are no dampers fitted, what is used instead? What evil to the boiler is sometimes attributed to this? When the heating surfaces are clean does this occur?

54.

Describe the piston of a steam cylinder, with its different rings and their uses? There are generally round pieces let in flush on one side of a piston: what are they? How are these pieces fixed?

55.

Cylinder drain cocks: what is their use? There is sometimes a valve upon each cock: what purpose does it serve?

56.

Cylinder escape valves: of what do they consist? How protected? How regulated? When are they most needed? To what danger do they expose the Engineer? What precaution is sometimes used to obviate this danger?

57.

What is a compound engine? What different kinds are there for screw steamers, in respect to the number and arrangement of their cranks and cylinders? What is a triple expansion engine?

58.

What is link motion? What are some of its advantages? In modern engines for the screw propeller when there is no link motion, what takes its place?

59.

What is a separate expansion valve? Why is it not fitted to all engines? What effect has an expansion valve upon the starting and upon the reversing of the engine?

60.

What arrangement is applied to reduce the friction of a slide valve? To what is the friction due?

61.

Describe a loose eccentric; how does it act? In what engines is the loose eccentric still employed?

62.

What is the travel of the eccentric rod? How is it measured on the eccentric? What is the travel of the slide valve when the link motion is in mid gear, and the engine still moving?

63.

What are "double beat valves"? Why are they not generally used for safety valves? Are they ever used instead of the slide valve? What objections are there to their use?

64

What is a circulating pump? Is it always worked by the main engine? Give an example from your last steamer of the three water temperatures generally noted by careful engineers?

65.

An air valve is sometimes fitted to a circulating reciprocating pump: what purpose does it serve?

66.

What is the difference between a bucket air-pump, a piston air-pump, and a plunger air-pump?

67.

Whether are double-acting air-pumps made with plungers, with pistons, or with buckets?

68.

What is an air-pump trunk? When is it necessary? How is it attached to the bucket?

69.

What class of air-pump requires both foot and delivery valves, and in what other class can either of these valves be in some cases dispensed with?

70.

When under way, when the air-pump bucket is at the top of its stroke, at what height is the water in the condenser?

71.

With a surface condenser and a single acting air-pump, what is the effect of a leaky foot valve, and what is the effect of a leaky bucket when there is also a foot valve?

72.

Air-pump pet cock or valve: where is it placed? How does it act? What is its object? Does it in every case reduce the effective capacity of the pump? Is it equally applicable to double-acting pumps?

73.

At what temperature is the hot well worked? What is the effect of higher temperatures? What is the effect of lower temperatures? What limits the lowness of temperature? Has a very low temperature any disadvantages?

74.

Bilge injection with common condensers: what are the fittings required? When is it used? What precautions are necessary in using it?

75.

When surface condensers are used, what takes the place of the bilge injection? To what is the connection made? How is its valve formed? Why is this necessary?

76.

What are the practical guides to the proper amount of opening of the inlet valve for the circulating pump?

77.

Feed-pump pet cock or valve: where is it placed? What is its use? How does it act? Is it always a necessary fitting?

78.

What are some of the ways of fastening the ends of surface condenser tubes? About what size and about what thickness are condenser tubes? What parts of a surface condenser are made of brass?

79.

What is a blow-through valve or cock? To what is it attached? There is sometimes a valve that, when opened, admits steam from the slide valve casing to the exhaust port; what is its use? To which cylinder is it fitted?

80.

What is a snifting valve? What is its use? Where is it placed? Can it be placed too high? Can it be placed too low? At what height should it be placed? Was there one in your last steamer; if so, where was it? Why are snifting valves generally omitted now?

81.

What connections are generally fitted to the donkey-pump, and to what services can it be applied?

82.

When the engines are stopped with steam up, what are to be shut and what are to be opened?

83.

How is an engine heated up before starting? What precautionary examinations are made before starting?

84.

What is an interceptor or catch-water? Where is it fixed; what is its construction; how does it act; and what attention does it require?

85.

Describe an air-pump bucket, with its valve or valves and its packing? Of what are the valves generally made?

86.

Of what materials are air-pump rods made? Why so?

87.

What is the racing of the engine? When does it occur? What danger attaches to it? What is done to prevent it?

88.

What are marine governors? What is their general construction? How do they act?

89.

What is meant by the "pitch" of a screw propeller? How is it measured?

90.

Explain the difference between a "right hand" and a "left hand" propeller, and state how each of them revolves.

91.

What is the slip of a screw propeller? How is its amount expressed in figures?

92.

Which of the valves about engines and boilers have to be worked by hand, which of them work self-actingly, and which are worked by the motion of the engine?

93.

Why is soda sometimes put into a boiler, and how is it put in when under way? What is the kind of soda used?

94.

Tallow cups for cylinders were sometimes made with two small cocks, or with only one small cock, or with one large hollow plug cock, or with one small cock and a valve; which of these is suitable for a high-pressure cylinder, and which for the cylinder of a condensing engine? Describe how the cup with only one small cock is used? What is now generally used instead of these? How has this change come about?

95.

Does a cylinder escape valve, self-acting, allow all the water to escape; if not, how much is left in the cylinder?

96.

What is a "Steam Lubricator" (sometimes called an Impermeator)? Explain its action? To what part of the engine is it connected? Whether will throwing cold water over it make it work faster or slower? Describe the one used in your last steamer?

97.

A common paddle wheel: of what is the centre made? Of what are the arms formed? What is the form of the bolts which attach the floats to the arms? How are the arms attached to the centres?

98.

Why have some paddle wheels one or more cast-iron floats in each wheel? With what engines are these most required? At what part of the circumference are they placed?

99.

Why are paddle wheel floats sometimes made of different breadths in the same wheel? With what description of engine is this most needed? Where are the broad floats placed, and where are the narrow floats placed in the circumference of the wheel?

100.

What difference is there between a radial paddle wheel and one with feathering floats? What is the object of feathering floats? Are all the eccentric rods attached in the same way, and are they all of the same form?

101.

Whereabout is the centre of the eccentric of a paddle wheel with feathering floats placed? In that case are the feathering levers on the striking face or on the back of the float? When the paddle shaft has an outer bearing, how is the eccentric made?

102.

Of what materials are the working surfaces of a paddle wheel with feathering floats? Are they all lubricated? With what?

103.

What is a "Disconnecting Paddle Engine"? At what place is the disconnecting effected? How is it accomplished? In which of the cranks of a disconnecting engine are the crank pins fixed?

104.

Whether is link motion valve gear or the loose eccentric generally used for disconnecting paddle engines? For what steamers are disconnecting paddle engines frequently employed?

105.

What are expansion joints? Where are they necessary? What attention do they require? Of what should the working surfaces be made?

106.

What omission in the construction of expansion joints may lead to a serious accident when steam is first applied? How is this prevented in the construction of a steam trunion pipe for an oscillating engine?

107.

Describe an oil cup with a syphon worsted? How is the worsted arranged? How is it cleaned? How far down the tube does it extend?

108.

Describe a thrust bearing; which of the surfaces wears? Why are there sometimes a number of oil tubes for one thrust bearing?

109.

What parts of a screw shaft are generally covered with brass? Why is this necessary? About what thickness is the brass?

110.

What is the stern tube or screw shaft pipe? Why is a pipe of such a length required? Of what is it made? How is it fixed at each end?

111.

What is a lignum vitæ bearing? How is the wood fitted? Where is such a bearing generally used?

112.

How is a screw propeller fixed on the shaft? What means are used to prevent its getting loose at sea?

113.

Where are sluice valves placed? What large sluice valve is there in almost all screw steamers? From what position should this valve be worked? Why so? What attention should it receive?

114.

With a condensing engine, what valves or cocks are on the skin of the ship in the engine-room and in the stokehole?

115.

What are the necessary fittings of a marine boiler?

116.

With a surface condensing engine, what cocks or valves are open some time before the engine is started so as to be ready for starting whenever the order is given?

117.

What is a steam jacket? What cocks are on it? In what engines are jackets most generally used? Do they require to be felted?

118.

What parts of an engine or its fittings should be felted or otherwise protected from radiation?

119.

What are the small cylinders sometimes fitted on the slide valve casing cover of vertical engines? Explain their action? To what are they connected by a pipe? Why so?

120.

Name the principal pipes in connection with the engines and boilers of a steamer, and state to what the ends of these pipes are connected?

121.

Through what cocks or valves, pipes and chambers does the water pass on its way from the sea inlet rose plate to the water space of the boiler, with a jet condenser?

122.

Through what cocks or valves, pipes and chambers does the circulating water of a surface condenser pass?

123.

Through what cocks or valves, pipes and chambers does the steam pass from the boiler until it is in the form of water in the hot well?

124.

Name the pieces of the engine through which the pressure of the steam is transmitted from the piston to the screw propeller. Name them in the order in which they act.

125.

What is an air vessel? How does it act? At what parts of an engine or of its fittings are air vessels generally applied?

126.

What is the construction of a mud box? Where should mud boxes be placed? Why are they necessary? How should the space be divided by the rose plate, and why?

127.

What is a trunk engine? When used in a horizontal engine for a right-hand screw propeller, at which side of the vessel should the cylinders be placed? Why so?

128.

What is an oscillating engine? For what steamers are oscillating engines generally adopted? Why? How is the steam conveyed to and from the slide valve casing?

129.

Of what parts does the valve motion gear of an oscillating engine consist?

130.

For what have geared engines sometimes been used? Of what were the cogs of the large wheel made?

131.

At what part of a screw steamer is the pressure that propels it applied to the hull?

132.

At what part of a paddle steamer is the pressure that propels it applied to the hull?

133.

About how much fuel per indicated horse power per hour is required by modern steam engines, common, compound and triple expansion?

134.

What is the explanation of the economy of the surface condenser?

135.

What is the construction of a surface condenser? Of what are its tubes made? How are they fixed? How are they kept tight? What is done with a split tube?

136.

Where do surface condensers foul? How are they cleaned?

137.

What non-conducting substances are employed to prevent radiation, and how are they applied?

138.

In the construction of smoke-box doors and of dry uptakes, what provision is made to lessen the amount of radiation?

139.

How can the formation of black smoke be prevented? Describe smoke preventing apparatus?

140.

What is meant by "circulation" in a boiler, and what are the results of defective circulation?

141.

What means are sometimes adopted to improve the circulation in a boiler?

142.

By what arrangement is the circulation promoted in a "hay-stack" boiler?

143.

Describe a ship's side air-pump discharge valve? In what respects does it sometimes differ from a common stop valve, and what attention does it require?

144.

What is the construction of a feed escape valve, to what is its discharge connected, and how is its loading regulated?

145.

When there is no feed escape valve, what is the arrangement of the feed valves or cocks?

146.

What is the measure of a horse power? How is indicated horse power ascertained?

147.

Has "nominal horse power" a fixed meaning? What is the use of this expression? What is generally taken as the measure of one horse-power nominal?

148.

What is "back pressure" in a cylinder? About how much is it in each of the cylinders in your last steamer? Is excessive cushioning ever a trouble under certain conditions in modern engines? Say when and why and in which cylinder this occurs?

149.

What is meant by "speed of piston"? About how much is the speed of piston in modern marine engines?

150.

What is "atmospheric pressure"? What is its average amount? What instrument tells this amount?

151.

What is "gross pressure" or "absolute pressure"? What pressure is it that is shown by the steam gauge?

152.

What is meant by "cutting off" steam? How is it done? What part of the valve regulates the cut off?

153.

What is a piston slide valve? Describe its construction? Why are such frequently employed in place of the common slide valve? What is a great drawback to the use of these valves?

154.

What fixes the time of closing the exhaust? After the exhaust is closed and before the port opens for steam, what becomes of the steam that is in the cylinder?

155.

What is the "lead" of the valve? What is its object? About what amount is it?

156.

What is the "cover" or "lap" of the valve? What is its object? About what proportion of the stroke of the valve is it made?

157.

What is the "exhaust cover" of a slide valve? What is its effect upon cushioning and upon exhaust?

158.

What is "minus cover" or "minus lap" on the exhaust? What is its effect upon the exhaust and upon cushioning?

159.

What is "cushioning" or "compression" in a steam cylinder? How is it affected by the amount of cover or of minus cover there may be upon the exhaust? How is it affected by the exhaust pressure?

160.

What is "mean effective pressure"? How is its amount ascertained?

161.

What is a dial vacuum gauge? What is its construction? For what is it used? About what amount should it show when the engine is working all right? What effect has the variations it indicates on the performance of the engine?

162.

Does the vacuum gauge enable you to tell what pressure there is in the condenser, or must you have recourse also to the barometer to arrive at that? How would you ascertain the actual amount of back pressure there is in the condenser?

163.

What is a barometer? What is its construction? Is a barometer sometimes used instead of a vacuum gauge? In what respect does the weather barometer differ from the vacuum gauge barometer?

164.

The common vacuum gauge and the common steam gauge: in which of them are the graduations marked from atmospheric pressure? Does either of them tell what is the true actual pressure in the boiler or in the condenser?

165.

Do steam and vacuum gauges vary with the variations of the weather barometer? When the weather barometer varies from 29 to 31, how much will the vacuum gauge vary, and how will that affect the working of the engine? Why so?

166.

Vacuum is generally stated as so many inches. What is meant by, say, 20 inches vacuum? What does that tell us about the absolute pressure of the vapour then in the condenser?

167.

From what depth will a pump draw water? Is there any limit? Why?

168.

What is vacuum? Can vacuum move a piston? When the temperature of the water in the condenser is 212°, what is the greatest degree of vacuum there can then be in the condenser?

169.

What is a thermometer; its construction? What is the property of matter that is the principle of its construction? What temperatures are regularly noted by careful engineers?

170.

What is the temperature of (1) melting ice, (2) of boiling water, (3) of steam about 60 lbs. pressure by the steam gauge, (4) of steam about 100 lbs., and (5) of strain about 150 lbs.; also (6) of smoke in the funnel, and (7) of water in the hot well?

171.

What is meant by the "conduction" of heat? Give examples of it in the boiler and in the engine.

172.

What is meant by the "convection" of heat? Give examples of it in the boiler and in the engine.

173.

What is meant by "radiation" of heat? Give examples of it in the boiler and in the engine.

174.

Which is convection, which is radiation, and which is conduction in the following cases: (1) Heat from the glowing fuel to the furnace crown. (2) Heat passing from one side of the furnace crown plate to the other. (3) Heat passing from the steam pipes in the engine-room. (4) The heat of evaporation?

175.

What are the effective heating surfaces of a marine boiler? What is an objection to vertical heating surfaces?

176.

What parts of a marine engine are exposed to danger when the temperature is below freezing point?

177.

What precautions are necessary in cold climates when the temperature is below freezing point?

178.

State as many ways as you can by which a boiler might not get its full feed; that is, a boiler, or one of a set of boilers, gets short of water although the feed valve is open its proper amount; to what causes might this be due?

179.

Of what are furnace bars generally made? About what thickness are they at top? About what space is between them? Whether are the bars put further apart for Newcastle coal or for Welsh coal?

180.

Which burns faster, Newcastle coal or Welsh coal? Which is the flaming coal? Which makes most smoke?

181.

About how many tons of steam coal will be burnt per day in four furnaces each 3′ 0″ wide, and of about the usual length? On what grounds do you say so?

182.

About how many tons of steam coal will be burnt per day with good compound engines to drive an ordinary steamer of 40 ft. beam 10 knots an hour by steam alone? On what grounds do you say so? What percentage more coal would be required to propel the same steamer one knot faster?

183.

About how many tons of steam coal will be burnt per day with a good compound engine, surface condensers, the low pressure cylinder 70 inches diameter, doing average work? On what grounds do you say so?

184.

A pair of inverted cylinder direct acting engines, there is a liner half an inch thick between the ahead eccentric rod and the eccentric strap, in overhauling the engine this piece is lost and forgotten; what difference will its omission make in the working of the engine, on the admission, on the cut off, and on the exhaust of the steam? Which will take place earlier, and which later distinguishing between the up stroke and the down stroke?

185.

A pair of inverted cylinder direct acting engines driving a right-hand screw; on which of the crosshead guide bars is the pressure greatest in the up stroke, and on which in the down stroke?

186.

A screw propeller is getting loose; it has a little play on the shaft, sideways on the key or feather; how will this show in the engine-room?

187.

How would you prove whether the centre line of the trunions of an oscillating cylinder be fair with the centre line of the main shaft?

188.

How can the fairness of a line of screw shafting be tested without lifting the shafts?

APPENDIX B.

Form Exn. 17.

Examination in Rough Working Drawing for a First-Class Engineer's Certificate of Competency.

1. The regulations in regard to the qualifications of a candidate for a first-class Engineer's Certificate of Competency specify that—

> "He must be able to make rough working drawings of the different parts of the engines and boilers."
>
> "He must be able to state the general proportions borne by the principal parts of the machinery to each other."

2. In accordance with these clauses, a candidate for a first-class certificate is required to make a rough working drawing of the parts specified on the other side of this leaf. A mechanic who has been some years in charge of marine engines and boilers ought by this time to have familiarly in his mind the general construction of at least one set of engines and boilers, say that set he was

last with. Fine drawing is not expected, and in the proportions of the parts a wide margin will be allowed; absurd dimensions will be failure in practical knowledge.

3. The drawing must, however, be practically a working drawing, giving a sufficient number of views to show the parts fully—sections, plans, or elevations, just as the candidate would require to be supplied to him if he had to make the parts to the design of another person.

4. A clear hand sketch showing the construction, completely and fully dimensioned, will be accepted if the candidate prefers this alternative.

5. A portion only of the parts specified may be accepted in place of the whole, if that portion is sufficient to show that the candidate has a good practical idea of the construction of the parts, and a fair notion of their general proportions or dimensions.

6. Candidates are hereby cautioned not to put on paper what they have not fully considered, and deliberately intend to be understood, as their statement of what they know about the construction of any part required.

7. The statements given in by a candidate may be in themselves, apparently, of little importance, but as sample material from which the state of the candidate's knowledge of engines and boilers is to be inferred, every detail which is glaringly inconsistent with a sound knowledge of the use of the part, or in which an essential consideration has evidently been overlooked, is an important element in the description which the candidate is giving of his own qualifications.

8. The candidate is advised not to begin more than he can clearly finish in the time allowed. An important object in this part of the examination is to ascertain whether the candidate can be trusted to mark all necessary dimensions upon a sketch or a drawing. The test of this is, practically, the making of the part from the sketch without having to supply additional dimensions, and without measuring the drawing. To prove this ability the candidate must fully dimension the parts shown in his sketch or drawing, notwithstanding that the parts may be correctly drawn to scale. A drawing is fully dimensioned when no part of it is left to the option of the party who is to work to the drawing.

9. To prevent misunderstanding, however, when the candidate has been led into showing more of the details than he has time fully to finish, he should name, in the statement on the other side, the particular parts which he has fully dimensioned.

10. All dimensions should have lines and darts, to indicate distinctly the points between which the dimensions are given.

11. Beware of writing cross dimensions upon centre lines, or upon longitudinal dimension lines. This is not an order but a recommendation.

12. The candidate is not expected to design anything; he has merely to sketch or draw a something with which he is expected to be already familiar.

13. Pencil in nothing after half-past 3; all the dimensions, the figures, and the darts must be inked in; employ the remaining time in examining the drawing and in inking in any figures which may have been before overlooked, and in checking the dimensions.

14. Make sure that you will have sufficient room on the drawing sheet to show all the necessary views. You can have another sheet or drawing paper if necessary. All the paper used must be forwarded with the drawing.

15. Fill in and sign the following statement.

(Specimen.)

Form **Exn. 17a.**

SUBJECT FOR EXAMINATION IN ROUGH WORKING DRAWING.

(Read the foregoing general instructions.)

A common slide valve with its spindle. Show also an outline section of the ports at the cylinder face. Show the provision for connecting the slide valve to the spindle.

The candidate is requested to fill up the following, and to attach this paper to his drawing.

Statement by the Candidate.

The accompanying drawing, made by me this day, without referring to any document, and without the assistance of any person, is intended by me to be sufficient for the new construction of the parts above described to fit the places of similar parts which are to be removed. The construction is similar to what I have been with in the_____steamer_____, but the dimensions may be different.

The diameter of the cylinder is_____

The stroke of the piston is_____

The stroke of the valve is_____

The cover at top end on steam side is_____

The cover at bottom end on steam side is_____

The lead at top is intended to be_____

The lead at bottom is intended to be_____

The inside cover is +_____or-_____

The thickness of the face of valve is_____

The thickness of the body of valve is_____

The greatest opening for steam will be_____

That gives an area equal to one_____

The opening for exhaust when the crank is on the top centre is_____

That gives an area equal to_____th of piston.

The length of the connecting rod is_____

The valve will cut off steam on the down stroke at_____

The valve will cut off steam on the up stroke at_____

The Candidate may omit this part if he chooses.

The parts fully dimensioned, in ink, are_____

Dated at_____

this_____ day of_____18

_____ Applicant.

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

FIRST CLASS ENGINEER.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of FIRST CLASS ENGINEER in the Merchant Service, I do hereby, in pursuance of Act VII of* 1884, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18——.

Under-Secy. to the Govt. of Bengal.

BENGAL.

No. of Certificate [redacted]

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

This Certificate is given upon an ORDINARY EXAMINATION passed at _____ *on the* _____ *day of* _____ 18 .

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the _____ *day of* _____ 18 .

Registered,

Port Officer of Calcutta

BEN

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issued under section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

AS

SECOND CLASS ENGINEER.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of SECOND CLASS ENGINEER in the Merchant Service, I do hereby, in pursuance of Act VII of 1884, grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18__.

Secy. Govt of Bengal.

BENGAL.

No. of Certificate [redacted]

Address of Owner———————————————

Date and Place of Birth———————————————

Signature———————————————

This Certificate is given upon an ORDINARY EXAMINATION passed at———————*on the*———————

day of———————18——.

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the———*day of*——— 18 . .

Registered.

Port Officer of Calcutta.

NOTIFICATION.

No. 24 Marine, dated Calcutta, the 30th January 1890.

UNDER the powers conferred upon him by section 36 of Act VII of 1884 (the Indian Steam-ships Act), and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to engine-drivers of sea-going steam-ships having engines of under 50 nominal horse-power.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

1. Certificates of competency will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed and arrangements have been made for holding the examinations periodically at the port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint.

2. The application for examination is to be made in Form Exn. 3*a*, which must be filled up at the Port Office. The Exn. 3*a* properly filled in, together with the candidate's testimonials, must be lodged with the Port Officer not later than the day before the day of examination.

3. A candidate for a certificate of competency under these rules must be not less than 22 years of age.

4. He must have served three years as principal serang or tindal in the engine-room of a sea-going steamer under a certificated Engineer.

5. He must have the testimonial shown in Appendix A filled up by the Engineer with whom he has last served, or his other testimonials must contain all the particulars therein required.

6. He must pass a *viva voce* examination before the Board of Examiners as to the working of an engine and the use of its different parts.

7. He must, if required, be able to show his practical qualifications by one week's trial in a steamer, after fulfilling the other tests to which he will be subjected.

8. He must show a knowledge of the use of brine cocks and blowing off, of the salinometer, and of the care of the boiler in salt-water.

9. Candidates for examination, in making the application on Form Exn. 3*a*, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them; but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service or are able to produce satisfactory testimonials, as the case may be.

10. The fee for examination under these rules is ten rupees, and the amount must be remitted with the application to the Port Officer. In any case in which a candidate offers money to any other officer than the Port Officer, and in any place but the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

11. If a candidate fails in his examination, *no part of the fee he has paid will be returned to him.*

12. In case of failure, candidates may be re-examined *de novo* after a lapse of six months, if the past examination showed that they might reasonably be expected to qualify.

13. Certificates of competency shall be made and issued by the Government in the form hereunto annexed.

14. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

TESTIMONIAL.

I *hereby certify that* *has served with me in the engine-room of* *as principal serang or tindal for a period of* *, during which time he has discharged his duties to my entire satisfaction.*

I consider that he fully understands the working of an engine, and has sufficient tact, presence of mind, and energy to look after and manage the working of the engines of a sea-going steamer having engines of under 50 nominal horse-power.

Signed

No. and description of Certificate.

Note.—Any Engineer giving a testimonial in this form should be very careful in doing so, as the document may materially influence the applicant's eligibility as a candidate.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

ENGINE-DRIVER OF A SEA-GOING STEAM VESSEL UNDER ACT VII OF 1884.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of Engine-driver on a sea-going Steam-ship having engines of under* 50 *nominal horse-power, I do hereby, in pursuance of Act VII of* 1884, *grant you this CERTIFICATE OF COMPETENCY as Engine-driver.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

*The*_____*day of*_____18____. *Under-Secretary to the Govt. of Bengal.*

No. of Certificate

*Bearer*_____ *son of*_____ *by caste*_____

Date and Place of Birth, showing Village, Thana and District*_____

*Residence, showing Village, Thana and District*_____

*Height*_____

*Personal description, stating particularly any permanent marks or scars*_____

*No. of Register Ticket*_____

*Signature*_____

Any Engine-driver who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer of Calcutta.

*Issued at Calcutta on the*_____ *day of*_____ 18____.

Registered.

Port Officer of Calcutta.

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* If not known exactly, must be stated on the best information or evidence.

NOTIFICATION.

No. 25 Marine, dated Calcutta, the 30th January 1890.

UNDER section 10 of the Indian Merchant Shipping Act, 1859, the Lieutenant-Governor is pleased, with the sanction of the Governor-General in Council, to make the following rules for the conduct of examinations for Masters and Mates of foreign-going ships and as to the qualifications to be required. These rules are in supersession of the rules issued under the notification dated the 28th of August 1877.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose examiners have been appointed, and arrangements have been made for holding the examinations periodically at the port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint.

Examinations continued till all the Candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the Candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Notice of application for examination to be given to the Port Officer.

3. Candidates for examination must make their application upon the appropriate Form (Exn. 2), which must be filled up at the Port Office. The Exn. 2, properly filled in, together with the Candidate's testimonials and discharges, must be lodged with the Port Officer of Calcutta not later than the day before the day of examination, and the Candidate must conform to any regulations in this respect which may be laid down by the Government, as, if this be not done, delay may be occasioned.

Testimonials of character, conduct, and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges may have to be verified before the Candidate can be examined, it is desirable that they should be handed in together with the Form, Exn. 2, as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners, and of British Seamen serving in foreign vessels, which cannot be verified by the Port Officer, must be confirmed either by the Consul of the country to which the ship in which the Candidate served belonged, or by some other recognized official authority of that country, or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case will be decided on its own merits, and if the sufficiency of the proofs given appears to be at all doubtful, it must be referred to the Government.

Certificates as to age.

6. Should any doubt exist as to the age of a Candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British Vessel. In the case of natives of India, who may not be able to speak English, their Certificates will be endorsed to the effect that they are only valid for vessels manned and officered entirely by Asiatics.

8. The time for which length of service as Seaman or Officer in the Mercantile Marine is to be reckoned in all cases referred to in the following paragraphs is to commence at the date when the Articles of Agreement were signed by the Applicant, and to end at the date when he was discharged as shown on the Articles of Agreement. The Certificates of Discharge will generally be sufficient evidence of this, but great care must be exercised by the Port Officer and Examiners to detect any tampering in any way with the information contained in them, and to report to the Government at once any suspicious cases.

Verification of services, &c., by Articles

9. Services, which cannot be verified by proper Entries in the Articles of the Ships in which the Candidates have served, cannot be counted. For instance, a man will state his

service to have been as Second or Only Mate, and to support his assertion will produce a Certificate of Discharge or of employment by the Master, to the effect that he served as Mate, when, on reference to the Articles, it appears that he has actually been rated as Boatswain; the service in such a case will not be regarded as having been in the capacity of Mate.

Promotion during Voyage

10. Whenever a man has, from any cause, been regularly promoted on a vacancy in the course of the Voyage from the rank in which he first shipped, and such promotion, with the ground on which it has been made, is properly entered in the Articles and in the Official Log Book, he will of course receive credit for his service in the higher grade for the period subsequent to his promotion.

Service in the coasting trade

11. Service in the coasting trade may be allowed to count as service, in order to qualify a Candidate for examination for a Certificate of Competency for Foreign-going Ships, it being understood, however, that service in the coasting trade must amount to half as much again as service in the foreign trade, and that service in a lower grade than that of First or Only Mate in the coasting trade will not be recognised as officer's service.

12. Three years' service as Mate in the coasting trade, together with at least nine months' service as Master, may be allowed to count as service for a Master's Certificate, provided the Candidates' entire service at sea calculated as above is sufficient, and that his services as Mate and Master in the coasting trade can be proved by the Articles, and provided he has already passed an examination *for the Foreign Trade*, unless, *under special circumstances*, the Government see fit to dispense with this latter provision.

13. Service in Pleasure Yachts under 80 tons, if performed within Home Trade limits, will not be accepted towards qualifying a Candidate for examination.

14. Service in Pleasure Yachts will not be accepted at all unless verified by satisfactory proofs, and it must be distinctly understood that accepted service is confined to *actual sea service*, service in harbour or port being inadmissible. *See also para.* 21.

Service as an Apprentice.

15. Time for which Indentures of Apprenticeship are in force will be accepted as sea service, provided that the Apprentice has remained by the ship for at least four-fifths of the time covered by the Indentures, and the Indentures of the applicant are endorsed by the Owner or Master to whom he has been bound, to the effect that he has performed his service faithfully for the whole time agreed upon.

Service as 3rd or 4th Mate to qualify for 1st Mate.

16. Service as Third or Fourth Mate may be accepted as equivalent to service as Second Mate to qualify a Candidate for examination for a Certificate of Competency as First Mate, provided he is able to produce a satisfactory testimonial from the Master or owner of the vessel in which the service was performed, showing that he has had charge of a watch while serving as such Third or Fourth Mate, and that during the whole of the time claimed he was in possession of a Second Mate's Certificate of Competency, valid in the United Kingdom.

Service as 3rd or 4th Mate to qualify for Master.

17. Service as Third or Fourth Mate may also be accepted on the same conditions to qualify a Candidate for examination for a Master's Certificate of Competency, provided he can produce satisfactory evidence of his having served at sea 12 months as Second Mate of a Foreign-going Ship while in possession of a First Mate's Certificate of Competency, valid in the United Kingdom. If a Candidate has had no service as First Mate he must have been six and-a-half years at sea, of which two and-a-half years must have been as Mate of a lower grade under the above-named conditions. It will also be noted that occasional service in charge of a watch in the daytime will not be accepted as Mate's service under the Regulations.

Service on board a Training Ship.

18. Part of the time served on board a training ship will be allowed to count as service at sea, provided that the Candidate can produce amongst his testimonials a Certificate from the Committee that he has conducted himself reditably, and passed a good examination in seamanship so

within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

48. In Navigation, &c.—He must write a legible hand, and will be required to give in writing, *vide supplementary viva voce* test, page 37, definitions of various astronomical and other terms used in navigation.* He must have a competent knowledge of the first five rules of arithmetic, and the use of logarithms. He must be able to work a day's work complete, correcting the courses for deviation, leeway, and variation. He will be required to find the latitude by meridian altitude of the sun, and the difference of longitude from a given departure by parallel sailing; also to find the course and distance from one position to another by Mercator's method. He will be required to find the time of high water at a given port, to observe and calculate the amplitude of the sun, and to find the error of the ship's compass therefrom, and also the deviation, the variation being given. He must be able to find the daily rate of the chronometer from error observed, and to find the longitude from altitude of the sun by the usual methods. He must understand the use of the sextant, with its adjustments, and be able to observe with it, find the index error by the horizon, and *read off* and *on the arc*.† He must also pass a satisfactory examination in the International Code of Signals.‡

49. In Seamanship, &c.—He must give satisfactory answers as to the standing and running rigging of ships; as to bending, unbending, setting, reefing, taking in and furling sail; as to sending masts and yards up and down, &c., &c.; as to the management of a ship when under canvas; of a ship's boat in heavy weather, and as to dunnaging and stowing cargo, &c. He must have a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog, and sound signals,§ and be able to describe the signals of distress, and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals ‖ He must be able to mark and use the lead and log lines. He must also understand the use and management of the rocket apparatus in the event of his vessel being stranded, and other questions of a like nature appertaining to the duties of the Second Mate of a ship, which the Examiners may think necessary to put to him. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Second Mates' Certificates of Competency for Foreign-going Steam-ships.

50. An ONLY and FIRST MATE.—An Only Mate and a First Mate must be not less than nineteen years of age, and must have served five years at sea, of which in the case of a First Mate, one year must have been as Second or Only Mate. *See* also paras. 11, 16 and 27.

On and after the 1st April 1890, no Candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediataly preceding the date of his application to be examined.

Only and First Mate.

A Candidate for an Ordinary Certificate of *any* grade, who does not already hold an Ordinary Certificate of a lower grade, must prove that he has served 12 months in a square-rigged sailing vessel within the last five years.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

51. In Navigation.—In addition to the qualifications required for a Second Mate, an Only and First Mate must be

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* *See* Appendix A.

† *See* Appendix B. ‡ *See* Appendix C. § *See* Appendix D. ‖ *See* Appendix E.

able to find the true bearing of the sun and the error of the ship's compass from an observed azimuth of the sun, both from an altitude and also from the "Time Azimuth Tables," and with the variation given compute the deviation; to find the latitude from a single altitude of the sun off the meridian, and be able to use and adjust the sextant,* and to find the index error by the sun; also to ascertain the true bearing of the sun, &c., and the ship's position by Sumner's Method by Projection.† He must also be conversant with the use of Mercator's Chart, and be able to find, on either a "true" or "magnetic" chart,‡ the course to steer and the distance from one given position to another; and find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of ship from the object at the time of taking the second bearing. He must also understand how to keep a ship's Log Book. He will also be required to answer certain questions in writing (*and orally*) relative to cyclones or revolving storms.§

52. In Seamanship, &c.—In addition to the qualifications required for a Second Mate, a more extensive knowledge of seamanship will be required, as to shifting large spars, rigging sheers, taking lower masts in and out, how to moor and unmoor ship, and to keep a clear anchor; to carry out an anchor; how to manage a ship in stormy weather; how to cast a ship on a lee shore; how to secure the masts in the event of accident to the bowsprit; and how to rig purchases for getting heavy weights, anchors, machinery, &c., in and out. He must give satisfactory answers as to the ventilation of holds and the stowage of explosives. He must also know how to rig a sea anchor, and what means to apply to keep a vessel disabled or unmanageable out of the trough of the sea, and lessen her lee drift; how to get a cast of deep sea lead in heavy weather; and answer any other questions appertaining to the duties of an Only and First Mate of a ship which the Examiners may think necessary to put to him. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Only and First Mate's Certificates of Competency for Foreign-going Steam-ships.

53. A MASTER must be twenty-one years of age, and have been six years at sea, of which one year must have been as First or Only Mate in a Foreign-going Ship, and one year as Second or Only Mate; or he must have been six and-a-half years at sea, of which two and-a-half years must have been as Second Mate of a Foreign-going Ship, during the last twelve months of which service as Second Mate he must have been in possession of a First Mate's Certificate. *Vide also paras.* 11, 12 and 17. Master.

On and after the 1st June 1889, no Candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

A Candidate for an Ordinary Certificate of any grade, who does not already hold an Ordinary Certificate of a lower grade, must prove that he has served 12 months in a square-rigged sailing vessel within the last five years.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

54. In Navigation.—In addition to the qualifications required for a Second, Only, and First Mate, a Master must be able to compute the latitude from the meridian altitude of a star, &c. He must be able to find the magnetic bearing from

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* *See* Appendix B.

† *See* Appendix I.

‡ *See* Appendix F. The terms "true" and "magnetic" are used throughout the Regulations for the sake of brevity and convenience for indicating charts that have compasses engraved upon them showing the "true" or "magnetic" points of the compass respectively.

§ *See* Appendix K.

equidistant compass bearings of any fixed object when at sea, and compute the deviation therefrom. He must construct a deviation curve upon a "Napier's" diagram, which will be furnished by the Examiner, and understand the practical application of the same, and give satisfactory written (*and oral*) answers to certain practical questions on the effect of the ship's iron upon the compasses, the method of determining the deviation, and compensating same by magnets and soft iron.* He will be required to find the course to steer by compass in order to counteract the effect of a given current, and find the distance the ship will make good towards a given point in a certain time and to work out practically the correction to apply to soundings taken at a given time and place to compare with the depth marked on the chart.†

55. In Seamanship, &c.—In addition to the qualifications required of a Second, Only, and First Mate, he must be able to construct jury rudders for both wooden and iron vessels, and also rafts. He will be examined as to his resources for the preservation of the ship's crew in the event of wreck; as to the management of ships in heavy weather; as to rescuing the crew of a disabled ship; as to steps to be taken when a ship is on her beam ends, or in any danger or difficulty; or if disabled or unmanageable and on a lee shore; heaving a keel out, &c. He must explain the mode of procedure when placing ship in dry dock, directing repairs, and if putting in to port in distress with damage to cargo and ship. He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew, and as to penalties, and entries to be made in the official log, and a knowledge of the measures for preventing and checking the outbreak of scurvy on board ship, and the law as to load line marks, and the entries and reports to be made respecting them. He will be questioned as to his knowledge of invoices, charter party, bills of-lading, Lloyd's agent, and as to the nature of bottomry, also bills-of-exchange, surveys, averages, &c., and must answer any other questions of a like nature appertaining to the management of a ship which the Examiners may consider it necessary to touch upon. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Masters' Certificates of Competency for Foreign going Steam-ships.

Fore and Aft rigged ships.

Certificates for Fore and Aft rigged Vessels.

56. Certificates for the grades of Master, First Mate, Only Mate, and Second Mate, on which the words "for Fore and Aft rigged vessels only" will be written, will be issued to Candidates who have not complied with the regulation which requires them to have served at least one year in square-rigged *sailing* vessels, or who prove in course of examination that they are ignorant of the management of square-rigged ships.

57. A certificate "for Fore and Aft rigged vessels only" will not entitle the possessor to act in a capacity for which a certificate is required in square-rigged vessels, amongst which are classed full-rigged ships, barques, brig, barquentines, brigantines, and steam-ships carrying square sails.

58. A Candidate possessing a certificate "for Fore and Aft rigged vessels only," and desiring to obtain an ordinary certificate of the same grade, must prove that he has served at sea at least one year in a square-rigged *sailing* vessel, and will be re-examined both in navigation and seamanship.

Foreign-going Steam-Ships.

Qualifications for Certificates of Competency for Foreign-going Steam-ships only.

59. Certificates of Competency will be issued, subject to the examinations hereinafter described, for officers who have served in steam-ships, and who, owing to absence of service in square-rigged sailing ships, cannot under the

* *See* Appendices G and M.
† *See* Appendix F.

existing regulations obtain Certificates of Competency to act in the capacity of Masters or Mates of square-rigged ships.

60. These certificates will entitle the holders to go to sea as Masters and Mates of foreign-going steam-ships, but will not entitle the holders to go to sea as Masters or Mates of foreign-going sailing ships.

61. There will be no distinction in respect of "Fore and Aft" and "Square-rigged" steam-ships.

62. EXAMINATION IN COLOURS.—All Candidates for Certificates of Competency must pass the examination in Colours.

63. A SECOND MATE must be not less than seventeen years of age, and must have been four years at sea. *See* also para. 11. Second Mate

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

64. IN NAVIGATION, &c.—He must write a legible hand, and will be required to give in writing (*vide supplementary viva voce test, page* 39) definitions of various astronomical and other terms used in navigation.* He must have a competent knowledge of the first five rules of arithmetic, and the use of logarithms. He must be able to work a day's work complete, correcting the courses for deviation, leeway, and variation. He will be required to find the latitude by meridian altitude of the sun, and the difference of longitude from a given departure by a parallel sailing; also to find the course and distance from one position to another by Mercator's method. He will be required to find the time of high water at a given port, to observe and calculate the amplitude of the sun, and to find the error of the ship's compass therefrom, and also the deviation, the variation being given. He must be able to find the daily rate of the chronometer from error observed, and to find the longitude from altitude of the sun by the usual methods. He must understand the use of the sextant with its adjustments, and be able to observe with it, find the index error by the horizon, and read *off* and *on* the arc.† He must also pass a satisfactory examination in the International Code of Signals.‡

65. IN SEAMANSHIP, &c.—He must give satisfactory answers as to the standing and running rigging of steam-ships; as to bending, unbending, setting, reefing, taking in and furling sail; as to sending masts and yards up and down, &c., &c., as to seeing everything in readiness and clear for getting under way, and as to the precautions to be then observed with regard to engines, propellers, &c.; as to the management of a steam-ship when under canvas; and of a ship's boat in heavy weather, and as to dunnaging and stowing cargo, &c. He must have a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog, and sound signals,§ and be able to describe the signals of distress and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals.‖ He must be able to mark and use the lead and log lines. He must also understand the construction, use, and action of the sluices, and of the water-ballast tanks, engine-room, telegraph, &c.; the use and management of the rocket apparatus in the event of his vessel being stranded, and other questions of a like nature, appertaining to the duties of the Second Mate of a steam-ship, which the Examiners may think necessary to put to him.

66. AN ONLY AND FIRST MATE.—An Only Mate must be not less than nineteen years of age, and must have served five years at sea. A First Mate must be nineteen years of age, and must have served five years at sea, of which Only and First Mate.

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* *See* Appendix A. † *See* Appendix B. ‡ *See* Appendix C.
§ *See* Appendix D. ‖ *See* Appendix E.

one year must have been as Second or Only Mate of a Foreign-going Steam-ship. *See also paras.* 11, 16 *and* 27.

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last three years immediately preceding the date of his application to be examined

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

67. IN NAVIGATION.—In addition to the qualifications required for a Second Mate, an Only or First Mate must be able to find the true bearing of the sun and the error of the ship's compass from an observed azimuth of the sun both from an altitude and also from the "Time Azimuth Tables," and with the variation given compute the deviation; to find the latitude from a single altitude of the sun off the meridian, and to be able to use and adjust the sextant,* and to find the index error by the sun; and also to ascertain the true bearing of the sun, &c., and the ship's position by Sumner's Method by Projection.† He must also be conversant with the use of Mercator's Chart, and be able to find on either a "true" or "magnetic" chart,‡ the course to steer and the distance from one given position to another; and find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of ship from the object at the time of taking the second bearing. He must also understand how to keep a ship's Log Book. He will also be required to answer certain questions in writing (*and orally*) relating to cyclones or revolving storms.

68. IN SEAMANSHIP.—In addition to the qualifications required for a Second Mate, a more extensive knowledge of seamanship will be required, as to shifting large spars, rigging sheers, taking lower masts in and out, how to moor and unmoor ship and to keep a clear anchor, to carry out an anchor; how to manage a steam-ship in stormy weather, and how to rig purchases for getting heavy weights, anchors, machinery, &c., in and out. He must give satisfactory answers as to the ventilation of holds, and the stowage of explosives. He must be able to describe the effects of the screw race upon the rudder; and the effect produced on the direction of the head of the ship by going [ahead] [astern] with a [right] [left] handed screw when the rudder is [ported] [starboarded]. He must also know how to rig a sea anchor, and what means to apply to keep a steamer with machinery disabled out of the trough of the sea, and lessen her lee drift. How to turn a steam-ship short round; how to get cast of deep sea lead in heavy weather, and other questions of a like nature appertaining to the duties of an Only and First Mate of a steam-ship, which the Examiners may think necessary to put to him.

Master.

69. A MASTER—Must be not less than twenty-one years of age, and have been six years at sea, of which one year must have been as First or Only Mate in a Foreign-going Steam-ship, and one year as Second or Only Mate; or he must have been six and-a-half years at sea, of which two and-a-half years must have been as Second or Only Mate in a Foreign-going Steam-ship, during the last twelve months of which he must have been in possession of a First Mate's Certificate. *See also paras.* 11, 12 *and* 17.

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

70. IN NAVIGATION.—In addition to the qualification required for a Second, Only, and First Mate, he must be able

* *See* Appendix B. † *See* Appendix I. ‡ *See* Appendix F.
Also page 24 foot-note ‡.

to compute the latitude from the meridian altitude of a star, he must be able to find the magnetic bearing from equidistant compass bearings of any fixed object when at sea, and compute the deviation therefrom. He must construct a deviation curve upon a "Napier's" diagram which will be furnished by the Examiner, and understand the practical application of the same, and give satisfactory written (*and oral*) answers to certain practical questions on the effect of the ship's iron upon the compasses, the method of determining the deviation, and compensating same by magnets and soft iron * He will be required to find the course to steer by compass in order to counteract the effect of a given current, and find the distance the ship will make good towards a given point in a certain time, and to work out practically the correction to apply to soundings taken at a given time and place, to compare with the depth marked on the chart.†

71. In Seamanship, &c.—In addition to the qualifications required of a Second, Only, and First Mate, he must be able to construct rafts and jury rudders suitable for a screw steam-ship. He will be examined as to his resources for the preservation of the ship's crew in the event of wreck; as to the management of steam-ships in heavy weather; as to rescuing the crew of a disabled ship; as to steps to be taken when a ship is on her beam ends; or if disabled and on a lee shore. How to use steam appliances in the event of fire, and the best arrangement for towing vessels under different circumstances, placing ship in dry dock, directing repairs, and the mode of procedure if putting into port in distress with damage to cargo and ship. He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew, and as to penalties and entries to be made in the official log, and a knowledge of the measures for preventing and checking the outbreak of scurvy on board ship, and the law as to load line marks, and the entries and reports to be made respecting them. He will be questioned as to his knowledge of invoices, charter-party, bills-of-lading, Lloyd's agent, and as to the nature of bottomry; also bills-of-exchange, surveys, averages, &c., and answer any other questions of a like nature, appertaining to the management of a steam-ship, which the Examiners may consider it necessary to touch upon.

Service in Royal Navy.

Service in Royal Navy.

72. Officers of the Royal Navy are at liberty to apply for Certificates of service and to be examined for Certificates of Competency in the Mercantile Marine, but they must submit their applications in the manner directed by the Lords Commissioners of the Admiralty.

73 Officers of the Royal Navy desirous of being examined for Certificates of Competency in the Mercantile Marine will be required to prove the following service, of which twelve months must have been sea service under sail alone.

74. For Second Mate.—A Candidate must produce satisfactory evidence of four years' service at sea, or that he has attained the rank of acting Sub-Lieutenant.

75. For Only Mate.—A Candidate must prove five years' service at sea.

76. For First Mate or Masters.—A Candidate must show that he has attained the rank of Sub-Lieutenant, or Navigating Sub-Lieutenant.

Voluntary Examination in the Laws of the Deviation of the Compasses of Iron Ships.

Voluntary Examination of Masters and Mates in the Syllabus.

77. Any Master or Mate who wishes to pass a *voluntary* examination in the Syllabus* of examination on the Laws of the Deviation of the Compasses of an Iron Ship, &c., can at any time be examined upon filling up the form of application, and the payment to the Port Officer of the prescribed fee. If the candidate passes the examination successfully, an endorsement to that effect will be duly made upon the Master's or Mate's Certificate held by him.

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* *See* Appendices G and M. † *See* Appendix F. ‡ *See* Appendix A.

Failure.

Re-examination in case of failure

78. In all cases of failure the Candidate must be examined *de novo*. If a Candidate fails in *Seamanship* he will not be re-examined *until after a lapse* of SIX MONTHS. Whether the whole or part of this period must be served at sea must depend upon the subjects in Seamanship in which the Candidate failed, but what amount (if any) of sea service will be required will be left to the discretion of the Port Officer, subject, however, to revision by the Government, should they see fit.

79. The Examiners in making out their report on Form Exn. 14 should state what amount (if any) of further sea service the Candidate must perform, and they should also insert this information under Division H. in Form Exn. 2.*

80. If he fails three times in *Navigation* he will not be re-examined until after a lapse of THREE MONTHS from the date of the *last failure*.

Certificate of lower grade.

81. If a Candidate has failed in his Examination, but the subjects in which he has failed are not included in the subjects required for a Certificate of a lower grade, he may, if he desires it, receive a Certificate of such lower grade.*

82. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled, for re-examination for the higher grade of Certificate he will be required to pay a further full fee.

83. If a Candidate fails for bad spelling or writing, he will not be re-examined until after a lapse of at least three months.

84. If a Candidate fails in his examination for an ordinary Certificate, he may, if qualified, and upon payment of another fee, &c., be examined for a Certificate of Competency for Foreign-going Steam-ships without waiting the usual time after failure.

Fees.

85. Candidates for examination, in making their application on Form Exn. 2, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause, except failure to pass the colour tests, not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be, they will be allowed to again present themselves for examination for a Certificate of the same grade without paying any further fee.

Fees to be paid by applicants for examination, s. 133.

86. The fee for examination must be paid to the Port Officer. In any case in which a Candidate offers money to any other officer, and in any place but in the Port office, the Candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be again examined for twelve months.

87. If a Candidate fail in his examination *no part of the fee will be returned to him.*

88. The fees are as follow:—

FOR "FOREIGN-GOING SAILING AND STEAM SHIPS."

	Rs.
Second Mate	12
First and Only Mate, if previously possessing an inferior certificate, either granted by the Board of Trade, or by the Government of a British Possession *under section 8 of the "Merchant Shipping (Colonial) Act, 1869"*	6
If not	12
Master	24
Where a Candidate is in possession of a Certificate for Fore and Aft rigged Vessels, for an Ordinary or Steam-ship Certificate of the same grade	12

* *See* Appendix H.

FOR "VOLUNTARY EXAMINATION IN STEAM."

	Rs.
Mate (Only or First)	12
Master	12

FOR "VOLUNTARY EXAMINATION IN DEVIATION OF THE COMPASS."

	Rs.
Mate (Second, Only or First)... ...	12
Master	12

GENERAL.

89. Certificates of Competency shall be made and issued by the Government in the forms hereunto annexed.

90. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate and the other shall be kept and recorded by the Port Officer of Calcutta.

90A. No application from the holder of a certificate granted by the Government of any other British Possession or by the Board of Trade to be examined for a certificate of the same legal value shall be entertained.

General Instructions to Examiners and Candidates.

Prohibited books and papers.

91. All instruments necessary for use in the examinations are supplied by the Government.

92. Before commencing the examination, the tables or desks must be cleared of all scraps of paper, or books that are not used in the examination, and care should be taken that the candidates do not bring into the examination room any book, paper, document, or memoranda of any description whatever. No person whatever should be allowed in the room during the time of examination, but those whose duties require them to be present.

93. No instructors will be allowed on the premises.

Candidates not to leave premises during examination.

94. Candidates will under no pretence whatever be allowed to leave the premises while the examination is proceeding. If a Candidate has occasion to visit the retiring room he will only be allowed to do so on the completion of the paper on which he may be engaged, when he will be required to enter in a book, kept for the purpose, the exact time of his leaving and returning to the examination room. When only a few Candidates are under examination, two persons will not be allowed to leave the room at the same time.

Position of Candidates at examination.

95. Candidates should be so placed as to prevent one copying from the other, and no communication whatever between the Candidates should be allowed.

Blotting paper.

96. If any blotting paper is allowed it should be black; and when the first examination paper is issued each Candidate should be furnished with a piece which should be returned to the Examiner upon the completion of the last paper.

How examination papers should be issued.

97. The examination papers should be issued to the Candidates in half sheets only, and one at a time. This will prevent a Candidate from spreading out the sheets on the table in an apparently careless manner, but so as to enable his nearest neighbour to look over and copy, or examine the problems. It will also enable the Examiner to look over and report upon the work on one half sheet, while the Candidate is at work upon another, and so on. When the errors are not too numerous, or when they are not from ignorance of the subject, the incorrect problems may be returned to the Candidate for correction, but in no case should the errors be pointed out by the Examiner, neither should any marks be made on the correct work of the problem, which would at once indicate how far or to what extent the work is correct. Should the problems be returned to the Examiner the second time incorrect, this would be a failure; and as the time allowed is considered ample for working out the papers carefully, this rule is expected to be strictly observed.

In certain cases problems may be corrected on morning following examination day.

98. When from the large number of the Candidates, it may be found impossible to look over the work, on the day of examination during the office hours, an hour in the morning of the following day may be allotted for the purpose of correcting the problems, but in no case should a Candidate have his problem returned to him for correction after he has made the second attempt.

Re. Exn 4A

99. The paper (Exn. 4A) is only for those Candidates who present themselves for examination for the first time. It is intended not only to ensure on the part of the Candidate a knowledge of the meaning of a variety of terms of great use to the Navigator respecting which much ignorance exists at present, but at the same time to test his handwriting and spelling.

100. In using this paper, the Examiner will place a mark against the numbers of the particular questions which he selects for answers, and not less than ten questions should be selected. The Candidate will then write against the questions so marked his definition of the terms in a clear and legible hand, so as to prevent the possibility of any letter being mistaken. Attention should be paid to the spelling and writing of all grades of Candidates. The *supplementary vivâ voce* test should also be applied as usual.

Re-questions on Deviation of the Compass. (Exn. 7, Appendix G.)

101. In the questions on Deviation of the Compass (Exn. 7, Appendix G) the Examiner should indicate by a mark against at least twelve of the questions for answers, and those indicated must be correctly answered. The selected questions should be varied frequently, and no two Candidates should have precisely the same questions. The Candidate should be furnished with sheets of blank ruled paper which is supplied for that purpose with instructions that he is to write only on one side of the paper, and to answer each of the questions against which a mark is placed in a clear and legible hand, and to commence each answer by writing down the number of the question to which it relates in the margin left for that purpose. In answering question 19, besides giving a full explanation in writing, of the *tentative* method* of compass adjustment (accompanied by the usual *supplementary vivâ voce* test), the Candidates should be required to illustrate by diagrams how the poles of the magnets are placed with regard to the compass needle for correcting the semi-circular deviation, as well as the heeling error, and also how the soft iron should be placed for correcting the quadrantal deviation, or the Candidate may be tested by "Beall's Compass Deviascope," in which case it will not be necessary for him to give the written answer and sketches.

Vivâ voce examination.

102. In the *vivâ voce* examination a reasonable time should be allowed for the Candidate to give his answers. No assistance should be given or leading question put.

Adjustment of sextant.

103. Particular attention should be paid to the adjustments of the sextant, and the written answers should be given on the ruled paper in the same manner as the answers to the questions on Exn. 7, and the *supplementary vivâ voce* test applied as usual. Every Candidate should have a practical knowledge of what is known as the first three adjustments, and be able to read correctly *off* the arc, a supposed index error to be given by the Examiner as additive, as well as reading *on* the arc in the usual way.

Minor corrections.

104. All outstanding or minor corrections should appear in the margin of each problem paper; also on the chart papers Exn. 9C and Exn. 9D; and unless all these corrections appear on the papers of the Candidate they will not be considered complete.

Examination to commence with that for Second Mate.

105. In every case the Examination, whether for Only Mate, First Mate, or Master, is to commence with the problems for Second Mate.

Problems required as tests.

106. Examiners should bear in mind that the problems to be performed are required as tests, and for the purposes of an Examination, and not for sea-going or practical purposes alone.

107. The Candidates will be allowed to work out the various problems according to the method and the tables they have been accustomed to use.

Time allowed for Problems and Writings.

Time allowed for working problems.

108. *Candidates for Second Mates' Certificates of Competency* must complete the whole of their Examination in Navigation in *eight hours*, including the time allowed for writing the definitions (Exn. 4*a*), the paper on the adjustment of the sextant, and the correction of *all* errors and oversights; but

* See Appendix M.

the nautical problems on Forms "Exn. 4" and "Exn. 5" must be completed within *six hours*, and without the Candidates leaving the premises during that period.

109. *Candidates for Only and First Mates' Certificates* must complete the whole of their examination in Navigation in *twelve and-a-half hours*,* including the time allowed for the papers on the sextant; the chart; cyclones or revolving storms; and for the correction of *all* errors and oversights; but the nautical problems on Forms "Exn. 4," "Exn. 5," and "Exn. 6" must be completed within *six hours*, and without the Candidates leaving the premises during that period.

110. *Candidates for Certificates as Masters,' Ordinary*, must complete the whole of their examination in Navigation in *fifteen hours;* including the time allowed for the papers on the sextant; the chart; compass deviation; cyclones or revolving storms; and for the correction of *all* errors and oversights; but the problems on Forms "Exn. 4," "Exn. 5," and "Exn. 6," must be completed within *six hours*, and without the Candidates leaving the premises during that period.

111. *Candidates after finishing the problems required of the respective grades* on the first day of examination should proceed, until the end of that day, with such subjects as the definitions, sextant, chart, and Question 19 of Form "Exn. 7."

112. *The Sumner Problem* (*Exn. 6a*) must on no account be given out to any of the grades on the first day of the examination, but should be the commencement of the Candidate's work on the second day, and on completion of this problem the Candidates for Masters' Certificates should proceed with the problems on paper "Exn. 7."

113. *Candidates for Foreign-going Steam-ship Certificates of Competency* will be allowed the same amount of time to perform their navigation, &c., as hereinbefore laid down for the respective grades for the Ordinary Foreign-going Certificates.

114. *Deviation of the Compass.*—A period not exceeding eleven hours will be allowed to Candidates for the completion of the whole of the examination in the Syllabus, including the correction of all errors and oversights in both the problems and writings.

115. Punctually at the expiration of the prescribed time all the papers should be called up, whether completed or not, and if not completed, the Candidate will be declared to have failed, unless the Port Officer or the Examiner see fit to lengthen the period in any special case If, however, the period is lengthened in any case, the special circumstances of that case, and the reasons for lenthening the period, together with the time allowed, must be reported to the Government by the Examiners, in the column for "remarks" on the Form Exn 14. It should be noted that the periods prescribed in the foregoing paragraphs are not intended to include the time occupied by the *viva voce* part of the examination. Additional time allowed in special cases.

116. It is anticipated that but few of the Candidates for Certificates of Competency for any of the foregoing grades will require the whole of the time herein allowed for completing their Examination in Navigation; and ample time has been prescribed, so that Candidates may perform their work in a careful, clear, and legible manner, and to the entire satisfaction of the Examiners.

Degree of Precision required in the Solution of the Problems.

117. In order to prevent any misapprehension as to the degree of precision required by the Regulations in working out the various problems in the Examinations for Masters' and Mates' Certificates, the attention of Examiners and Candidates is particularly directed to the following Instructions:—

(*a.*) Candidates are expected to work out their answers to all problems within or not to exceed a margin of *one mile of position* from a correct result (*e.g.*, in problems where the answer required is a latitude, longitude, or distance), excepting in finding the

* A Candidate other than Second Mate who may not previously have passed an examination may be allowed the time occupied in writing his definitions on Exn. 4*a*, in addition to the above.

ship's position by "Sumner's" method, where a margin of 2½ miles will be allowed.

(*b.*) In such problems as the "Amplitude" and "Alt-Azimuth," where the bearings, deviations, &c, only are required, a margin of 2′, or 3′, from a correct result will be sufficiently accurate.

(*c.*) In no problem is the Candidate for an "ordinary" Certificate required by the Regulations to correct for *second differences* in taking out the quantities from the Nautical Almanac.

(*d.*) In solving the "Time Azimuth" problem, an answer not exceeding half a degree from the exact result will be sufficiently near. But in all cases the actual latitude, declination, and time used, together with the exact bearing (from the North or South) as given in the tables, must be clearly shown by the Candidate on his papers.

(*e.*) In interpolating for the correct deviation to be applied in solving the Chart question, Papers "Exn. 9 C." and "Exn. 9 D," it will usually be sufficiently near if the Candidate works throughout with the nearest degree of deviation taken from the "Deviation Card," and even in cases where the deviations may vary but little, the nearest half degree used throughout will be sufficiently precise, and will at the same time prove whether the Candidate understands the method of arriving at the amount of, and applying, deviations. It is not necessary that the Candidate should waste his time in solving the course to *odd minutes* as is sometimes done.

(*f.*) In calculating the correction to apply to the Soundings, Question 5 of Paper "Exn. 9 D," the Candidate is not required to work out to the exact inch, as is sometimes done. It will be sufficiently near if he brings his answer within half a foot or so of a precise result.

It must be clearly understood in reading the foregoing Instructions that it is always provided the work of the Candidate is correct in principle.

Supplementary viva voce *Examination on written Papers.*

118. An impression prevails in regard to the examination of Masters and Mates, that so long as a Candidate can commit to paper correct answers to the various questions requiring written answers (*e.g., Forms Exn. 4a, Exn. 7, Exn. 9a, Exn. 9c, Exn.* 32. 70, *&c.*), no matter how indicative the answers may be of their having been learnt off by rote *only*, the duty and responsibility of the Examiners are at an end, and that they have no power or authority to reject a Candidate should his written answers be correct.

119 Lest, therefore, such an impression should prevail, Candidates for Certificates of Competency should bear in mind that they are not only expected to give correct written answers, which may merely be learnt off by rote, but they are expected to possess an intelligent knowledge of the various subjects prescibed in the Regulations, particularly as regards the important subject of the Deviation of the Compass.

120. This result may be easily attained by the Examiner putting a few *viva voce* questions to the Candidate as the papers are brought up for inspection, or at any subsequent time if more convenient. The oral questions (suggested by the printed questions and the answers given) should be such that the Examiner may satisfy himself that the candidate possesses a real knowledge of what he has written, and should be confined strictly to the subjects of the printed questions. Should the candidate then exhibit ignorance of the subjects, the Examiner (who is in a position to judge of the real knowledge the man before him possesses) should deal with him at his discretion, notwithstanding that the candidate may have written all the answers correctly by rote.

121. When an Examiner finds it necessary to fail a Candidate in this *supplementary viva voce* test, a memorandum containing the particulars of the points on which the candidate was ignorant, *i.e., the identical questions and the identical*

answers given, must in each case be attached to his examination papers, when forwarded in the usual course to the Port Officer, or the particulars may be set forth by the Examiner in the margins of the candidate's papers in red ink.

122. If the Candidate passes, he will receive the Form Exn. 16, upon which the Government, will issue the Certificate to the candidate, whose testimonials, &c., will be returned at the same time. Form Exn. 16 Completion of examination

Special Notice to Candidates.

123. The attention of Candidates is specially called to the following Regulations :—

124. Candidates are required to appear at the examination-room punctually at the time appointed.

125. Candidates are prohibited from bringing into the examination-room books, paper, or memoranda of any kind whatever. The slightest infringement of this regulation will subject the offender to all the penalties of a failure, and he will not be allowed to present himself for re-examination for a period of three months.

126. In the event of any Candidate being detected in defacing, blotting, writing in, or otherwise injuring any book or books belonging to the Government, the papers of such Candidate will be detained until the book or books so defaced be replaced by him. He will not, however, be at liberty to remove the damaged book, which will still remain the property of the Government.

127. In the event of any Candidate being discovered referring to any book or memoranda. copying from another, or affording any assistance or giving any information to another, or communicating in any way with another, during the time of examination or copying any part of the problems for the purpose of taking out of the Examination rooms, he will subject himself to all the penalties of a failure, and he will not be allowed to be examined for a period of six months.

128. No Candidate will be allowed to work out his problems on a slate or on waste paper.

129. No Candidate will be permitted to leave the room until he has given up the paper on which he is engaged.

130. Candidates will find it more convenient both here and at sea, to correct the declination and other elements from the Nautical Almanac by the " hourly differences." which have been given in that work in order to facilitate such calculations ; they will thereby render themselves independent of any proportional or logarithmic table for such purpose.

131. The corrections by inspection from tables given in some of the works on Navigation will not be allowed (*see* Tables IX, XI and XXI in Norie's Epitome, &c.) ; every correction must appear on the papers of the Candidates.

132. Any candidate who may be guilty of insolence to the Examiner or of other misconduct will render himself liable to the postponement of his examination, or, if he has passed, to the detention of his Certificate for such period as the Government may direct

133. For rules as to amount of time allowed to perform the work, *see* page 36.

Masters' and Mates' Voluntary Examinations in Steam.

134. These examinations are limited to Masters and First or Only Mates who are possessed of or entitled to Certificates of Competency, and are provided for the purpose of giving them an opportunity of undergoing a voluntary examination as to their practical knowledge of the use and working of the steam engine. They are conducted under the superintendence of the Port Officer at such times as they may appoint for the purpose ; and the Examiners are selected by the Government from the Engineer-Surveyors appointed under the Indian Steam Ships Act, 1884. *Voluntary Examinations in Steam.*

135. Any Master or Mate desiring to be examined in Steam must deliver to the Port Officer a statement in writing to that effect, upon the Form of Application (Exn. 2), and the applicant's Certificate of Competency must be delivered to the Port Officer along with his statement. If he is about to pass an examination for a Certificate of Competency at the same time, the applications should be sent in together. Application, how to be made. Exn. 2.

136. A fee of Rs. 12 must be paid by the applicant for the examination *in Steam*, and the Port Officer will thereupon inform him of the time and place at which he is to attend to Fee to be paid. Conduct of examination, &c.

be examined, and the examination will then and there proceed in the same manner as the other examinations. If the applicant fails, and has given in his Certificate, it will be at once returned to him.

Record of Certificate. Exn. 14.

137. If the applicant passes, the Report (Exn. 14.) and the Certificate of Competency with the Form (Exn. 2.) will be sent to the Government; the words "*Passed in Steam,*" with the date and place of examination, will then be entered on the Certificate and its counterpart, and the Certificate will be sent to the Port Officer to be delivered to the applicant in the usual manner.

Failure.

138. If the applicant fails he may not present himself for re examination until the expiration of three months from the date of failure.

Extent of examination.

139. The examination is for the most part *vivâvoce*, and extends to a general knowledge of the practical use and working of the steam engine, and of the various valves, fittings, and pieces of machinery connected with it. Intricate theoritical questions on calculations of horse power or areas of cylinders and valves, or any of the more difficult questions which appertain to steam engines and boilers, will not be asked. The examination will in fact be confined to what a Master of a steam-vessel may be called upon to perform in the case of the death, incapacity, or delinquency of the engineer.

140. Examiners are to be careful in their examinations to satisfy themselves that applicants really do know the names and uses of the various parts of engines and boilers, and their connecting pipes, valves, cocks, &c. Practical knowledge, as distinguished from theories, abstruse calculations, and book learning is to be the test of the applicant's fitness to have his Certificate indorsed.

Where examination to be conducted

141. The Examiner should arrange to conduct part of the examination in the engine-room of a Steam-ship, unless from circumstances he finds it impossible to do so; and if an opportunity offer the applicant should be permitted, under the guidance of the Examiner, to start and stop the engine of some vessel which may have her steam up.

142. The Examiner, in sending in his report of examinations of Masters and Mates in steam, should state where the examination has been held.

Examination in elementary questions.

143. Candidates will be required to give written answers to sixteen out of twenty questions taken from a book of Elementary Questions pulished by the Government.* These questions will be altered from time to time without notice. The twenty questions are not to be difficult, theoretical, or book questions, but are to be such as any man of ordinary capacity ought to answer who has any "*practical knowledge of the use and working of the steam-engine.*"

Answers to be sent to the Board of Trade.

144. These questions, with the Candidate's answers, should be sent to the Government, with the reports, after each examination

145. These answers will also assist in enabling the Government to decide any question that may hereafter arise in cases where it is alleged that applicants have been improperly passed, or improperly rejected.

Candidates referring to books, &c., to be put down as failed.

146. The Examiners will be careful that if any Candidate refers to any book or paper or memorandum, or obtains information from another Candidate during the examination, he will be treated as having failed, will forfeit his fee, and will not be allowed to be re-examined for a period of three months.

In cases of failure Examiner to report questions that decided it.

147. The Examiners will report in the case of failure, the nature of the question or questions that decided the failure, or the point in the management of the engine in which the Candidate was deficient.

Service on board Steam-Ship unnecessary.

148. There is nothing in the Regulations requiring that applicants for the voluntary examination shall have served on board Steam-Ships; all that is required is that they shall have a "practical knowledge." Examiners will, of course, not fail to appreciate the fact, when passing applicants, that practical knowledge is best gained in the engine-room; and the examination of an Officer who does not produce official evidence of service in Steam Ships, and of experience of engines, must necessarily be more searching than in the case of one who produces evidence of such service and experience.

See Appendix. Q.

APPENDIX A.

N.B.—*The Candidate is to write a short definition against so many of the following terms as may be marked with a cross by the Examiner. The Examiner will not mark less than* 10. *The writing should be clear, and the spelling should not be disregarded.*

1. The Equator.
2. The Poles.
3. A Meridian.
4. The Ecliptic.
5. The Tropics.
6. Latitude.
7. Parallels of Latitude.
8. Longitude.
9. The Visible Horizon.
10. The Sensible Horizon.
11. The Rational Horizon.
12. Artificial Horizon and its use.
13. True Course of a Ship.
14. Magnetic Course.
15. Compass Course.
16. Variation of the Compass.
17. Deviation of the Compass.
18. The Error of the Compass.
19. Lee Way.
20. Meridian Altitude of a Celestial Object.
21. Azimuth.
22. Amplitude.
23. Declination.
24. Polar Distance.
25. Right Ascension.
26. Dip or Depression of the Horizon.
27. Refraction.
28. Parallax.
29. Semi-diameter.
30. Augmentation of Moon's Semi-diameter.
31. Observed Altitude.
32. Apparent Altitude.
33. True Altitude.
34. Zenith Distance.
35. Vertical Circles.
36. Prime Vertical.
37. Civil Time.
38. Astronomical Time.
39. Sidereal Time.
40. Mean Time.
41. Apparent Time.
42. Equation of Time.
43. Hour Angle of a Celestial Object.
44. Complement of an Arc or Angle.
45. Supplement of ditto.

APPENDIX B.

ADJUSTMENTS OF THE SEXTANT.

The Applicant will answer in writing, on paper which will be given him by the Examiner, all the following questions, numbering his answers with the numbers corresponding to the questions :—

Question.

1. What is the first adjustment of the sextant ?
2. How do you make that adjustment ?
3. What is the second adjustment ?
4. Describe how you make that adjustment ?
5. What is the third adjustment ?
6. How would you make the third adjustment ?
7. In the absence of a screw how would you proceed ?
8. How would you find the index error by the horizon ?
9. How is it to be applied ?
10. Place the index at error of minutes to be added, clamp it, and leave it.

    (NOTE.—The Examiner will see that it is correct).

11. The Examiner will then place the zero of the vernier on the arc, not near any of the marked divisions, and the Candidate will read it.

    NOTE.—In all cases the applicants will name or otherwise point out the screws used in the various adjustments.

(*The above completes the Examination of Second Mates.*)

Candidates for Only Mates', First Mates', and Masters' Certificates will be required to give, in writing, replies to the following questions, *in addition* to those required of Candidates for Second Mates' Certificates as above.

1. How do you find the index error by the Sun ?
2. The readings being { } What is the Index Error, and how do you apply it ?
3. What proof have you that those measurements or angles have been taken with tolerable accuracy ?

APPENDIX C.

EXAMINATION OF MASTERS AND MATES IN THE INTERNATIONAL CODE OF SIGNALS.

Instructions to Examiners.

The Government desire to direct the attention of the Examiners to the principal points connected with the International Code of Signals (which is to be treated as a subject in Navigation) as to which Candidates for Examination should be questioned in order to qualify for Certificates of Competency.

The Government would recommend to the Examiners a perusal of the *Report of the Signal Committee* of 1855 (which will be found at the commencement of the Signal Book), and also the *first few pages of the Book*. The information therein given will be found sufficient to make the Examiners theoretically acquainted with the characteristics of the Code, and the advantages it claims to possess over other Codes, and will enable them to appreciate and urge upon Candidates for Examination the facilities which this System of Signalling affords for easy and rapid communication.

The "comprehensiveness" and "distinctness" of the International Code are its chief recommendations.

The form of the Hoist generally indicates the nature of the Signal made, so that an observer can at sight understand the character of the Signal he sees flying.

The annexed plate gives examples which illustrate this.

The Examinations should tend to elicit a knowledge of the distinctive features of the Code above alluded to.

With this object the Examiners should make the 2, 3, and 4 Flag Signals on the Frame board which is furnished for the purpose *(always taking care first to show the Ensign and the Code Pennant at the Gaff)*,* questioning the Candidates as to the distinguishing Forms of the respective Hoists *(See Plate annexed)*, which will be indicated according as a Burgee, or a Pennant, or a Square Flag, is uppermost.

The Candidate ought to know how to find in the Signal Book the communication or the inquiry he desires to make, and how to make the Signal. The Signal to be made should *invariably* be sought for by the Candidate in the Vocabulary and Index, Part II, and never in Part I.

The Candidate ought to know how to interpret a Signal.

The Examiner should place a Signal on the Frame board and vary the Signal by showing a 2 or 3 Flag Signal, or a "Geographical" or a "Vocabulary" Signal, or the name of a Merchant Ship or a Ship of War.

The two latter signals would not of course be found in the Signal Book. The Candidate ought to point them out in the *Code List of Ships*.

A Candidate ought to be able to read off a Signal at sight, so far as to name the Flags composing the Hoist.

He ought to know the use of the Code Pennant, and of the Pennants C. and D., "Yes" and "No."

The Candidate should be practised in the use of the Spelling Table, by being made to spell his own name, or some word not in the Vocabulary of the Code.

A knowledge of the Distant Signals should be required of the Candidate, their object and the mode of signalling by the Distant Code, which will be found at the end of the Signal Book.

For this purpose two Black Balls, two Black Square Flags, and two Black Pennants will be furnished with the Frame board, and the Candidate should be required to make one or two Distant Signals, and to read off one or two made by the Examiners.

The Ball being the distinguishing symbol of the Distant Signal, any Pennants or Flags of the Code may be employed in conjunction with it, irrespective of colour. The Black Pennants and Flags are merely sent as showing best in the light background of the Frame board.

The Examiners should be careful to ascertain that the Candidate possesses a knowledge of the Distress Signals which came into operation November 1st, 1873.

Semaphores.

A plate at the end of the Signal Book explains the method by which the arms of the Semaphore are made to represent by their position (up, down, or horizontal,) the three symbols used for Distant Signalling, viz. a Flag, a Ball, or a Pennant. Before making Signals with the Semaphore, the Black Disc with the white rim should be placed on the top of the Semaphore Mast, as it properly forms a part of the Mast itself.

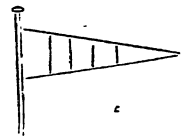
The International Code is used on board Her Majesty's Ships and it has been adopted by all the principal maritime powers for their Imperial as well as for their Mercantile Navies.

Note.—The International Code of Signals, with the Code List, is prepared by the Registrar-General of Shipping and Seamen, and may be had of the Publishers, Messrs. Spottiswood & Co., 54, Gracechurch Street, London, and the principal Booksellers at the various ports.

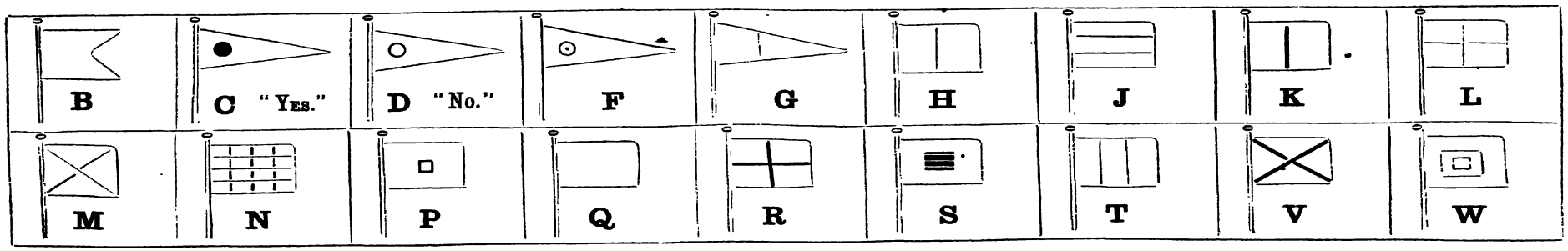
The Official Mercantile Navy List and Maritime Directory published for the use of Merchants, Shipowners, Shipbrokers, and others, may be obtained in like manner, price 12*s*.

* The object of this is, of course, to distinguish the Signals from those of another Code.

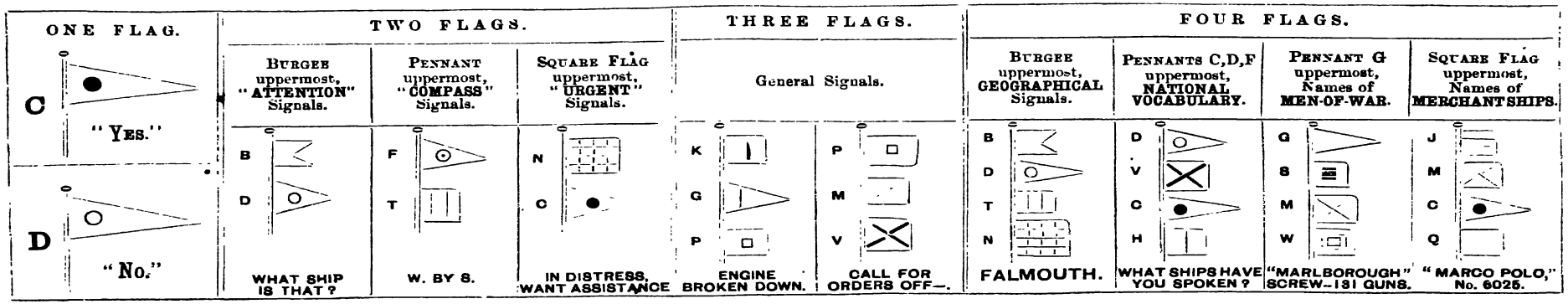
FLAGS OF THE INTERNATIONAL CODE OF SIGNALS.

"CODE SIGNAL" AND  "ANSWERING PENNANT."

N.B.—When used as the "Code Signal," this Pennant is to be hoisted under the "Ensign;" when used as the "Answering Pennant," where best seen.



The following examples will serve to illustrate how the *form of a Hoist* will usually denote the *nature of the Signal* made :—



APPENDIX D.

Regulations respecting Lights and Fog Signals and Steering and Sailing Rules Issued by the Board of Trade.

NOTICE.

The Board of Trade have had their attention drawn to the necessity of a more strict examination of applicants for Certificates of Competency in their knowledge of the regulations for preventing collisions at sea.

In order that the rule of the road at sea may be better understood, and that a uniform system of examination may prevail, the Board of Trade have issued the following catechism.

This catechism has received the approval of the Trinity House and Admiralty in England, and of the Council of the Admiralty of France.

The Board of Trade attach very great importance to a thorough knowledge of the steering and sailing rules on the part of every applicant for a Certificate of Competency, and a thorough examination on the part of the examiners.

All applicants for examination, whether for certificates as masters or mates, are to be examined as to their knowledge of the steering and sailing rules each time they present themselves for examination.

Questions suggested by the following heads of Examination are to be asked in addition to, and are not to supersede, any other questions proper and necessary to be asked by the Examiner.

The following questions need not be adhered to literally by the Examiner, and are not all to be asked ; but the substance of the leading questions should be asked, and all that are asked should be satisfactorily answered, before an applicant is reported to have passed his examination. The Examiner should make such a selection of the questions as each case appears to him to require.

Thomas Gray,
Assistant Secretary.

Board of Trade,
Marine Department.

Heads of Examination in Regulations respecting Lights and Fog Signals and in the Steering and Sailing Rules.

1. What light or lights are required by the regulations to be exhibited by sailing vessels at anchor ?

One light only, viz., a white light.

2. What light or lights are required by the regulations to be exhibited by steam-ships at anchor ?

The same as for sailing vessels.

3. Where is the anchor light to be exhibited ?

Where it can best be seen. It must of course be placed where there is the least possible chance of obstruction from spars, ropes, &c., &c.

4. To what height may the anchor light be hoisted ?

It may be exhibited at any height where it can best be seen not exceeding 20 feet above the deck.

5. What is the description of the lantern containing the anchor light required by the regulations ?

A globular lantern of not less than eight inches in diameter.

6. In what direction or directions must the anchor light show ?

It must show a clear, uniform, and unbroken light, visible all round the horizon.

7. At what distance must it be visible ?

At least one mile.

8. What is the number of lights required by the regulations to be carried by sailing ships when under weigh at night ?

Two side-lights, and to have in readiness a white light or a flare-up light to show from their stern to any vessel overtaking them.

9. Of what colour are these lights, and how are they to be placed on board the ship ?

A green light on the starboard side, and a red light on the port side.

10. What description of light must be shown from the sides of sailing vessels under weigh ; and over how many points of the compass, and in what directions, and how far, are they required to show ?

Each light must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass ; so fixed as to throw the light from right ahead to two points abaft the beam on the starboard and port sides respectively ;

and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

11. What lights are they to carry when being towed at night ?

The same.

12. Are the side-lights required to be fitted with screens ; and if so, of what length, and how ?

Yes on the inboard side ; at least three feet in length, measuring forward from the light. They are to be so fitted as to prevent the coloured lights from being seen across the bows.

13. What is the number of lights required by the regulations to be carried by steam-ships when under steam at night ?

Three lights, and to have in readiness a white light or flare-up light to show from their stern to any vessel overtaking them.

14. Of what colour are these lights, and how are they to be placed on board the ship ?

A white light on or in front of the foremast at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth. A green light on the starboard side, and a red one on the port side.

15. Over how many points of the compass, in what direction, and how far, is the foremast-head light of a steamer required to show ?

Over 20 points, viz., from right ahead to two points abaft the beam on both sides. It must be of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

16. Are the side-lights required to be fitted with screens ; and if so, of what length ?

The green and red lights are to be fitted with screens on the inboard side, extending at least three feet forward from the light, as in the case of sailing vessels.

17. Over how many points of the compass, in what directions, and how far, are the coloured side-lights of steamers required to show ?

The side-lights must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, on each side of the ship, *i.e.*, from right ahead to two points abaft the beam on the starboard and port sides respectively, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles.

18. What description of lights are steamers required by the regulations to carry when they are not under steam, but under sail only ?

Side-lights only, the same as sailing vessels.

19. What exceptional lights are to be carried by small sailing vessels in certain cases ?

Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use ; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

20. What description of lights are pilot vessels required to carry when on their stations on pilotage duty ?

A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

21. What description of lights are pilot vessels required to carry when not on their station on pilotage duty ?

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

22. What lights are open boats and fishing vessels of less than 20 tons net register required to carry when under way and not actually engaged in fishing.

Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights ; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

23. What lights are fishing vessels and fishing boats of 20 tons net register, or upwards, required to carry when under way and not actually engaged in fishing?

They must carry similar lights to those of other ships when under way.

24. What lights are steam trawlers of 20 tons gross register, or upwards, whilst actually engaged in trawling, and not being stationary, required to carry?

All steam-vessels engaged in trawling must carry either one of the two following arrangements of lights, whichever of the two may be the more convenient:—

(*a*) The usual green and red side-lights, and foremast-head light, similar to those carried by other steam-ships; or

(*b*) They must carry on or in front of the foremast-head, and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side; such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: and (2) a white light in a gobular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform, and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet, nor more than 12 feet.

25. What lights are sailing trawlers whilst actually engaged in trawling, and not being stationary, required to carry?

All sailing vessels, of whatever tonnage, whilst engaged in trawling, must carry either one of the three following arrangements of lights, whichever of the three, (*a*), (*b*), or (*c*), may be the most convenient:—

(*a*) They may carry the green and red side-lights similar to those of other sailing ships; or

(*b*) They may carry on or in front of the foremast-head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side and the red light from right ahead to four points abaft the beam on the port side; and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet; or

(*c*) They may carry a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon, and visible on a dark night, with a clear atmosphere, for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by, another ship or vessel in sufficient time to prevent collision.

26. What lights are vessels whilst actually engaged in drift net fishing required to carry?

All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than 5 feet and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character and contained in lanterns of such construction as to show all round the horizon, on a dark night, with a clear atmosphere, for a distance not less than three miles.

27. What lights are vessels whilst actually engaged in line fishing required to carry?

A vessel engaged in line fishing is required to carry the same lights as a vessel engaged in drift net fishing.

28. If a vessel, when fishing, becomes stationary in consequence of her gear getting fast to a rock or other obstruction, what signal must she make?

She must show the same light, and if a fog, mist, or falling snow prevail, she must make the same fog signals as if she were at anchor.

29. What lights are fishing vessels and open boats required to exhibit when at anchor?

Between sunset and sunrise they must exhibit a white light, visible all round the horizon at a distance of at least one mile, the same as any other vessel.

30. What sound signals are fishing vessels required to make whilst engaged in fishing in thick weather?

In fog, mist, or falling snow, a drift net vessel attached to her nets, and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

31. May fishing vessels and open boats use flare-up lights, and if so, at what part, or parts, of the vessel should they be exhibited?

Yes. Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

32. Do these regulations referring specially to fishing vessels and boats apply to foreign vessels, and to all parts of the world?

No, with the exception of the *first paragraph* of Article 10 of the regulations, they apply only to British vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre.

33. What lights are steam-ships required to carry when towing other ships?

A steam-ship, when towing another ship, shall, in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position as the white light which other steam-ships are required to carry.

34. What light is a ship which is being overtaken by another required to show?

A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

35. Describe the lights and the day signals that vessels employed in laying or picking up a telegraph cable are required to carry.

A ship, whether a steam-ship or a sailing ship employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line over one another, not less than six feet apart: the highest and lowest of these lights shall be red and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than her foremast-head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

36. Describe the lights and the day signals that vessels which from any cause are not under command are required to carry.

A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same

position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles ; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of but not lower than her foremast-head, three black balls or shapes, each two feet in diameter.

37. Are the above-mentioned ships to carry side-lights ?

The above ships, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

38. What are the previous mentioned shapes and lights intended to indicate to approaching ships ?

These shapes and lights are to be taken by approaching ships as signals that the ship using them is not under command, and cannot therefore get out of the way.

39. Do these rules prevent squadrons and convoys from carrying special lights ?

No. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war, or for ships sailing under convoy.

40. What sound signals are steam-ships and sailing ships required by the regulations to be provided with ?

A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by bellows or other mechanical means, and also with an efficient bell. A sailing ship shall be provided with a similar fog-horn and bell.

41. When are these signals to be used ?

In fog, mist, or falling snow, whether by day or night.

42. What sound signal is to be made by steam-ships and sailing ships when not under way ?

A steam-ship and a sailing ship when not under way shall, at intervals of not more than two minutes, ring the bell.

43. What sound signal is required to be made by a steam-ship when under way ?

A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

44. What sound signals are required to be made by sailing ships when under way ?

A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

45. Do the regulations require ships to take any other precaution during thick weather ?

Yes. Art. 13 says every ship, whether a sailing ship or steam-ship, shall, in a fog, mist, or falling snow, go at a moderate speed.

46. Is it optional for a steam-ship to make any other signals with her steam whistle ?

Yes; but only to vessels in sight, *i.e.*, not to vessels which are so obscured by fog, mist, or falling snow that they cannot be seen, though their whistles may be heard.

Art. 19 provides that in taking any course authorised or required by the regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.:—

One short blast to mean "I am directing my course to starboard :"

Two short blasts to mean "I am directing my course to port :".

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

47. What precaution is to be taken by steamers approaching another vessel ?

If there is risk of collision, the steamer is to slacken speed, or, if necessary, stop and reverse.

48. If you see two white lights in a vertical line one over the other, what do they denote as regards the vessel carrying them ?

They denote the presence of a steamer towing with her side lights not within sight on account of distance, fog, &c. ; or a vessel end on to me engaged in drift net fishing, or in line fishing, or it may be a steam trawler end on, or within 2 points of being end on, to me.

49. If you see a green, or a red, light with a white light below, what do they denote?

They denote the presence of either a sailing, or a steam, vessel engaged in trawling.

50. If you see both the green and red lights with a white light below them, what do they denote?

They denote the presence of a sailing trawler coming end on to me.

51. If you see a white light alone, what does it denote as regards the ship carrying it?

It denotes the presence of a vessel or boat at anchor; or a pilot vessel on her station; or the mast-head light of a vessel, under steam, with her side-lights not within sight on account of distance, fog, &c., or a fishing vessel stationary through her gear getting fast to some obstruction, or a sailing traveller engaged in trawling (1) under one arrangement of lights heading so that her side-lights or obscured, (2) under another arrangement from the red pyrotechnic light not having been exhibited, or it may be a light shown from the stern of a vessel which is being overtaken.

52. If you see a green or a red light without a white light, or both a green and a red light without a white light, is the vessel carrying the light or lights seen, a vessel under steam or a vessel under sail?

A vessel under sail.

53. How do you know?

Because there is no white mast-head light.

54. If you see a white light over a coloured light, is the vessel a vessel under sail or a vessel under steam?

A vessel under steam. The mast-head light denotes that the vessel is under steam.

[The Examiner will then take one model of a vessel, which he will place on the table, and call it A. He will then take the mast or stand with a white and a red ball on it, and place it at the other end of the table and call it B.

The Examiner should be careful that the model of one vessel only is used when the questions numbered 55 to 60 are asked.]

55. A is a steamer going north, seeing a white light and red light right ahead at B. Are A and the vessel B showing the two lights meeting end on or nearly end on, or is B passing A, or is B crossing the path of A, and in what direction, and how do you know?

Passing to port, because if I see a red light ahead, I know that the head of the vessel carrying that red light must be pointing away in some direction to my own port or left hand. The ship showing the red light has her port or left side more or less open to A.

56. If A is going north, within what points of the compass must the vessel B showing the white and red lights be steering?

B must be going from a little W. of S. to W.N.-W.

57. How do you know this?

Because the screens being properly fitted, I could not see the red light of B at all with the vessel's head in any other direction.

58. A is a steamer going north, and seeing a white and green light ahead. Are A and B meeting, or is B passing A, or is B crossing the course of A, and in what direction; and how do you know?

B is passing to starboard of A, because if I see a green light ahead, I know that the head of the vessel carrying that green light must be pointing away in some direction to my starboard or right hand. The ship showing the green light has her right or starboard side more or less open to me.

59. As A is going north, within what points of the compass must the vessel showing the white and green lights be steering?

B must be going from a little E. of South to E.N.-E.

60. How do you know?

Because the screens being properly fitted, I cannot see the green light at all with the vessel's head in any other direction.

61. If a steamer A sees the *three* lights of another steamer B ahead or nearly ahead, are the two steamers meeting, passing, or crossing?

Meeting end on, or nearly end on.

62. Do the regulations expressly require the course of a ship to be altered to starboard in any case; and if so, when?

Yes; in the case of two steamers meeting end on, or nearly end on.

63. Do they expressly require the course of a ship to be altered to starboard in any other case; and if so, in what other?

No. It is not in any other case expressly required by the regulations.

[The Examiner should see that the candidate puts the models in the position indicated by the question 64, and following.]

64. If a steamer A sees another steamer's red light B on her own starboard side, are the steamers meeting, passing, or crossing; and how do you know?

Crossing, because the red light of one is opposed to the green light of the other; and whenever a green light is opposed to a red light, or a red light to a green light, the ships carrying the lights are crossing ships.

65. Is A to stand on; and if not, why not?

A has the other vessel B on her own starboard side. A knows she is crossing the course of B, because she sees the red light of B on her (A's) own starboard side. A also knows she must get out of the way of B, because Article 16 expressly requires that the steamer that has the other on her own starboard side shall keep out of the way of the other.

66. Is A to starboard or to port in such a case?

A must do what is right so as to get herself out of the way of B: it is generally preferable to pass under a ship's stern rather than attempt to cross her bows, but it depends entirely on the position and relative speed of the two ships, and therefore the regulations wisely leave the giving way ship to get out of the way in any manner that may be most desirable, so always that she does get out of the way.

67. If A gets into collision by porting, will it be because she is acting on any rule?

No; the rule does not require her either to port or to starboard. If she ports, and gets into collision by porting, it is not the fault of any rule.

68. If a steamer A sees the green light of another steamer B on her own (A's own) port bow, are the two steamers meeting, passing, or crossing; and how do you know?

Crossing, because the green light of one ship is shown to the red light of the other.

69. What is A to do, and why?

By the rule contained in Article 22 of the Regulations, A is required to keep her course, subject only to the qualification that due regard must be had to all dangers of navigation; and that due regard must also be had to any special circumstances which may exist in any particular case rendering a departure from that rule necessary in order to avoid immediate danger. The crossing ship B on A's port side must get out of the way of A, because A is on B's starboard side.

70. A, a steamer, sees the green light of another steamer, B, a point on her A's port bow. Is there any regulation requiring A to port in such a case; and if so, where is it to be found?

There is not any.

71. Are steam-ships to get out of the way of sailing ships?

If a steamer and a sailing ship are proceeding in such direction as to involve risk of collision, the steamer is to get out of the way of the sailing ship, unless the sailing ship is overtaking the steamer.

72. What is to be done by A, whether a steamer or a sailing ship, if overtaking B?

A is to keep out of the way of B.

73. When the by rules one of two ships is required to keep out of the way of the other, what is the other to do?

To keep her course. This is absolutely necessary to enable the commander of the ship required by the regulations to keep out of the way, to act with decision and promptitude, which he cannot possibly, unless he knows what the other vessel is going to do.

74. Is there any qualification or exception to this?

Yes. Due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case, and require a departure from the regulations to avoid immediate danger.

75. Is there any general direction in the steering and sailing rules; and if so, what is it?

Yes, it is this: that nothing in the rules shall exonerate any ship, or the owner, master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

76. Can you repeat article (———) of the regulations, I refer to the article containing the rule for (———)?

[The Examiner should repeat this question, naming a different article each time.]

77. What does the Act of Parliament provide as to the obligation of owners and masters in obeying the regulations respecting lights, fog signals, and steering and sailing?

Section 27 of "the Merchant Shipping Act Amendment Act, 1862," provides that owners and masters shall be bound to obey the regulations, and it also provides that in case of wilful default

by the master or owner he shall be deemed to be guilty of a misdemeanor for each infringement.

78. What do breaches of the regulations imply ?

If an accident happens through non-observance of the regulations, it implies wilful default on the part of the person in charge of the deck at the time, unless it is shown to the satisfaction of the court hearing the case that the special circumstances of the case rendered a departure from the rules necessary.

79. If collision ensues from a breach of there gulations, who is to be deemed in fault for the collision ?

The person by whom the regulations are infringed, unless the court hearing the case decides to the contrary.

80. Is there any special rule for steam-ships navigating narrow channels ?

In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which is on the starboard side of such ship.

81. Do the regulations apply to sea-going ships in harbours and in rivers ?

Yes: unless there is any rule to the contrary made by a competent authority.

82. Do they apply to British ships only ?

No, to foreign ships as well, with the exception of paragraphs (*a*), (*b*), (*c*), (*d*), (*e*), (*f*) and (*g*) of Article 10, which apply to only British fishing vessels.

83. Do you know where the present regulations are to be found ?

Yes, in the Orders in Council of the 11th August 1884, the 30th December 1884, and 24th June 1885. Copies are given away on application to the Board of Trade.

84. Is one ship bound to assist another in case of collision ?

Yes.

85. What is the penalty for default ?

If the master or person in charge of the ship fails to render assistance without reasonable excuse, the collision is, in absence of proof to the contrary, to be deemed to be caused by his wrongful act, neglect, or default.

86. Is there any other penalty attached to not rendering assistance ?

Yes. If it is afterwards proved that he did not render assistance, his certificate may be cancelled or suspended by the court investigating the case.

87. Is it not expected that you should understand the regulations before you take charge of the deck of a ship ?

It is.

88. Why ?

If I do not understand them and am guilty of default, the consequences will be very serious to me.

89. What would be a serious offence ?

To cause a collision by porting the helm or doing anything not required by the regulations and without due consideration.

Regulations for preventing collisions at sea. Order in Council of 11th August 1884.

Preliminary.

Art. 1. In the following rules every steam-ship which is under sail and not under steam is to be considered a sailing ship ; and every steam-ship which is under steam, whether under sail or not, is to be considered a ship under steam.

Rules concerning Lights.

Art. 2. The lights mentioned in the following Articles, numbered 3, 4, 5, 6, 7, 8, 9, 10 and 11, and no others, shall be carried in all weathers, from sunset to sunrise.

Art. 3. A sea-going steam-ship when under way shall carry—

(*a*) On or in front of the foremast, at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth, a bright white light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 20 points of the compass ; so fixed as to throw the light 10 points on each side of the ship, viz. from right ahead to two points abaft the beam on either side ; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

(*b*) On the starboard side, a green light so constructed as to show an uniform and unbroken light over an arc of the

horizon of 10 points of the compass; so fixed as to throw the light from right ahead to 2 points abaft the beam on the starboard side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*c*) On the port side, a red light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass; so fixed as to throw the light from right ahead to 2 points abaft the beam on the port side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*d*) The said green and red side-lights shall be fitted with inboard screens projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

Art. 4. A steam-ship, when towing another ship, shall in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position, as the white light which other steam-ships are required to carry.

Art. 5. (*a.*) A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of, but not lower than, her foremast-head, three black balls or shapes, each two feet in diameter.

(*b.*) A ship, whether a steam-ship or a sailing ship, employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over another, not less than six feet apart: the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than, her foremast-head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

(*c.*) The ships referred to in this Article, when not making any way through the water, shall not carry the side-lights, but when making way, shall carry them.

(*d.*) The lights and shapes required to be shown by this Article are to be taken by other ships as signals that the ship showing them is not under command, and cannot therefore get out of the way. The signals to be made by ships in distress and requiring assistance are contained in Article 27.

Art. 6. A sailing ship under way, or being towed, shall carry the same lights as are provided by Article 3 for a steam-ship under way, with the exception of the white light, which she shall never carry.

Art. 7. Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

Art. 8. A ship, whether a steam-ship or a sailing ship, when at anchor, shall carry, where it can best be seen, but at height not exceeding 20 feet above the hull, a white light, in a globular lantern of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light visible all round the horizon at a distance of at least one mile.

Art. 9. A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but

shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

Art. 10. Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

The following portion of this article applies only to fishing vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre:—

(*a*) All fishing vessels and fishing boats of 20 tons net registered tonnage, or upwards, when under way and when not required by the following regulations in this article to carry and show the lights therein named, shall carry and show the same lights as other vessels under way.

(*b*) All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than five feet, and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night with a clear atmosphere, for a distance of not less than three miles.

(*c*) A vessel employed in line fishing with her lines out shall carry the same lights as a vessel when engaged in fishing with drift nets.

(*d*) If a vessel when fishing becomes stationary in consequence of her gear getting fast to a rock or other obstruction, she shall show the light and make the fog signal for a vessel at anchor.

(*e*) Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this Article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

(*f*) Every fishing vessel and every open boat when at anchor between sunset and sunrise shall exhibit a white light visible all round the horizon at a distance of at least one mile.

(*g*) In fog, mist, or falling snow, a drift net vessel attached to her nets and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

Art. 11. A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

Sound Signals for Fog, &c.

Art. 12. A steam-ship shall be provided with a steam whistle or toher efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog horn to be sounded by a bellows or other mechanical means, and also with an efficient bell.* A sailing ship shall be provided with a similar fog-horn and bell.

In fog, mist, or falling snow, whether by day or night, the signals described in this Article shall be used as follows; that is to say—

(*a*) A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

(*b*) A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the

* In all cases where the regulations require a bell to be used, a drum will be substituted on board Turkish vessels.

starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

(*c*) A steam-ship and a sailing ship, when not under way shall, at intervals of not more than two minutes, ring the bell.

Speed of Ships to be moderate in Fog, &c.

Art. 13. Every ship, whether a sailing ship or steam-ship, shall in a fog, mist, or falling snow, go at a moderate speed.

Steering and Sailing Rules.

Art. 14. When two sailing ships are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other, as follows, viz.—

(*a*) A ship which is running free shall keep out of the way of a ship which is close-hauled.

(*b*) A ship which is close-hauled on the port tack shall keep out of the way of a ship which is close-hauled on the starboard tack.

(*c*) When both are running free with the wind on different sides, the ship which has the wind on the port side shall keep out of the way of the other.

(*d*) When both are running free with the wind on the same side, the ship which is to windward shall keep out of the way of the ship which is to leeward.

(*e*) A ship which has the wind aft shall keep out of the way of the other ship.

Art. 15. If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

This Article only applies to cases where ships are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two ships which must, if both keep on their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of the two ships is end on, or nearly end on, to the other; in other words, in cases in which, by day, each ship sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each ship is in such a position as to see both the side-lights of the other.

It does not apply, by day, to cases in which a ship sees another ahead crossing her own course; or by night, to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

Art. 16. If two ships under steam are crossing, so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

Art. 17. If two ships, one of which is a sailing ship, and the other a steam-ship, are proceeding in such directions as to involve risk of collision, the steam-ship shall keep out of the way of the sailing ship.

Art. 18. Every steam-ship, when approaching another ship, so as to involve risk of collision, shall slacken her speed or stop and reverse, if necessary.

Art. 19. In taking any course authorised or required by these Regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.—

One short blast to mean "I am directing my course to starboard:"

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

Art. 20. Notwithstanding anything contained in any preceding Article, every ship, whether a sailing ship or a steam-ship, overtaking any other shall keep out of the way of the overtaken ship.

Art. 21. In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such ship.

Art. 22. Where by the above rules one of two ships is to keep out of the way, the other shall keep her course.

Art. 23. In obeying and construing these rules due regard shall be had to all dangers of navigation; and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

No Ship, under any circumstances, to neglect proper Precautions.

Art. 24. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Reservation of Rules for Harbours and Inland Navigation.

Art. 25. Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland navigation.

Special Lights for Squadrons and Convoys.

Art. 26. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war or for ships sailing under convoy.

Art. 27. When a ship is in distress, and requires assistance from other ships or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, that is to say—

In the day-time—

1. A gun fired at intervals of about a minute.
2. The International Code signal of distress indicated by N C.
3. The distant signal, consisting of a square flag, having either above or below it a ball or anything resembling a ball.

At night—

1. A gun fired at intervals of about a minute.
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.).
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals.

ORDERS IN COUNCIL OF 30TH DECEMBER 1884 AND 24TH JUNE 1885.

ALTERNATIVE LIGHTS FOR TRAWLERS WHEN ENGAGED IN TRAWLING, HAVING THEIR TRAWLS IN THE WATER AND NOT BEING STATIONARY.

1884.—PART I.—STEAM-VESSELS OF 20 TONS GROSS REGISTER TONNAGE OR UPWARDS.

(1.) On or in front of the foremast head and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side, such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet nor more than 12 feet.

1884.—PART II.—SAILING VESSELS OF 20 TONS NET REGISTER TONNAGE OR UPWARDS.

(1.) On or in front of the foremast head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft

the beam on the port side: and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet.

1885.—SAILING TRAWLERS OF ANY TONNAGE.

As regards sailing vessels engaged in trawling, such vessels having their trawls in the water and not being stationary in consequence of their gear getting fast to a rock or other obstruction, if they do not carry and show the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in Part 2 of the Schedule to the said recited Order in Council of the 30th of December, 1884, shall carry and show in lieu of the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in paragraph 2 of the Schedule to the said recited Order, other lights as follows, that is to say:

A white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, and visible on a dark night with a clear atmosphere for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by another ship or vessel in sufficient time to prevent collision.

AIDS TO MEMORY in four verses, by THOMAS GRAY.

1. *Two Steam-ships meeting.*

When both side-lights you see ahead—
Port your helm and show your RED.

2. *Two Steam-ships passing.*

GREEN TO GREEN—or, RED TO RED—
Perfect safety—Go ahead!

3. *Two Steam-ships crossing.*

Note.—This is the position of greatest danger: there is nothing for it but good look-out, caution, and judgment.

If to your starboard RED appear,
It is your duty to keep clear;
To act as judgment says is proper:—
To port—or Starboard—Back,—or, Stop her!

But when upon your Port is seen
A Steamer's Starboard Light of GREEN,
There's not so much for you to do.
For GREEN to Port keeps clear of you.

4. *All Ships must keep a good look-out, and Steam-ships must stop and go astern, if necessary.*

Both in safety and in doubt
Always keep a good look-out;
In danger, with no room to turn,
Ease her, stop her, go astern.

14th October 1867.

APPENDIX E.

DISTRESS AND PILOT SIGNALS.

The following sections, together with the schedules referred to therein, of the "Merchant Shipping Acts Amendment Act, 1873," relate to Signals of Distress and signals for Pilots. (*See also "Regulations for preventing Collisions at sea." Article* 27.)

M. S. Act, 1873.

Signals of distress.

18. The signals specified in the first schedule to this Act shall be deemed to be signals of distress.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals, except in the case of a vessel being in distress, shall be liable to pay compensation for any labour undertaken, risk incurred, or loss sustained in consequence of such signal having been supposed to be a signal of distress, and such compensation may, without prejudice to any other remedy, be recovered in the same manner in which salvage is recoverable.

Signals for pilots.

19. If a vessel requires the services of a pilot, the signals to be used and displayed shall be those specified in the second schedule to this Act.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals for any other purpose than that of summoning a pilot, or uses or causes or permits any person under his authority to use any other signal for a pilot, shall incur a penalty not exceeding twenty pounds.

Power to alter rules as to signals.

20. Her Majesty may from time to time by Order in Council repeal or alter the rules as to signals contained in the schedules to this Act, or make new rules in addition thereto, or in substitution therefor, and any alterations in or additions to such rules made in manner aforesaid shall be of the same force as the rules in the said schedules.

SCHEDULES.

SCHEDULE I.

Signals of Distress.

In the day-time.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress in the day-time:—

1. A gun fired at intervals of about a minute;
2. The International Code signal of distress indicated by N C;
3. The distant signal, consisting of a square flag having either above or below it a ball, or anything resembling a ball.

At night.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress at night:

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, of any colour or description, fired one at a time, at short intervals.

SCHEDULE II.

Signals to be made by Ships wanting a Pilot.

In the day-time.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot in the day-time, viz.—

1. To be hoisted at the fore, the Jack or other national colour usually worn by merchant ships, having round it a white border, one-fifth of the breadth of the flag; or
2. The International Code pilotage signal indicated by P T.

At night.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot at night, viz.—

1. The pyrotechnic light, commonly known as a blue light, every fifteen minutes; or
2. A bright white light, flashed or shown at short or frequent intervals, just above the bulwarks, for about a minute at a time.

APPENDIX F.

Examination in Chart.

For all Grades where the Chart is used.

[The candidate will be required to work out the following questions on either a "true" or "magnetic" chart* whichever may be handed to him by the Examiner; and also determine whether the chart is a "true" or "magnetic" one, and whether it is for the northern or southern, and eastern or western hemisphere.]

* The terms "true" and "magnetic" are used for the sake of brevity and convenience, for indicating charts that have compasses delineated upon them showing the "true" or "magnetic" point of the compass respectively.

1. Using deviation [card] [curve*] No. , find the course to steer by compass from to ; also the distance.

Answer.—Compass course °

Distance °

Variation °

Deviation °

2. With the ship's head on the above-named compass course a [point] [light-house] bore by compass and bore by the same compass, find the ship's position.

Answer.—Latitude °

Longitude °

3. With the ship's head as above, a [point] [light-house] bore by compass , and after continuing on the same course miles it bore , find the position of ship and her distance from at the time of taking the second bearing.

Answer.—Latitude °

Longitude °

Distance °

All the foregoing questions must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature °

Date °

Chart used °

Additional for Masters.

4. Find the course to steer by compass from to (*see* Question 1) to counteract the effect of a current which set at the rate of miles per hour, the ship making by log miles per hour; also the distance the ship would then make good in hours towards

Answer.—Compass course °

Distance °

5. On being off took a cast of the lead; required the correction to be applied to the depth obtained by the lead line before comparing it with the depth marked on the chart.

6. What do you understand the small numbers to indicate that you see placed about the chart, and at what time of tide?

7. What do the Roman numerals indicate that are occasionally seen near the coasts and in harbours?

8. How would you find, approximately, the time of high water at any place, the Admiralty tables not being at hand, nor any other special tables available?

All the foregoing questions, and those on Form Exn. 9C., must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature

Date

* A Candidate for a Master's Certificate is expected to use either a card of deviations or a curve of deviations on a Napier's diagram, whichever the Examiner may think proper to put before him.

APPENDIX G.

Deviation of the Compass.

N. B.—*The Examiner will not mark less than* 12 *of the following questions, which must be correctly answered by the candidate, and the Examiner's attention is specially called to the importance of Questions* 7, 8, 9, 10, *and* 19, *which should be marked in all cases.*

1. What do you mean by Deviation of the Compass?
2. How do you determine the deviation (*a*) when in port, and (*b*) when at sea?
3. Having determined the deviation with the ship's head on the various points of the Compass, how do you know when it is easterly and when westerly?
4. Why is it necessary, in order to ascertain the deviations, to bring the ship's head in more than one direction?
5. For accuracy, what is the least number of points to which the ship's head should be brought?
6. How would you find the deviation when sailing along a well-known coast?
7. In the following table give the correct magnetic bearing of the distant object, and thence the deviation:—

Ship's head by Standard Compass.	Bearing of distant object by Standard Compass.	Deviation required.	Ship's head by Standard Compass.	Bearing of distant object by Standard Compass.	Deviation required.
North			South		
N.-E.			S.-W.		
East			West		
S.-E.			N.-W.		

8. With the deviation as above, give the courses you would steer by the Standard Compass to make the following courses, correct magnetic [ ].
9. Supposing you have steered the following courses by the Standard Compass, find the correct magnetic courses made from the above deviation table [ ].
10. You have taken the following bearings of two distant objects by your Standard Compass as above; with the ship's head at , find the bearings, correct magnetic [ ].
11. Name some suitable objects by which you could readily obtain the deviation of the Compass when sailing along the coasts of the English Channel.
12. Do you expect the deviation to change; if so, state under what circumstances?
13. How often is it advisable to test the accuracy of your table of deviations?
14. State briefly what you have chiefly to guard against in selecting a position for the Compass.
15. The Compasses of iron ships are more or less affected by what is termed the heeling error; on what courses does this error vanish, and on what courses is it the greatest?
16. State to which side of the ship, in the majority of cases, is the North point of the Compass drawn in the Northern Hemisphere; and what effect has it on the assumed position of the ship when she is steering on Northerly, and also on Southerly courses?
17. The effect being as you state, on what courses would you keep away, and on what courses would you keep closer to the wind, in order to make good a given Compass course?
18. Does the same rule hold good in both hemispheres with regard to the heeling error?
19. Your Steering Compass having a large error, how would you proceed to correct that Compass by compensating magnets and soft iron, in order to reduce the error within manageable limits?

APPENDIX H.

Syllabus of Examination in the Laws of the Deviation of the Compasses of an Iron Ship, and in the Means of compensating or correcting it.

Candidates for the voluntary examination in Compass Deviation, and also for Extra Masters' Certificates, will be examined in the whole of this syllabus, and will be required to answer all

the questions correctly, and to the entire satisfaction of the Examiner.

1. Describe an artificial magnet, and how a steel bar or needle is usually magnetized.

2. [*For the sake of simplicity it is desirable to adopt the nomenclature of the Astronomer Royal, and call that pole of the compass needle that points to the magnetic north the red, and the other the blue pole.*] What effect has the pole of one magnet of either name on the pole of the same name of another magnet, and what would be the consequence of the pole of one magnet of either name being brought near enough to affect the pole of contrary name, if in these cases both magnets were freely suspended?

3. By applying this law to all magnets, natural as well as artificial, show what would be the result on a magnetic bar or needle, freely suspended, but by weight or by the nature of its mounting constrained to preserve a horizontal position; and what result, if so mounted, but free to move in every direction, the earth being regarded as a natural magnet?

4. Which is the red magnetic pole of the earth, and which the blue?

5. What is the cause of the variation of the compass?

6. What is meant by the deviation of the compass?

7. Describe the sub-permanent magnetism of an iron ship, and state when and how it is acquired, and which is the sub-permanent red, and which is the blue pole, and why it is called sub-permanent magnetism.

8. What is meant by "the composition of forces" and "the parallelogram of forces," and show how the knowledge of these is valuable in ascertaining and compensating the sub-permanent magnetism of an iron ship?

9. Describe the co-efficients B and C, plus (+), and minus (—), and why they are said to produce semi-circular deviations.

10. On what points by compass bearing of the ship's head does + B give westerly deviation, and on what does it give easterly; and also on what point does — B give westerly, and on what points easterly?

11. On what points does + C give westerly, and on what points easterly; also on what points does — C give westerly, and on what points easterly deviation?

12. How would you compensate the co-efficient C?

13. How would you compensate the co-efficient B?

14. If the value either of co-efficient B or C be given, also the magnetic direction of the ship's head while she was being built, how by the traverse tables would you determine the approximate value of the other co-efficient C or B; and if the value of both these co-efficients be given, how would you determine approximately the direction, by compass, of the ship's head whilst being built?

15. What is meant by transient induced magnetism?

16. Under what circumstances does induced magnetism give semi-circular deviation?

17. How would you compensate — B resulting from induced magnetism, and why for this purpose would you adopt a different mode of compensation to that employed in correcting — B produced by sub-permanent magnetism?

18. Describe quadrantal deviation, and state what co-efficients represent it; also on what points of the ship's head, by compass, each of these co-efficients gives the greatest amount of deviation.

19. On what points of the compass will each of these co-efficients, D and E + and —, give easterly, and on what points westerly deviation?

20. Generally + D gives the greatest amount of *quadrantal* deviation: how should it be compensated?

21. If D be compensated in the manner you have described, will it remain so in every latitude? If so, state the reason why.

22. What conditions of the iron of a ship will produce + D and what — D?

23. Describe the nature of the deviation resulting from + A and —A, and describe the error in the construction of the compass that frequently produces them.

24. Under what circumstances does the character of A and E so change as to render it desirable that these co-efficients should be disregarded or modified?

25. The value of A, B, C, D, and E being given, or B, C, and D only, find the deviation on any required point of the compass, or construct a table of deviation, if required.

26. Describe how you would determine the deviation by means of a distant object, by reciprocal bearings, or by the figures on the dock walls.

27. If it be required to determine the deviation of two or more compasses, it is most convenient to bring the ship's head, *correct* magnetic, on as many points as may be necessary. To determine the co-efficients B, C, and D, the bearing of the ship's head by each compass is required. How would you for this purpose employ a Graphic Method?

28 State your rule for determining whether deviation is easterly or westerly.

29. Describe the use of the "dumb card," or an azimuth card without a needle, in compensating a compass.

30. If you determine the deviation by an azimuth or an amplitude of a heavenly body, it is then combined with variation,* which together is sometimes called the *correction* for the compass. State when the deviation is the difference between the variation and the *correction*, and when the sum; and when it is of the same name as that of the *correction*, and when of the contrary name.

31. In observing azimuths of heavenly bodies, the best method is by "time azimuths," since these can be observed without an altitude when the ship is in port, or the horizon cannot be defined from any cause. Given the sun's declination, the hour of the day, and the latitude to find the true bearing of the sun.†

32. By night, if it be desirable to observe the *correction* of the compass. Given the day of the year, and time at ship, also the latitude of the place to determine what† star will be in good position for this purpose.

33. If your correcting magnets are so mounted that their positions can be altered, describe the process by which, on open sea, you can place the ship's head correct magnetic N. (or S.), and correct magnetic E. (or W.), and can make the correction perfect.

34. Given the name of a star, the time, the place of ship, the variation of the compass, and the bearing of the star by compass. Determine the deviation, and name it east or west.

35. If an ordinary standard compass placed higher than the iron top sides be compensated whilst the ship is upright, what coefficient will be effected by heeling?

36. When generally will this co-efficient be plus, and when minus?

37. State the exceptions to this general rule.

38. Does the heeling error arise from the altered position of the sub-permanent poles of the ship, or from a change in the induced magnetism?

39. To what extent is the heeling error altered by a change in the magnetic latitude of the ship?

40. If a ship is beating to windward; when she tacks, under what circumstances will the heeling error retain the same name, and under what circumstances will it take the contrary name?

41. If a ship is placed on the opposite tack by the change of wind, the ship's course being the same by compass, will the heeling error change its name?

42. Under what circumstances will the heeling error, if disregarded, take the ship to windward, or when to leeward?

43. Can the heeling error be compensated? If so, state the means to be employed.

44. Can the compensation of the heeling error be depended on in every latitude? If not, state the reason.

45. Given the heel, the direction of the ship's head by compass, and the heeling error observed, to find the approximate heeling error, with a greater or less given heel, and with the ship's head on some other named point of the compass, the ship's magnetic latitude being in both cases the same.

46. Describe any instrument to show the ship's heel (generally called a clinometer), and state how and where it should be fixed.

47. Should the clinometer be observed when the ship is swung to determine the deviation when the ship is upright? If so, state the reason why.

APPENDIX I.

Particulars of Examination in Sumner's Method by Projection.

Candidates are required to compute their longitude by chronometer worked with two assumed latitudes.

* The magnetic variation is best determined by a chart of the curves of equal magnetic variation.

† The process of finding time azimuths by the ordinary formulæ of spherical trigonometry is tedious, and since on board an iron ship these observations should be often repeated, the candidate will be allowed to use any table or graphic or linear method that will solve the problem within a half of a degree, the altitude of the heavenly body not being given.

They are to mark off on the chart the two positions ascertained by the first altitude, and are then to connect them with a straight line, termed the *line of position*, or the line of equal altitude, which will show the bearing of any land it may intersect.

They will then be required to correct the first *line of position* for the ship's change of station, in the interval between the two observations, to project the *line of position* corresponding to the second observation on the chart, showing by its intersection with the first *line of position*, as corrected for change of station, the position of the ship at the time of the second observation.

The longitudes corresponding to the two latitudes by the second observation are no longer furnished by the Examiners. The candidates are consequently required to work out the whole of the problem for themselves (in place of the explanation recently required), and must be prepared to find the sun's true bearing by projection at the time of taking either the first or second observation; and when necessary to produce the *lines of positions* on the chart in order to make them cut one another should the position of the ship happen to be outside the parallels of the two assumed latitudes given in the question. Outline charts, extending from 46° to 49° and from 49° to 52° of latitude, respectively, are furnished by the Board of Trade to the different examiners for this purpose.

APPENDIX K.

The Candidate must answer in writing, on paper supplied to him by the Examiner, the following questions, numbering the answer to correspond with the questions.

Question—

Questions relating to cyclones or revolving storms common in tropical seas.

1. The direction of the wind in a cyclone being*_____ state the probable bearing of its centre from the ship in the*_____ Hemisphere.
2. And suppose that the wind during the passage of the same cyclone were found to change towards the*_____, what would be the ship's position with reference to the line of progression of the centre of the cyclone, and what action would you take?
3. Under what conditions would the change in the direction of the wind in the cyclone be the reverse of the above?
4. What are the usual indications of a ship being on the line of progression of the centre of a cyclone?
5. What are the usual indications that a ship is (*a*) approaching the centre of a cyclone; (*b*) receding from it?
6. Describe the track usually taken by cyclones in the †_____, and state the seasons of the year in which they most frequently occur in that region.

APPENDIX L.

Instructions to Examiners.

Examination in Colours.

Herewith are—

(*a*) A lanthorn having in it a lamp in which kerosine is to be burnt.

(*b*) A slide having ground glass in it.

(*c*) Nine slides, each having a coloured glass in it. The colours are as follows:—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1).
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

* These spaces to be filled in by the Examiners, and frequently varied.

† The Examiners to fill in whether North Atlantic, Bay of Bengal, China Seas, Indian Ocean, &c., &c.

(*d*) Cards, five of each as follow :—

1. White.
2. Black.
3. Red.
4. Pink.*
5. Green.
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight, the examiner should do it in three ways—

1. The cards should be mixed up. The examiner should then hold up each card separately, and ask the candidate to name the colour, and if the candidate does so without hesitation, he is to be regarded as having passed the daylight test.
2. If the candidate hesitates in any of his answers, so as to raise a doubt in the mind of the examiner as to his ablity to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that, they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

Examination by artificial Light.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn, and at least 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour; and if so, what colour?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star * is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c.; or to name card No. 7 as red, green, or yellow; or glass No. 2 as green, blue, or yellow; or glass No. 5 as red, pink, salmon, &c.; or glass No. 7 as bright red or bright green; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B.

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black, by daylight; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown), he may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

APPENDIX M.

Instructions to Examiners.

Compass Adjustment.

It is of the utmost importance that masters of ships should thoroughly understand the tentative method of Compass Adjust-

ment as generally practised in merchant ships, and Examiners are therefore directed to fully satisfy themselves that all Candidates for Masters' Certificates have this particular knowledge. It should be tested in connexion with the Form of Examination, "Exn. 7," or it may be tested by Captain Beall's "Deviascope" at those ports which have been supplied with this instrument. Where the "Deviascope" is used it will not be necessary for the Candidates to give the written answers and sketches illustrative of the Question 19 of Form Examination 7.

A concise statement of the present method of tentative Compass Adjustment is forwarded for the use of Examiners. The Government wish them, however, distinctly to understand that the Government are not in any way advocating the correction of that part of co-efficient B which arises from vertical induction in soft iron by a permanent magnet instead of by a soft iron bar. The Government have no authority to interfere with the methods in use amongst Compass adjusters for the adjustment of Compasses in iron ships, but instruct the Examiners to satisfy themselves that masters are acquainted with the ordinary method as at present practised.

The examination by the "Deviascope" is at present only experimental, and no Candidate should be reported as having "failed" who does not pass the examination in it, provided he has answered satisfactorily the Question 19, "Exn. 7."

The "Deviascope" is sent only to three ports at present, and its extended use will depend upon experience at those ports.

The Tentative Method of Compass Adjustment as generally practised by Compass Adjusters in Ships of the Mercantile Marine.

Before describing the practice it will be as well to briefly state the co-efficients used to express the different magnetic forces:—

Co-efficient A represents a constant quantity.
" B " semi-circular deviation due to fore and aft magnetic forces.
" C " semi-circular deviation due to transverse magnetic forces.
" D " quadrantal deviation due to horizontal induction in soft iron.
" E " quadrantal deviation due to horizontal induction in soft iron unsymmetrically distributed.

Signs and Effects of Co-efficients A, B, C, D, and E.

Co-efficient A represents a constant deviation of the same nature and amount, on all points of the compass; + A signifying easterly, and — A, westerly deviation.

Co-efficient + B represents an attraction towards the ship's head, and causes easterly deviations with ship's head in the eastern semi-circle of the Compass, and westerly deviations in the western semi-circle, attaining a maximum value on the east and west points, decreasing to zero on north and south points, by Compass.

Co-efficient — B represents an attraction towards the ship's stern, and causes easterly deviations with ship's head in the western semi-circle, and westerly deviations with the ship's head in the eastern semi-circle, with a maximum value on the east and west points, decreasing to zero on the north and south points, by Compass.

Co-efficient + C represents an attraction towards the starboard side of the ship, and causes easterly deviations with ship's head in the northern semi-circle, and westerly deviations in the southern semi-circle, attaining a maximum value on the north and south points, decreasing to zero on the east and west points, by Compass.

Co-efficient — C represents an attraction towards the port side of the ship, and causes westerly deviations with ship's head in the northern semi-circle, and easterly in the southern semi-circle, attaining a maximum value on the north and south points, decreasing to zero on the east and west points, by Compass.

Co-efficient + D gives easterly deviations with ship's head between N. and E. and S. and W., and westerly deviations between S. and E. and N. and W.

Co-efficient — D gives results exactly the reverse to + D.

Note.—Both + D and — D have a maximum value on the four quadrantal points, and become zero on the cardinal points by Compass.

Co-efficient + E gives easterly deviations with ship's head between N.E. and N.W. and S.E. and S. W. and westerly deviations between N.E. and S.E. and N.W. and S.W.

Co-efficient — E gives results exactly the reverse to + E.

Note.—Both + E and — E have a maximum value on the cardinal points, and become zero on the four quadrantal points, but are usually very small in amount in Compasses placed in the middle line of the ship.

Heeling Error.—The heeling error arises partly from vertical induction in transverse iron, and iron vertical to the ship's deck, and partly from the vertical component of the sub-permanent magnetism of the ship. In the Northern Hemisphere in the majority of cases the N. point of the Compass needle is drawn to windard or the high side of the ship, with, as a rule, a maximum heeling error on N. and S. points, and zero on E. and W. points by Compass. If the Compass is not properly placed in the ship, there may be a sensible heeling deviation on E. and W. courses.

Tentative Corrections.

To correct co-efficient C.—With ship's head north or south, magnetic, place a bar magnet (or more than one if necessary) horizontally and exactly athwart ship, either on the deck or on any convenient platform, with its centre on the fore and aft line passing through the centre of the Compass card, placing its red or marked end to starboard if the N. point of the needle deviates to the starboard side, or to port if it deviates to the port side of the ship, moving the magnet to or from the Compass until it points correctly.

Note.—The deviation represented by co-efficient C varies inversely as the earth's horizontal force, providing the iron is symmetrically arranged on each side of the Compass.

To correct co-efficient B.—With ship's head east or west, magnetic, place a bar magnet (or more than one if necessary) horizontally and exactly parallel to the fore and aft midship line of the ship, either on the deck or on any convenient platform, with its centre on the athwart ship line passing through the centre of the Compass, the red or marked end of the magnet being directed aft if the end point of the Compass needle deviates towards the stern, or forward if it deviates towards the bow, moving the magnet to or from the Compass until it points correctly.

Note.—The co-efficient B consists of two parts: one is due to the permanent magnetism of the ship, which varies inversely as the earth's horizontal force; the other to vertical induction in soft iron, which varies as the tangent of the dip. As ships in the merchant service are rarely built with a view of providing a satisfactory position for the standard Compasses, it is very difficult in many ships to find a position for it where it will not be affected by vertical iron. It follows, therefore, that if this deviation be compensated, as is customary, by a fore and aft permanent magnet instead of by a vertical soft iron bar, the poles of the magnet may in some cases require to be reversed in high southern latitudes.

To correct co-efficient + D.—With ship's head on one of the quadrantal points, magnetic, the + D is generally corrected by boxes of small chain, cylinders of soft iron, or soft iron globes placed athwart ships on the same level, and at equal distances, on the port and starboard sides of the Compass, with the centre of their mass on a level with the Compass needle, move them to or from the Compass till the needle points correctly.

To correct co-efficient—D.—Co-efficient—D, which is of very rare occurrence, is corrected by placing the above correctors on the fore and aft sides of the compass.

Note.—When once the co-efficient D is properly corrected by soft iron it is correct for all magnetic latitudes, provided the distribution of the iron in the ship is not materially changed, and provided the magnetism of the soft iron has not been affected by the Compass needles. With short needles having small magnetic power, such for instance as Sir Wm. Thomson's, there will probably be no change; but when the needles are long and powerful, one-half the original D may be expected to return when approaching the magnetic equator. *See* Admiralty Manual, 1882, page 96, as follows:—"When "a compass with long and powerful needless is employed, "soft iron correctors placed very near it become mag- "netized by induction according to the power of the

" needles, and the resulting correction will not remain " strictly perfect in all latitudes."

To correct Heeling Error.—The heeling error is corrected for any given magnetic latitude by placing a vertical magnet exactly under the centre of the Compass card, with its N. or red pole uppermost if the heeling error is to windward or to the high side of ship, or its S. or blue end uppermost if to leeward or to the low side of ship, moving the magnet to or from the Compass until the heeling error is corrected.

Note.—The heeling error, due to the permanent par of the magnetism, varies inversely as the earth's horizontal force, and consequently is greatest in high latitudes, diminishes as the ship approaches the magnetic equator, and increases again, still retaining the same name, as the ship recedes from the magnetic equator in the Southern Hemisphere. The heeling error, due to transverse and vertical soft iron, decreases as the ship approaches the magnetic equator, where it is zero, and is of a contrary name in the Southern Hemisphere. It is probable that the poles of the vertical magnet may require to be reversed in high southern latitudes.

A divided scale should be marked or fitted outside the tube or some other convenient place, so as to show the proper position for the correcting magnet as found in any given magnetic latitude, and the same recorded as a guide for approximately placing the magnet in position on any subsequent voyage in the same locality, and especially on the return of the ship to the United Kingdom.

Candidates should understand that the object of tentative adjustment is to bring the deviations within manageable limits, and also to equalise the directive force of the needle so far as is practicable on all courses ; but no system of adjustment whatever is sufficiently reliable in character to absolve the navigator from the necessity of using every precaution, and especially of ascertaining the deviation on every available opportunity by observations of the sun by day and the other heavenly bodies by night.

APPENDIX N.

(From Memorandum on Examination of Engineers.)

EXAMINATION OF A MASTER OR MATE IN STEAM

The regulations under which these examinations are conducted are printed at pages 41 to 43 of the regulations for examinations of masters and mates. (Exn. 1.)

A candidate for this examination is required to have a thorough grasp of the construction of the steam engine and boiler, to enable him, in the first place, to understand the nature and importance of any defect which may be reported to him by the engineer, and so that he may work in harmony with the engineer in affording time and facilities for disconnexions, inspections, adjustments, and repairs.

To have a looking-on knowledge of what the principal repairs are about engines and boilers and pipes, and how these repairs are accomplished.

To be able to form an independent opinion as to a breakdown and the consequent propriety or impropriety of proceeding under steam with temporarily repaired or defective machinery.

To understand how to estimate approximately the reduction of fuel required for reduced speed, and consequently to sanction such reduction of speed as may seem to him to be warranted by the report of the engineer, and to satisfy himself before leaving port that there is sufficient coal for the voyage.

To have an intelligent grasp of the general run of pipes and connexions in the engine room, the marking of cocks, the opening and closing of cocks and valves, how mistakes of importance may be made in the confusion of an accident, and how best to guard against such mistakes.

To be capable of being left in charge of the feeding of a set of boilers, to understand the working of the water-gauge, and to be able to guard against being misled by false indications of the gauge glass.

To understand about blowing down and surfacing, the reasons for doing so, and the danger which may result from the neglect of these under certain circumstances. A master or mate presenting himself for examination in steam must be understood to have made up for his want of practical experience by reading up

about the steam engine. He ought, therefore, to show that he has given his mind to intelligently understanding the *rationale* of the action of the steam engine. Under this head, he should, therefore, be able to state approximately the quantity of heat required in the formation of steam, the remarkable relation of "latent" heat to "sensible" heat, using these popular names, how much steam can be raised by the combustion of one pound of coal, what horse-power measure is, what indicated horse-power is, the action of the slide-valve, the course of the steam through the engine, the advantage of working expansively, and how the expansive action is shown by the indicator diagram.

The candidate has to answer in writing 16 out of 20 questions selected from the book of Elementary Questions * Selections for this examination are given on the alphabetic sheet for "Steam." Generally, these answers are given by candidates as learned by rote from a book; the candidate should therefore be asked such *vivâ voce* questions as will necessitate his giving his answers in different words, so as to discover whether he has the root of the matter in him.

The principal part of the *vivâ voce* is the examination on board a steamer, preferably one with which he is unacquainted. He is told to look about and try to find out the run of the machinery without the assistance of any one; the Examiner to be in the engine-room to see that this independent examination is properly carried out. When the candidate reports that he thinks he knows the whole arrangement of the machinery, the Examiner will then question him on the uses of the parts, get him to point out the different cylinders, pumps, valves, condenser, &c. He must show that he understands the run of the pipes in the bilges, not necessarily that he has gone over every one of them, but he ought to be directed to trace, at least, one important range of pipes, and to thoroughly satisfy the Examiner that he could be safely trusted to manipulate the valves or cocks in connexion therewith. It will not often be practicable for the candidate to be asked to actually work engines under steam, but he must satisfy the Examiner that he knows how to do so, and that he is aware what precautions have to be taken in regard to water in the cylinder, &c. It is most important that a candidate should show that, in the event of an accident depriving him of the assistance of engineers, he knows what to do to safely take his vessel to an anchorage, or to stop the engines and proceed under sail alone.

The examination of a mate in steam is the same as that of a master. The knowledge is not with reference to the mate's position. A mate may be examined, but such examination implies that the mate will one day be a master, when the possession of the knowledge will be an advantage to him in the discharge of his duties as master.

APPENDIX O.

The following is a reprint of

INSTRUCTIONS

TO

EXAMINERS OF MASTERS AND MATES.

1. The Examiners already understand that they are to be very careful (in examining all applicants for Certificates of Competency) to satisfy themselves that the applicants understand the Rule of the Road at Sea, and should decline to pass every applicant who does not understand it.

2. As a serious misapprehension has, however, arisen in a recent case in which Sound Signals were being made by a steamer under way in thick weather, contrary to the express wording of Articles 12*a* and 19 of the Regulations, it is more than ever incumbent on Examiners not to pass any applicant unless the Examiner is satisfied that the applicant understands that the Signals named in Article 19 are purely optional, and are only allowed to be made in cases in which the weather is so clear that the ship making them has the other vessel in sight.

3. Any Master using these *optional* Sound Signals, even when the other vessel is in sight, does so in every case on his own

* Printed at end of Engineers' Regulations, Exn. 1*a*.

responsibility ; but if he uses them when the other vessel is *not* in sight, he commits a very serious act of disobedience to the Regulations, and must abide the consequences of his illegal act.

4. Applicants must be made to understand that the compulsory Sound Signal which *must* be made by a steamer under way in a fog is a prolonged blast under Article 12*a*, and no other Sound Signal.

5. In examining an applicant on the application of Articles 12 and 13, the Examiner should, by answers to questions, ascertain that the applicant understands that it is his duty to go at a moderate speed in fog, while, as regards Article 24, the Examiner should impress on the applicant that an "ordinary precaution" to be observed in the navigation of a steam-ship in a fog is to get the way off his own vessel immediately he hears the Sound Signal of another steamer, and then he should go ahead very slowly, blowing the "prolonged blast" at intervals, and feeling his way until all danger of collision is passed.

APPENDIX P.

FORMS used in connection with the EXAMINATION and CERTIFICATES of MASTERS AND MATES.

Name of Form.	Initial Letters and Numbers.
Regulations relating to the Examinations of Masters and Mates.	Exn. 1
Masters' and Mates' Form of Application for Examination.	Exn. 2
Form of Application for Examination (Colours) ...	Exn 2*a*.
Examination Paper, to be used in the examination of Second Mates.	Exn. 4
Ditto, to be used by all candidates when appearing for examination for the first time only.	Exn. 4*a*.
Ditto, Second Mates	Exn. 5
Ditto, Only and First Mates	Exn 6
Ditto, ditto ditto	Exn. 6*a*.
Ditto, Masters, Ordinary	Exn. 7
Ditto, for adjustments of the Sextant ..	Exn. 9*a*.
Ditto, Examination in Chart (for Mates)...	Exn. 9*c*.
Ditto, (for Masters)	Exn. 9*d*.
Examiners' Report of Masters' and Mates' Examination	Exn. 14
Examiners' Authority for delivery of Certificate to successful candidate.	Exn. 16
Examiners' Certificate (Colours)	Exn. 16*d*.
Ditto authority for return of Fee to unsuccessful candidate (Colours).	Exn. 17*a*.
Ditto Report on Colours tests	Exn. 17*b*.
Application for renewed Certificate	Exn. 23
Deviation cards	Exn. 24
Napier's Diagram	Exn. 25
Examination paper on Cyclones on revolving storms ...	Exn. 32

Government of Bengal.

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issued unaer section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

AS

MASTER.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of MASTER in the Merchant Service, I do hereby, in pursuance of Act I of 1859, grant you this Certificate of Competency.*

By order of the Government of Bengal,

*this*_____*day of*_____18____.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate [redacted]

Address of Owner ———————————————

Date and Place of Birth ———————————————

Signature ———————————————

This Certificate is given upon an ORDINARY EXAMINATION passed at ——————— *on the* ———————

day of ——————— 18——.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the ——————— *day of* ——————— 18——.

———————————————

———————————————

Government of Bengal

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issued under section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

AS

FIRST MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of FIRST MATE in the Merchant Service, I do hereby, in pursuance of Act I of 1859, grant you this Certificate of Competency.*

By order of the Government of Bengal.

this _____ *day of* _____ 18__.

Under-Secy. to the Govt. of Bengal,

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate [redacted]

Address of Owner ———————————————

Date and Place of Birth ———————————————

Signature ———————————————

This Certificate is given upon an ORDINARY EXAMINATION passed at ——————— *on the* ———————

day of ——————— 18——.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the ——————— *day of* ——————— 18——.

———————————————

———————————————

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

ONLY MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified fulfil the duties of ONLY MATE in the Merchant Service, I do hereby, in persuance of Act I of* 1869, *grant you this Certifica of Competency.*

By order of the Government of Bengal.

this _____ *day of* _____ 18—.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

BENGAL

No. of Certificate 

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

*This Certificate is given upon an ORDINARY EXAMINATION passed at*_____*on the*_____ *day of*_____18—.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

*Issued at the Port of Calcutta on the*_____*day of*_____18—.

_____

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

SECOND MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of SECOND MATE in the Merchant Service, I do hereby, in persuance of Act I of* 1859, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18—.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate [redacted]

*Address of owner*_____

*Date and Place of Birth*_____

*Signature*_____

*This Certificate is given upon an ORDINARY EXAMINATION passed at*_____ *on the*_____ *day of*_____ 18 .

Any MASTER or MATE who fails to deliver up a certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

*Issued at the Port of Calcutta on the*_____ *day of*_____ 18 .

_____

_____

NOTIFICATION.

No. 26 Marine, dated Calcutta, the 31st January 1890.

UNDER the powers conferred upon him by section 10 of Act I of 1859, and with the sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules for the examination of persons desirous of obtaining local certificates of competency as Masters and Mates in the Mercantile Marine. These rules supersede those contained in the Notification of the General (Marine) Department of this Government, dated the 28th August 1877, and published in the *Calcutta Gazette* of the 29th idem.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed, and arrangements have been made for holding the examinations periodically at the Port of Calcutta. The examinations will be held twice a quarter or at such other times as the Government may appoint.

Examinations continued till all the Candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Notice of application for examination to be given to the Port Officer.

3. Candidates for examination must make their application upon the appropriate Form (Exn. 2), which must be filled up at the Port Office. The Exn. 2, properly filled in, together with the Candidate's testimonials and discharges, must be lodged with the Port Officer of Calcutta, not later than the day before the day of examination, and the Candidate must conform to any regulations in this respect which may be laid down by the Government; as, if this be not done, delay may be occasioned.

Testimonials of character, conduct and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges have to be verified before the Candidate can be examined, it is desirable that they should be handed in together with the Form Exn. 2 as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners and of British seamen serving in foreign vessels, which cannot be verified by the Port Officer, must be confirmed either by the Consul of the country to which the ship in which the Candidate served belonged, or by some other recognized official authority of that country, or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case will be decided on its own merits, and if the sufficiency of the proofs given appears to be at all doubtful, it must be referred to the Government.

Certificates as to Age.

6. Should any doubt exist as to the age of a Candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel. In the case of natives of India, who may not be able to speak English, their Certificates shall be endorsed to the effect that they are only valid for vessels manned and officered entirely by Asiatics.

Verification of Services by the Port Officer.

8. The time for which length of service as Seaman or Officer in the Mercantile Marine is to be reckoned in all cases referred to in the following paragraphs is to commence at the date when the articles of agreement were signed by the applicant, and to end at the date when he was discharged as shown in the articles of agreement. The certificates of discharge will generally be sufficient evidence of this, but great care must be exercised by the Port Officer and Examiners to detect any tampering in any way with the information contained in them, and to report to the Government at once any suspicious cases.

9. Services which cannot be verified by proper Entries in the Articles of the Ships in which the Candidates have served cannot be counted. For instance, a man will state his service to have been as Second or Only Mate, and to support his assertion will produce a Certificate of Discharge or of Employment by the Master to the effect that he served as Mate, when, on reference to the articles, it appears that he has actually been rated as Boatswain: the service in such a case will not be regarded as having been in the capacity of Mate.

Service as an Apprentice.

10. Time for which Indentures of Apprenticeship are in force will be accepted as sea service, provided that the Apprentice has remained by the ship for at least four-fifths of the time covered by the Indentures, and that the Indentures of the applicant are endorsed by the Owner or Master to whom he has been bound to the effect that he has performed his service faithfully for the whole time agreed upon.

Service as 2nd, 3rd or 4th Mate to qualify for Master.

12. Service as Second, Third, or Fourth Mate may be accepted as equivalent to service as First or Only Mate to qualify a Candidate for examination for a Master's Certificate of Competency, provided he can produce satisfactory evidence of his having served at sea 12 months as Second, Third, or Fourth Mate of a Foreign-going Ship while in possession of a First Mate's Certificate of Competency, valid in the United Kingdom. It will be noted that occasional service in charge of a watch in the daytime will not be accepted as Mate's service under the Regulations.

Service on board a Training Ship.

13. Part of the time served on board a training ship will be allowed to count as service at sea, provided that the Candidate can produce amongst his testimonials a Certificate from the Committee that he has conducted himself creditably, and passed a good examination in seamanship so far as practised in the training ship as well as in other matters down to the time of his leaving the ship.

14. No period of service on board a training ship will be allowed to count for more than one year's sea service.

Service in capacities other than as Apprentices or Seaman.

15. Candidates whose services have been in capacities other than Apprentice, Ordinary Seaman, or Able Seaman, *e.g.*, Cook, Steward, Carpenter, &c., will be required to satisfy the Port Officer that they have a good knowledge of Seamanship. This may possibly be proved by the production of satisfactory Certificates from Masters with whom the applicants have served. Failing satisfactory evidence, the applicant may be required to perform additional service, which must be in the capacity of Ordinary Seaman or Able Seaman.

Service on rivers and in smooth water.

16. Service performed on rivers, no matter of what size, or in smooth water or partially smooth water limits, cannot be accepted.

Partial loss of sight.

17. A person who has lost the sight of one eye cannot be permitted to be examined for a Certificate of Competency. If he already holds a Certificate, he cannot be examined for a Certificate of a higher grade.

Service in Light-ships and Engine-room.

18. Service in Light-ships or in an Engine-room will not be accepted as sea service for a Master's or Mate's Certificate of Competency.

Service as Hooghly Master Pilot.

19. Service as a First Class Pilot will be accepted as qualifying for examination for a Master's Certificate for Home Trade Ships, notwithstanding that he may not have served in the capacity of Mate, but only provided that his *Sea Services* are sufficient. For the purpose of this rule, a Hooghly Master Pilot will be held to be a First Class Pilot.

Service as Pilot's Apprentice.

20. Half the amount of service performed as an Apprentice in a Pilot Ship propelled by sails may count as actual Sea Service to qualify for examination for a Certificate of Competency.

Service in Tug Boats.

21. Service performed in Tug Boats employed in Sandheads Service or outside Port limits may be accepted as Sea Service for qualifying for a Mate's Certificate for Home Trade Ships. Service on Hooghly River survey vessels may be accepted on the same conditions. Service in the Hooghly Pilot vessels at the Sandheads is Sea Service.

Desertion and gross misconduct.

22. Candidates who have neglected to join their vessels after having signed Articles, or who have deserted their vessels after having joined, or who have been found guilty

of gross misconduct on board, will be required to produce satisfactory proofs of two years' subsequent service and good conduct at sea, unless the Government, after having investigated the matter, should see fit to reduce the time.

If after passing examination services are found to have been insufficient.

23. If after a Candidate has passed his Examination it is discovered on further investigation, *e g.*, by verification on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for which he has passed, it will not be granted to him; but if the Government are satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, he will be allowed to go up for re-examination without payment of a further fee when he has performed the amount of service in which he was deficient.

Certificate of a lower grade may be granted on certain conditions.

24. If in such a case the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference, if any, between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate, may be placed to his credit.

Must be re-examined for certificate of higher grade.

25. In such a case, when the applicant has by further service made up the amount in which he was found to be short, he must, before he can receive the higher Certificate, be re-examined in all the subjects.

Colour Tests.

26. The Local Government have made the following arrangements for the examination of persons as to their ability to distinguish colours :—*

27. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

28. Any person, including the holders of Certificates of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in Colours only*, must make application to the Port Officer on Form Exn. 2ª, and pay a fee of one rupee.

29. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a certificate to that effect.

30. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

31. The application of a *Candidate who is presenting himself for Examination for a Master's or Mate's Certificate* must be made on Form Exn. 2. Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any of the colours used in the test, he will not be allowed to proceed with the examination in Navigation and Seamanship.

32. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will in such event be returned to him.

33. A Candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the Colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If he fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

34. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form Exn. 2ª.

35. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination in Navigation and Seamanship for the Certificate of the higher grade.

* *See* Appendix O.

36. Should he pass this examination, the following statement will be written on the face of the higher Certificate which may be granted to him, viz.—"This Officer has failed to pass the Examination in Colours."

37. Should he ultimately fail to pass the Examination in Navigation and Seamanship, a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

38. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency for a Home Trade Ship.

40. All Candidates for Certificates of Competency must first be examined in Colours.*

41. A MATE must be not less than 19 years of age, and have served four years at sea.

No candidate will be allowed to be examined unless he has served two years at sea within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

42. IN NAVIGATION, &c.—He must write a legible hand, and understand the first five rules of arithmetic, both simple and compound. He must be able to take a bearing by compass, and be conversant with the use of Mercator's chart, and be able to find, on either a "true" or "magnetic" chart,† the course to steer, and the distance from one given position to another; to find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of the ship from the object at the time of taking the second bearing.

43. He must also pass an examination in the International Code of Signals.‡

44. IN SEAMANSHIP, &c.—He must possess a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog and sound signals.§ He must be able to describe the signals of distress, and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals;‖ also the use and management of the rocket apparatus in the event of his vessel being stranded. He must be able to mark and use the lead and log lines, to moor and unmoor a vessel, and to manage a ship's boat in heavy weather, &c., &c. He must also understand the construction, use, and action of the bulkhead sluices, the engine-room telegraph, &c., and to answer any other questions of a like nature appertaining to the duties of the Mate of a Home Trade Vessel which the Examiners may think proper to put to him.

45. A MASTER must be not less than 20 years of age, and have served five years at sea, of which one year must have been as First or Only Mate in the Home or Foreign Trade, during which service he must have been in possession of a Mate's Certificate for Home Trade Ships or of a First or Only Mate's Certificate for Foreign-going Ships. *Vide also para.* 19.

No candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

* *See* Appendix F.

† *See* Appendix D. The terms "true" and "magnetic" are used throughout the Regulations for the sake of brevity and convenience for indicating charts that have compasses engraved upon them, showing the "true" or "magnetic" point of the compass respectively.

‡ *See* Appendix A.

§ *See* Appendix B.

‖ *See* Appendix C.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

46. In Navigation, &c.—In addition to the qualifications required of a Mate of a Home Trade Ship, a Master will be required to find on a chart the course to steer by compass in order to counteract the effect of a given current, and to find the distance the ship will make good towards a given point in a certain time, and to *work out practically* the correction to apply to soundings taken at a given time and place, to compare with the depth marked on the chart,* &c. He will also be required to understand the use of the quadrant, to be able to observe with it, to read *off* and *on* the arc, and to find the index error by the horizon. He will also be required to find the latitude by a meridian altitude of the sun, and to give written answers (*vide supplementary viva voce test, page* 40) to certain practical questions on the subject of the deviation of the compass.†

47. In Seamanship, &c.—In addition to the qualifications required of a Mate of a Home Trade Ship, a Master must understand how to rig a sea anchor, and what means to apply to keep a steamer with machinery disabled out of the trough of the sea, &c. How to get a cast of the lead in heavy weather, &c. He will be examined as to his resources for the preservation of the crew and passengers in the event of wreck, and the steps to be taken if his vessel is disabled and drifting towards a lee shore, and will be required to answer any other questions appertaining to the management of Home Trade Vessels which the Examiner may think necessary to put to him.

Failure.

Re-examination in case of failure

48 In all cases of failure the Candidate must be examined *de novo*. If a Candidate fails in *Seamanship*, he will not be re-examined *until after a lapse* of six months. Whether the whole or part of this period must be served at sea must depend upon the subjects in Seamanship in which the Candidate failed, but what amount (if any) of sea service will be required will be left to the discretion of the Port Officer, subject, however, to revision by the Government should they see fit.

49. The Examiners in making out their Report on Form Exn. 14 should state what amount (if any) of further sea service the Candidate must perform, and they should also insert this information under Division H in Form Exn. 2.

50. If he fails three times in *Navigation* he will not be re-examined until after a lapse of three months from the date of the *last failure*.

Certificate of a lower grade.

51. If a Candidate has failed in his Examination, but the subjects in which he has failed are not included in the subjects required for a certificate of a lower grade, he may, if he desires it, receive a certificate of such lower grade.

52. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled, for re-examination for the higher grade of Certificate he will be required to pay a further full fee.

53. If a Candidate fails for bad spelling or writing, he will not be re-examined until after a lapse of at least three months.

Fees.

54. Candidates for examination, in making their application on Form Exn 2, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause, except failure to pass the colour tests, not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as

* *See* Appendix D.
† *See* Appendix E.

the case may be, they will be allowed to again present themselves for examination for a Certificate of the same grade without paying any further fee.

55. The fee for examination must be paid to the Port Officer. In any case in which a Candidate offers money to any other officer, and in any place but in the Port office, the Candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be again examined for twelve months. Fees to be paid by applicants for examination.

56. If a Candidate fail in his examination, *no part of the fee he has paid will be returned to him.* Fees to be paid by applicants for examinations. 133.

57. The fees are as follow:—

For "Home Trade Ships."

	Rs.
Mate	6
Master	12
For the renewal of any certificate ...	5

General Instructions to Examiners and Candidates.

58. All instruments necessary for use in the examinations are supplied by the Government. Instruments used in examinations.

59. Before commencing the examination, the tables or desks must be cleared of all scraps of paper or books that are not used in the examination, and care should be taken that the candidates do not bring into the examination room any book, paper, document or memoranda of any description whatever. No person whatever should be allowed in the room during the time of examination, but those whose duties require them to be present. Prohibited books and papers.

60 No instructors will be allowed on the premises.

61. Candidates will under no pretence whatever be allowed to leave the premises while the examination is proceeding. If a candidate has occasion to visit the retiring room, he will only be allowed to do so on the completion of the paper on which he may be engaged, when he will be required to enter in a book kept for the purpose the exact times of his leaving and returning to the examination room. When only a few candidates are under examination, two persons will not be allowed to leave the room at the same time. Candidates not to leave premises during examination.

62. Candidates should be so placed as to prevent one copying from the other, and no communication whatever between the Candidates should be allowed. Position of Candidates at examination

63. If any blotting paper is allowed, it should be black; and when the first examination paper is issued, each Candidate should be furnished with a piece, which must be returned to the Examiner upon the completion of the last paper. Blotting paper.

64. The examination papers should be issued to the Candidates in half sheets only, and one at a time. This will prevent a Candidate from spreading out the sheets on the table in an apparently careless manner, but so as to enable his nearest neighbour to look over and copy, or examine the problems It will also enable the Examiner to look over and report upon the work on one half sheet, while the Candidate is at work upon another, and so on. When the errors are not too numerous, or when they are not from ignorance of the subject, the incorrect problems may be returned to the Candidate for correction, but in no case should the errors be pointed out by the Examiner, neither should any marks be made on the correct work of the problem, which would at once indicate how far or to what extent the work is correct. Should the problems be returned to the Examiner the second time incorrect, this would be a failure; and as the time allowed is considered ample for working out the papers carefully, this rule is expected to be strictly observed. How examination papers should be issued.

65. When from the large number of the candidates it may be found impossible to look over the work on the day of examination during the office hours, an hour in the morning of the following day may be allotted for the purpose of correcting the problems, but In certain cases problems may be corrected on morning following examination day.

in no case should a Candidate have his problem returned to him for correction after he has made the second attempt.

Viva voce examination.

66. In the *viva voce* examination a reasonable time should be allowed for the Candidate to give his answers. No assistance should be given or leading question put.

Minor corrections.

67. All outstanding or minor corrections should appear in the margin of each problem paper; also on the chart papers Exn 9C and Exn. 9D; and unless all these corrections appear on the papers of the Candidate, they will not be considered complete.

Examination to commence with that for Second Mate.

68. In every case the examination, whether for Only Mate, First Mate, Master, is to commence with the problems for Second Mate.

Problems required as tests.

69. Examiners should bear in mind that the problems to be performed are required as tests, and for the purposes of an Examination, and not for sea-going or practical purposes alone.

70 The Candidates will be allowed to work out the various problems according to the method and the tables they have been accustomed to use.

Time allowed for Problems and Writings.

71. The rules as to the amount of time allowed are as follow: —

72 *Candidates for Home Trade Mate's Certificates* must complete the whole of their arithmetical and chart papers within *eight hours*, and Candidates for Home Trade Masters' Certificates within *ten hours*.

Additional time allowed in special cases.

73 Punctually at the expiration of the prescribed time all the papers should be called up, whether completed or not, and if not completed the Candidate will be declared to have failed, unless the Examiner see fit to lengthen the period in any special case. If, however, the period is lengthened in any case, the special circumstances of that case, and the reasons for lengthening the period, together with the time allowed, must be reported to the Government by the Examiner, in the column for "remarks" on the Form Exn. 14. It should be noted that the periods prescribed in the foregoing paragraphs are not intended to include the time occupied by the *viva voce* part of the examination

74. It is anticipated that but few of the Candidates for Certificates of Competency will require the whole of the time herein allowed for completing their examination in navigation; and ample time has been prescribed, so that Candidates may perform their work in a careful, clear and legible manner, and to the entire satisfaction of the Examiners.

Supplementary viva voce Examination on written Papers.

75. An impression prevails in regard to the examination of Masters and Mates, that so long as a Candidate can commit to paper correct answers to the various questions requiring written answers (*e. g., Forms Exn. 4a, Exn. 7, Exn. 9a, Exn. 9c, Exn. 32*, &c.), no matter how indicative the answers may be of their having been learnt off by rote *only*, the duty and responsibility of the local Examiners are at an end, and that they have no power or authority to reject a Candidate should his written answers be correct.

76. Lest, therefore, such an impression should prevail, the Government wish to point out that Candidates for Certificates of Competency are not only expected to give correct written answers, which may merely be learnt off by rote, but they are expected to possess an intelligent knowledge of the various subjects prescribed in the Regulations, particularly as regards the important subject of the Deviation of the Compass.

77. This result may be easily attained by the Examiner putting a few *viva voce* questions to the candidate as the papers are brought up for inspection, or at any subsequent time if more convenient. The oral questions (suggested by the printed questions and the answers given) should be such that the Examiner may satisfy himself that the candidate possesses a real knowledge of what he has written, and should be confined strictly to the subjects of the printed questions. Should the candidate then exhibit ignorance of the subjects, the Examiner (who is in a position to judge of the real knowledge the man before him possesses) should deal with him at his discretion, notwithstanding that the candidate may have written all the answers correctly by rote.

78. When an Examiner finds it necessary to fail a Candidate in this *supplementary viva voce* test, a memorandum containing the particulars of the points on which the candidate was ignorant, *i.e*, *the identical questions and the identical answers given*, must in each case be attached to his examination papers, when forwarded in the usual course to the Port Officer, or the particulars may be set forth by the Examiner in the margins of the candidate's papers in red ink.

79. If the Candidate passes he will receive the Form Exn. 16, upon which the Government will issue the certificate to the Candidate, whose testimonials, &c., will be returned at the same time. Form Exn. 16. Completion of examination.

Special Notice to Candidates.

80. The attention of Candidates is specially called to the following Regulations:—

81. Candidates are required to appear at the examination-room punctually at the time appointed.

82. Candidates are prohibited from bringing into the examination-room books, paper, or memoranda of any kind whatever. The slightest infringement of this regulation will subject the offender to all the penalties of a failure, and he will not be allowed to present himself for re-examination for a period of three months.

83. In the event of any Candidate being detected in defacing, blotting, writing in, or otherwise injuring any book or books belonging to the Government, the papers of such Candidate will be detained until the book or books so defaced be replaced by him. He will not, however, be at liberty to remove the damaged book, which will still remain the property of the Government.

84. In the event of any Candidate being discovered referring to any book or memoranda, copying from another, or affording any assistance or giving any information to another, or communicating in any way with another, during the time of examination, he will subject himself to all the penalties of a failure, and he will not be allowed to be examined for a period of six months.

85. No Candidate will be allowed to work out his problems on a slate or on waste paper.

86. No Candidate will be permitted to leave the room until he has given up the paper on which he is engaged.

87. Any Candidate who may be guilty of insolence to the Examiner or of other misconduct will render himself liable to the postponement of his examination, or, if he has passed, to the detention of his certificate for such period as the local Government may direct.

General.

88. Certificates of competency will be made and issued in the forms hereunto annexed.

89. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

90. No application from the holder of a certificate granted by the Government of Bombay to be examined for a certificate of the same legal value shall be entertained.

APPENDIX A.

EXAMINATION OF MASTERS AND MATES IN THE INTERNATIONAL CODE OF SIGNALS.

Instructions to Examiners.

The Government desire to direct the attention of the Examiners to the principal points connected with the International Code of Signals (which is to be treated as a subject in Navigation) as to which Candidates for Examination should be questioned in order to qualify for Certificates of Competency.

The Government would recommend to the Examiners a perusal of the *Report of the Signal Committee of* 1855 (which will be found at the commencement of the Signal Book), and also the *first few pages of the Book*. The information therein given will be found sufficient to make the Examiners theoretically acquainted with the characteristics of the Code, and the advantages it claims to possess over other Codes, and will enable them to appreciate and urge upon Candidates for Examination the facilities which this System of Signalling affords for easy and rapid communication.

The "comprehensiveness" and "distinctness" of the International Code are its chief recommendations.

The form of the Hoist generally indicates the nature of the Signal made, so that an observer can at sight understand the character of the Signal he sees flying.

The annexed plate gives examples which illustrate this.

The Examinations should tend to elicit a knowledge of the distinctive features of the Code above alluded to.

With this object the Examiners should make the 2, 3, and 4 Flag Signals on the Frame board which is furnished for the purpose (*always taking care first to show the Ensign and the Code Pennant at the Gaff*),* questioning the Candidates as to the distinguishing Forms of the respective Hoists, *(see Plate annexed)*, which will be indicated according as a Burgee, or a Pennant, or a Square Flag, is uppermost.

The Candidate ought to know how to find in the Signal Book the communication or the inquiry he desires to make, and how to make the Signal. The Signal to be made should *invariably* be sought for by the Candidate in the Vocabulary and Index, Part II, and never in Part I

The Candidate ought to know how to interpret a Signal.

The Examiner should place a Signal on the Frame board, and vary the Signal by showing a 2 or 3 Flag Signal, or a "Geographical" or a "Vocabulary" Signal, or the name of a Merchant Ship or a Ship of War.

The two latter signals would not of course be found in the Signal Book. The Candidate ought to point them out in the *Code List of Ships*.

A Candidate ought to be able to read off a Signal at sight, so far as to name the Flags composing the Hoist.

He ought to know the use of the Code Pennant, and of the Pennants C. and D., "Yes" and "No."

The Candidate should be practised in the use of the Spelling Table, by being made to spell his own name, or some word not to the Vocabulary of the Code.

A knowledge of the Distant Signals should be required of the Candidate, their object and the mode of signalling by the Distant Code, which will be found at the end of the Signal Book.

For this purpose two Black Balls, two Black Square Flags, and two Black Pennants will be furnished with the Frame board, and the Candidate should be required to make one or two Distant Signals, and to read off one or two made by the Examiners.

The Ball being the distinguishing symbol of the Distant Signal, any Pennants or Flags of the Code may be employed in conjunction with it, irrespective of colour. The Black Pennants and Flags are merely sent as showing best in the light background of the Frame board.

The Examiners should be careful to ascertain that the Candidate possesses a knowledge of the Distress Signals which came into operation November 1st, 1873.

Semaphores.

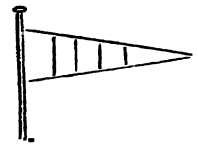
A plate at the end of the Signal Book explains the method by which the arms of the Semaphore are made to represent by their position (up, down, or horizontal) the three symbols used for Distant Signalling, viz., a Flag, a Ball, or a Pennant. Before making Signals with the Semaphore, the Black Disc with the white rim should be placed on the top of the Semaphore Mast, as it properly forms a part of the Mast itself.

The International Code is used on board Her Majesty's Ships, and it has been adopted by all the principal maritime powers for their Imperial as well as for their Mercantile Navies.

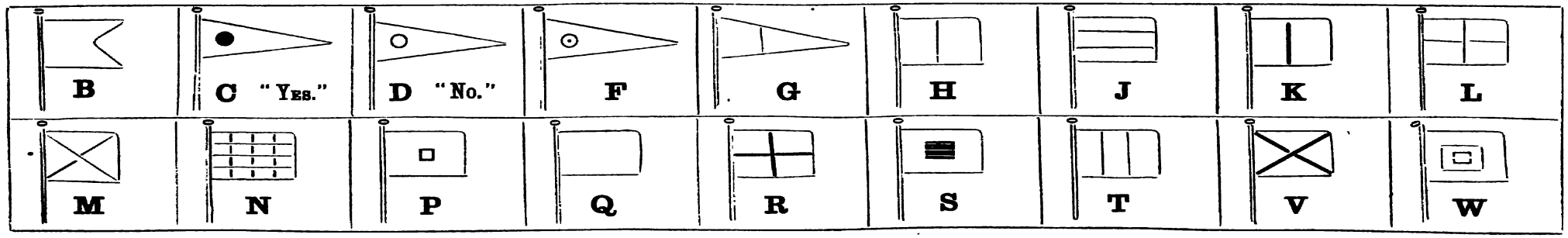
Note.—The International Code of Signals, with the Code List, is prepared by the Registrar-General of Shipping and Seamen, and may be had of the Publishers, Messrs. Spottiswoode & Co.,

* The object of this is, of course, to distinguish the Signals from those of another

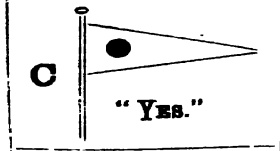
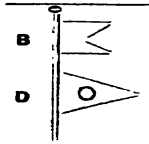
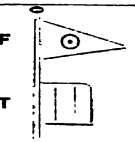
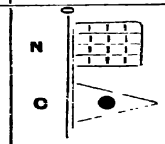
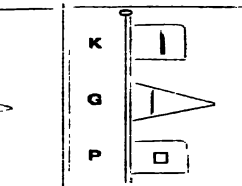
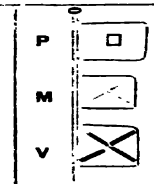
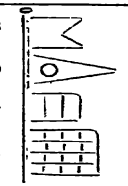
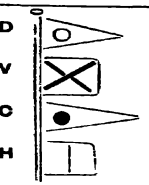
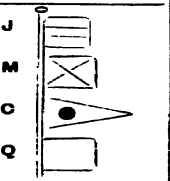
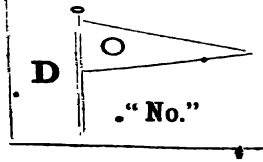
FLAGS OF THE INTERNATIONAL CODE OF SIGNALS.

"CODE SIGNAL" AND  "ANSWERING PENNANT."

N.B.—When used as the "Code Signal," this Pennant is to be hoisted under the "Ensign;" when used as the "Answering Pennant," where best seen.



The following examples will serve to illustrate how the *form of a Hoist* will usually denote the *nature of the Signal* made :—

ONE FLAG.	TWO FLAGS.			THREE FLAGS.		FOUR FLAGS.			
	BURGEE uppermost, "ATTENTION" Signals.	PENNANT uppermost, "COMPASS" Signals.	SQUARE FLAG uppermost, "URGENT" Signals.	General Signals.		BURGEE uppermost, GEOGRAPHICAL Signals.	PENNANTS C,D,F uppermost, NATIONAL VOCABULARY.	PENNANT G uppermost, Names of MEN-OF-WAR.	SQUARE FLAG uppermost, Names of MERCHANT SHIPS.
 C "YES."	 B D	 F T	 N C	 K G P	 P M V	 B D T N	 D V C H	 Q S M W	 J M C Q
 D "NO."	WHAT SHIP IS THAT?	W. BY S.	IN DISTRESS, WANT ASSISTANCE	ENGINE BROKEN DOWN.	CALL FOR ORDERS OFF—.	FALMOUTH.	WHAT SHIPS HAVE YOU SPOKEN?	"MARLBOROUGH" SCREW—131 GUNS.	"MARCO POLO," No. 6025.

54, Gracechurch Street, London, and the principal Booksellers at the various ports

The Official Mercantile Navy List and Maritime Directory published for the use of Merchants, Shipowners, Shipbrokers, and others, may be obtained in like manner; price 12*s*.

APPENDIX B.

REGULATIONS RESPECTING LIGHTS AND FOG SIGNALS AND STEERING AND SAILING RULES ISSUED BY THE BOARD OF TRADE.

NOTICE.

The Board of Trade have had their attention drawn to the necessity of a more strict examination of applicants for Certificates of Competency in their knowledge of the regulations for preventing collisions at sea.

In order that the rule of the road at sea may be better understood, and that a uniform system of examination may prevail, the Board of Trade have issued the following catechism.

This catechism has received the approval of the Trinity House and Admiralty in England, and of the Council of the Admiralty of France.

The Board of Trade attach very great importance to a thorough knowledge of the steering and sailing rules on the part of every applicant for a Certificate of Competency, and a thorough examination on the part of the Examiners.

All applicants for examination, whether for certificates as masters or mates, are to be examined as to their knowledge of the steering and sailing rules each time they present themselves for examination.

Questions suggested by the following heads of examination are to be asked in addition to, and are not to supersede, any other questions proper and necessary to be asked by the Examiner.

The following questions need not be adhered to literally by the Examiner, and are not all to be asked; but the substance of the leading questions should be asked, and all that are asked should be satisfactorily answered, before an applicant is reported to have passed his examination. The Examiner should make such a selection of the questions as each case appears to him to require.

THOMAS GRAY,
Assistant Secretary.

Board of Trade,
Marine Department.

HEADS OF EXAMINATION IN REGULATIONS RESPECTING LIGHTS AND FOG SIGNALS AND IN THE STEERING AND SAILING RULES.

1. What light or lights are required by the regulations to be exhibited by sailing vessels at anchor?

One light only, viz., a white light.

2. What light or lights are required by the regulations to be exhibited by steam-ships at anchor?

The same as for sailing vessels

3. Where is the anchor light to be exhibited?

Where it can best be seen. It must of course be placed where there is the least possible chance of obstruction from spars, ropes, &c., &c.

4. To what height may the anchor light be hoisted?

It may be exhibited at any height where it can best be seen, not exceeding 20 feet above the deck.

5. What is the description of the lantern containing the anchor light required by the regulations?

A globular lantern of not less than eight inches in diameter.

6. In what direction or directions must the anchor light show?

It must show a clear, uniform, and unbroken light, visible all round the horizon.

7. At what distance must it be visible?

At least one mile.

8. What is the number of lights required by the regulations to be carried by sailing ships when under weigh at night?

Two side-lights, and to have in readiness a white light or a flare-up light to show from their stern to any vessel overtaking them.

9. Of what colour are these lights, and how are they to be placed on board the ship?

A green light on the starboard side, and a red light on the port side.

10. What description of light must be shown from the sides of sailing vessels under weigh; and over how many points of the compass, and in what directions, and how far, are they required to show.

Each light must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass;

so fixed as to throw the light from right ahead to two points abaft the beam on the starboard and port sides respectively; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

11. What lights are they to carry when being towed at night?

The same.

12. Are the side-lights required to be fitted with screens; and if so, of what length, and how?

Yes, on the inboard side; at least three feet in length, measuring forward from the light. They are to be so fitted as to prevent the coloured lights from being seen across the bows.

13. What is the number of lights required by the regulations to be carried by steam-ships when under steam at night?

Three lights, and to have in readiness a white light or flare-up light to show from their stern to any vessel overtaking them.

14. Of what colour are these lights, and how are they to be placed on board the ship?

A white light on or in front of the foremast at a height above the hull of not less than 20 feet; and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth. A green light on the starboard side, and a red one on the port side.

15. Over how many points of the compass, in what direction, and how far, is the foremast-head light of a steamer required to show?

Over 20 points, viz., from right ahead to two points abaft the beam on both sides. It must be of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

16. Are the side-lights required to be fitted with screens; and if so, of what length?

The green and red lights are to be fitted with screens on the inboard side, extending at least three feet forward from the light, as in the case of sailing vessels.

17 Over how many points of the compass, in what directions, and how far, are the coloured side lights of steamers required to show?

The side-lights must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, on each side of the ship, *i.e.*, from right ahead to two points abaft the beam on the starboard and port sides respectively, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles.

18. What description of lights are steamers required by the regulations to carry when they are not under steam, but under sail only?

Side-lights only, the same as sailing vessels.

19. What exceptional lights are to be carried by small sailing vessels in certain cases?

Whenever, as in the case of small vessels during bad weather, the green and red side lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

20. What description of lights are pilot vessels required to carry when on their stations on pilotage duty?

A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

21. What description of lights are pilot vessels required to carry when not on their station on pilotage duty?

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

22. What lights are open boats and fishing vessels of less than 20 tons net registered required to carry when under way and not actually engaged in fishing.

Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

23. What lights are fishing vessels and fishing boats of 20 tons net register, or upwards, required to carry when under way and not actually engaged in fishing?

They must carry similar lights to those of other ships when under way.

24. What lights are steam trawlers of 20 tons gross register, or upwards, whilst actually engaged in trawling, and not being stationary, required to carry?

All steam-vessels engaged in trawling must carry either one of the two following arrangements of lights, whichever of the two may be the more convenient:—

(*a*) The usual green and red side-lights, and foremast head light, similar to those carried by other steamships; or

(*b*) They must carry on or in front of the foremast head, and in the same position as the white light which other steamships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side; such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: and (2) a white light in a gobular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform, and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet, nor more than 12 feet.

25. What lights are sailing trawlers whilst actually engaged in trawling, and not being stationary, required to carry.

All sailing vessels, of whatever tonnage, whilst engaged in trawling, must carry either one of the three following arrangements of lights, whichever of the three, (*a*), (*b*), or (*c*), may be the most convenient:—

(*a*) They may carry the green and red side-lights similar to those of other sailing ships; or

(*b*) They may carry on or in front of the foremast head a lanthorn having a green glass on the starbord side and a red glads on the port side, so constructed, fitted, and arranges that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft the beam on the port side; and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet; or

(*c*) They may carry a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed at to show a clear, uniform and unbroken light all round the horizon, and visible on a dark night, with a clear atmosphere, for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by, another ship or vessel in sufficient time to prevent collision.

26. What lights are vessels whilst actually engaged in drift net fishing required to carry?

All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than 5 feet and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night, with a clear atmosphere, for a distance of not less than 3 miles.

27. What lights are vessels whilst actually engaged in line fishing required to carry?

A vessel engaged in line fishing is required to carry the same lights as a vessel engaged in drift net fishing.

28. If a vessel, when fishing, becomes stationary in consequence of her gear getting fast to a rock or other obstruction, what signal must she make?

She must show the same light, and if a fog, mist, or falling snow prevail, she must make the same fog signal, as if she were at anchor.

29. What lights are fishing vessels and open boats required to exhibit when at anchor?

Between sunset and sunrise they must exhibit a white light, visible all round the horizon at a distance of at least one mile, the same as any other vessel.

30. What sound signals are fishing vessels required to make whilst engaged in fishing in thick weather?

In fog, mist, or falling snow, a drift net vessel attached to her nets, and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

31. May fishing vessels and open boats use flare-up lights, and if so, at what part, or parts, of the vessel should they be exhibited?

Yes. Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

32. Do these regulations referring specially to fishing vessels and boats apply to foreign vessels, and to all parts of the world?

No, with the exception of the *first paragraph* of Article 10 of the regulations, they apply only to British vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre.

33. What lights are steam-ships required to carry when towing other ships?

A steam-ship, when towing another ship, shall, in addition to her side lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position as the white light which other steam-ships are required to carry.

34. What light is a ship which is being overtaken by another required to show?

A ship which is being overtaken by another shall show from her stern to such last mentioned ship a white light or a flare-up light.

35. Describe the lights and the day signals that vessels employed in laying or picking up a telegraph cable are required to carry.

A ship, whether a steam-ship or a sailing-ship employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line over one another, not less than six feet apart; the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than her foremast head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

36. Describe the lights and the day signals that vessels which from any cause are not under command are required to carry.

A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over than other, not less than three feet apart, and of such a charater as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of but not lower than her foremast head, three black balls or shapes, each two feet in diameter.

37. Are the above-mentioned ships to carry side-lights?

The above ships, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

38. What are the previous mentioned shapes and lights intended to indicate to approaching ships?

These shapes and lights are to be taken by approaching ships as signals that the ship using them is not under command, and cannot therefore get out of the way.

39. Do these rules prevent squadrons and convoys from carrying special lights?

No. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war, or for ships sailing under convoy.

40. What sound signals are steam-ships and sailing ships required by the regulations to be provided with?

A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by a bellows or other mechanical means, and also with

an efficient bell. A sailing ship shall be provided with a similar fog-horn and bell.

41. When are these signals to be used?

In fog, mist, or falling snow, whether by day or night.

42. What sound signal is to be made by steam-ships and sailing ships when not under way?

A steam ship and a sailing ship when not under way shall, at intervals of not more than two minutes, ring the bell.

43. What sound signal is required to be made by a steam-ship when under way?

A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes a prolonged blast.

44. What sound signals are required to be made by sailing ships when under way?

A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

45. Do the regulations require ships to take any other precaution during thick weather?

Yes. Art. 13 says every ship, whether a sailing ship or steam-ship, shall, in a fog, mist, or falling snow, go at a moderate speed.

46. Is it optional for a steam-ship to make any other signals with her steam whistle?

Yes; but only to vessels in sight, *i.e.*, not to vessels which are so obscured by fog, mist, or falling snow that they cannot be seen, though their whistles may be heard.

Art. 19 provides that in taking any course authorised or required by the regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz:—

One short blast to mean "I am directing my course to starboard."

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern"

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

47. What precaution is to be taken by steamers approaching another vessel?

If there is risk of collision, the steamer is to slacken speed, or, if necessary, stop and reverse.

48. If you see two white lights in a vertical line one over the other, what do they denote as regards the vessel carrying them?

They denote the presence of a steamer towing with her side lights not within sight on account of distance, fog, &c.; or a vessel end on to me engaged in drift net fishing, or in line fishing or it may be a steam trawler end on, or within two points of being end on, to me.

49. If you see a green, or a red, light with a white light below, what do they denote?

They denote the presence of either a sailing, or a steam, vessel engaged in trawling.

50. If you see both the green and red lights with a white light below them, what do they denote?

They denote the presence of a sailing trawler coming end on to me.

51. If you see a white light alone, what does it denote as regards the ship carrying it?

It denotes the presence of a vessel or boat at anchor; or a pilot vessel on her station; or the mast-head light of a vessel, under steam, with her side-lights not within sight on account of distance fog, &c.; or a fishing vessel stationary through her gear getting fast to some obstruction, or a sailing trawler engaged in trawling (1) under one arrangement of lights heading so that her side-lights are obscured, (2) under another arrangement from the red pyrotechnic light not having been exhibited, or it may be a light shown from the stern of a vessel which is being overtaken.

52. If you see a green or a red light without a white light, or both a green and a red light without a white light, is the vessel carrying the light or lights seen, a vessel under steam or a vessel under sail?

A vessel under sail?

53. How do you know?

Because there is no white mast-head light.

54 If you see a white light over a coloured light, is the vessel a vessel under sail or a vessel under steam?

A vessel under steam. The mast-head light denotes that the vessel is under steam.

[The Examiner will then take one model of a vessel, which he will place on the table, and call it A. He will then take the mast or stand with a white and red ball on it and place it at the other end of the table and call it B.

The Examiner should be careful that the model of one vessel only is used when the questions numbered 55 to 60 are asked.]

55. A is a steamer going north, seeing a white light and red light right ahead at B. Are A and the vessel B showing the two lights meeting end on or nearly end on, or is B passing A, or is B crossing the path of A, and in what direction, and how do you know?

Passing to port, because if I see a red light ahead, I know that the head of the vessel carrying that red light must be pointing away

in some direction to my own port or left hand. The ship showing the red light has her port or left side more or less open to A.

66. If A is going north, within what points of the compass must the vessel B showing the white and red lights be steering?

B must be going from a little W. of S. to W. N.-W.

67. How do you know this?

Because the screens being properly fitted, I could not see the red light of B at all with the vessel's head in any other direction.

68. A is a steamer going north, and seeing a white and green light ahead. Are A and B meeting, or is B passing A, or is B crossing the course of A, and in what direction; and how do you know?

B is passing to starboard of A, because if I see a green light ahead, I know that the head of the vessel carrying that green light must be pointing away in some direction to my starboard or right hand. The ship showing the green light has her right or starboard side more or less open to me.

69. As A is going north, within what points of the compass must the vessel showing the white and green lights be steering?

B must be going from a little E. of South to E.N.E.

60. How do you know?

Because the screens being properly fitted, I cannot see the green light at all with the vessel's head in any other direction.

61. If a steamer A sees the *three* lights of another steamer B ahead or nearly ahead, are the two steamers meeting, passing, or crossing?

Meeting end on, or nearly end on.

62. Do the regulations expressly require the course of a ship to be altered to starboard in any case, and if so, when?

Yes; in the case of two steamers meeting end on, or nearly end on.

63. Do they expressly require the course of a ship to be altered to starboard in any other case; and if so, in what other?

No. It is not in any other case expressly required by the regulations.

[The Examiner should see that the candidate puts the models in the positions indicated by the question 64, and following.]

64. If a steamer A sees another steamer's red light B on her own starboard side, are the steamers meeting, passing, or crossing; and how do you know?

Crossing, because the red light of one is opposed to the green light of the other; and whenever a green light is opposed to a red light or a red light to a green light, the ships carrying the lights are, crossing ships.

65. Is A to stand on; and if not, why not?

A has the other vessel B on her own starboard side. A knows she is crossing the course of B, because she sees the red light of B on her (A's) own starboard side. A also knows she must get out of the way of B, because Article 16 expressly requires that the steamer that has the other on her own starboard side shall keep out of the way of the other.

66. Is A to starboard or to port in such a case?

A must do what is right so as to get herself out of the way of B: it is generally preferable to pass under a ship's stern rather than attempt to cross her bows, but it depends entirely on the position and relative speed of the two ships, and therefore the regulations wisely leave the giving way ship to get out of the way in any manner that may be most desirable, so always that she does get out of the way.

67. If A gets into collision by porting, will it be because she is acting on any rule?

No; the rule does not require her either to port or to star board If she ports, and gets into collision by porting, it is not the fault of any rule.

68. If a steamer A sees the green light of another steamer B on her own (A's own) port bow, are the two steamers meeting, passing, or crossing; and how do you know?

Crossing, because the green light of one ship is shown to the red light of the other.

69. What is A to do, and why?

By the rule contained in Article 22 of the Regulations, A is required to keep her course, subject only to the qualification that due regard must be had to all dangers of navigation; and that due regard must also be had to any special circumstances which may exist in any particular case rendering a departure from that rule necessary in order to avoid immediate danger. The crossing ship B on A's port side must get out of the way of A, because A is on B's starboard side.

70 A, a steamer, sees the green light of another steamer, B, a point on her A's port bow. Is there any regulation requiring A to port in such a case; and if so, where is it to be found?

There is not any.

71. Are steam-ships to get out of the way of sailing ships?

If a steamer and a sailing ship are proceeding in such direction as to involve risk of collision, the steamer is to get out of the way of the sailing ship, unless the sailing ship is overtaking the steamer.

72. What is to be done by A, whether a steamer or a sailing ship, if overtaking B?

A is to keep out of the way of B.

73. When by the rules one of two ships is required to keep out of the way of the other, what is the other to do?

To keep her course. This is absolutely necessary to enable the commander of the ship required by the regulations to keep out of the way, to act with decision and promptitude, which he cannot possibly, unless he knows what the other vessel is going to do.

74. Is there any qualification or exception to this?

Yes. Due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case, and require a departure from the regulations to avoid immediate danger.

75. Is there any general direction in the steering and sailing rules; and if so, what is it?

Yes, it is this: that nothing in the rules shall exonerate any ship, or the owner, master, or crew thereof, from the consequences of any neglect to carry lights, or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

76. Can you repeat article (———) of the regulations, I refer to the article containing the rule for (———)?

[The Examiner should repeat this question, naming a different article each time.]

77. What does the Act of Parliament provide as to the obligation of owners and masters in obeying the regulations respecting lights, fog signals, and steering and sailing?

Section 27 of "the Merchant Shipping Act Amendment Act, 1862," provides that owners and masters shall be bound to obey the regulations, and it also provides that in case of wilful default by the master or owner he shall be deemed to be guilty of a misdemeanor for each infringement.

78. What do breaches of the regulations imply?

If an accident happens through non-observance of the regulations, it implies wilful default on the part of the person in charge of the deck at the time, unless it is shown to the satisfaction of the court hearing the case that the special circumstances of the case rendered a departure from the rules necessary.

79. If collision ensues from a breach of the regulations, who is to be deemed in fault for the collision?

The person by whom the regulations are infringed, unless the court hearing the case decides to the contrary.

80. Is there any special rule for steam-ships navigating narrow channels?

In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which is on the starboard side of such ship.

81. Do the regulations apply to sea-going ships in harbours and in rivers?

Yes; unless there is any rule to the contrary made by a competent authority.

82. Do they apply to British ships only?

No, to foreign ships as well, with the exception of paragraphs (*a*), (*b*), (*c*), (*d*), (*e*), (*f*) and (*g*), of Article 10, which apply only to British fishing vessels.

83. Do you know where the present regulations are to be found?

Yes, in the Orders in Council of the 11th August 1884, the 30th December 1884, and 24th June 1885. Copies are given away on application to the Board of Trade.

84. Is one ship bound to assist another in case of collision?

Yes.

85. What is the penalty for default?

If the master or person in charge of the ship fails to render assistance without reasonable excuse, the collision is, in absence of proof to the contrary, to be deemed to be caused by his wrongful act, neglect, or default.

86. Is there any other penalty attached to not rendering assistance?

Yes. If it is afterwards proved that he did not render assistance, his certificate may be cancelled or suspended by the court investigating the case.

87. Is it not expected that you should understand the regulations before you take charge of the deck of a ship?

It is.

88. Why?

If I do not understand them and am guilty of default, the consequences will be very serious to me.

89. What would be a serious offence?

To cause a collision by porting the helm or doing anything not required by the regulations and without due consideration.

REGULATIONS FOR PREVENTING COLLISIONS AT SEA, ORDER IN COUNCIL OF 11TH AUGUST 1884.

Preliminary.

Art. 1. In the following rules every steam-ship which is under sail and not under steam is to be considered a sailing ship; and every steam-ship which is under steam, whether under sail or not, is to be considered a ship under steam.

Rules Concerning Lights.

Art. 2. The lights mentioned in the following Articles, numbered 3, 4, 5, 6, 7, 8, 9, 10 and 11, and no others, shall be carried in all weathers, from sunset to sunrise.

Art. 3. A sea-going steam-ship when under way shall carry—

(*a*) On or in front of the foremast, at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth, a bright white light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 20 points of the compass, so fixed as to throw the light 10 points on each side of the ship, viz. from right ahead to two points abaft the beam on either side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

(*b*) On the starboard side, a green light so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*c*) On the part side, a red light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the port side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*d*) The said green and red side-lights shall be fitted with inboard screens projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

Art. 4. A steam-ship, when towing another ship, shall in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position, as the white light which other steam-ships are required to carry.

Art. 5. (*a*) A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles; and shall by day carry in a vertical line one over the other, not less than three feet apart, in front of, but not lower than, her foremast head, three black balls or shapes, each two feet in diameter.

(*b*) A ship, whether a steam-ship or a sailing ship, employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular laterns, each not less than 10 inches in diameter, in a vertical line one over another, not less than six feet apart; the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than, her foremast head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

(*c*) The ships referred to in this Article, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

(*d*) The lights and shapes required to be shown by this Article are to be taken by other ships as signals that the ship showing them is not under command, and cannot therefore get out of the way. The signals to be made by ships in distress and requiring assistance are contained in Article 27.

Art. 6. A sailing ship under way, or being towed, shall carry the same lights as are provided by Article 3 for a steam-ship under way, with the exception of the white light, which she shall never carry.

Art. 7. Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessels, ready for use: and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent a collision, in such a manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

Art. 8. A ship, whether a steam-ship or a sailing ship, when at anchor, shall carry, where it can best be seen, but at a height not exceeding 20 feet above the hull, a white light, in a globular lantern of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light visible all round the horizon at a distance of at least one mile.

Art. 9. A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall

carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

Art 10. Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

The following portion of this article applies only to fishing vessels and boats when in the sea off the cost of Europe lying north of Cape Finisterre:—

(*a*) All fishing vessels and fishing boats of 20 tons not registered tonnage, or upwards, when under way and when not required by the following regulations in this article to carry and show the lights therein named, shall carry and show the same lights as other vessels under way.

(*b*) All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of th vessel shall be not less than five feet, and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night with a clear atmosphere, for a distance of not less than three miles.

(*c*) A vessel employed in line fishing with her lines out shall carry the same lights as a vessel when engaged in fishing with drift nets.

(*d*) If a vessel when fishing becomes stationary in consequence of her gear getting fast to a rock or other obstruction, she shall show the light and make the fog signal for a vessel at anchor.

(*e*) Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing, with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

(*f*) Every fishing vessel and every open boat when at anchor between sunset and sunrise shall exhibit a white light visible all round the horizon at a distance of at least one mile.

(*g*) In fog, mist, or falling snow, a drift net vessel attached to her nets and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

Art. 11. A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

Sound Signals for Fog, &c.

Art. 12. A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by a bellows or other mechanical means, and also with an efficient bell.* A sailing ship shall be provided with a similar fog-horn and bell.

In fog, mist, or falling snow, whether by day or night, the signals described in this Article shall be used as follows; that is to say—

(*a*) A steam-ship under way shall make with her steam whistle or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

(*b*) A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

(*c*) A steam-ship and a sailing ship, when not under way, shall, at intervals of not more than two minutes, ring the bell.

Speed of Ships to be moderate in Fog, &c.

Art. 13. Every ship, whether a sailing ship or steam-ship, shall in a fog, mist, or falling snow, go at a moderate speed.

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* In all cases where the regulations require a bell to be used, a drum will be substituted on board Turkish vessels.

Steering and Sailing Rules.

Art, 14. When two sailing ships are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other, as follows, viz.—

(*a*) A ship which is running free shall keep out of the way of a ship which is close-hauled.

(*b*) A ship which is close-hauled on the port tack shall keep out of the way of a ship which is close-hauled on the starboard tack.

(*c*) When both are running free with the wind on different sides, the ship which has the wind on the port side shall keep out of the way of the other.

(*d*) When both are running free with the wind on the same side, the ship which is to windward shall keep out of the way of the ship which is to leeward.

(*e*) A ship which has the wind aft shall keep out of the way of the other ship.

Art. 15. If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

This article only applies to cases where ships are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two ships which must, if both keep on their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of the two ships is end on, or nearly end on, to the other; in other words, in cases in which, by day, each ship sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each ship is in such a position as to see both the side-lights of the other.

It does not apply, by day, to cases in which a ship sees another ahead crossing her own course; or by night, to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

Art. 16. If two ships under steam are crossing, so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

Art. 17. If two ships, one of which is a sailing ship, and the other a steam-ship, are proceeding in such directions as to involve risk of collision, the steam-ship shall keep out of the way of the sailing ship.

Art. 18. Every steam-ship, when approaching another ship, so as to involve risk of collision, shall slacken her speed or stop and reverse, if necessary.

Art. 19. In taking any course authorised or required by these Regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.—

One short blast to mean "I am directing my course to starboard:"

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

Art. 20. Notwithstanding anything contained in any preceding Article, every ship, whether a sailing ship or a steam-ship, overtaking any other shall keep out of the way of the overtaken ship.

Art 21. In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such ship.

Art. 22. Where by the above rules one of two ships is to keep out of the way, the other shall keep her course.

Art. 23. In obeying and construing these rules due regard shall be had to all dangers of navigation; and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

No Ship, under any circumstances, to neglect proper Precautions.

Art 24. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Reservation of Rules for Harbours and Inland Navigation.

Art. 25. Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland navigation.

Special Lights for Squadrons and Convoys.

Art 26. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with

respect to additional station and signal lights for two or more ships of war or for ships sailing under convoy.

Art. 27. When a ship is in distress, and requires assistance from other ships or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, that is to say—

In the day-time—

1. A gun fired at intervals of about a minute;
2. The International Code signals of distress indicated by N. C.
3. The distant signal, consisting of square flag, having either above or below it a ball or anything resembling a ball.

At night—

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals.

ORDERS IN COUNCIL OF 30TH DECEMBER 1884 AND 24TH JUNE 1885.

ALTERNATIVE LIGHTS FOR TRAWLERS WHEN ENGAGED IN TRAWLING, HAVING THEIR TRAWLS IN THE WATER AND NOT BEING STATIONARY.

1884.—PART I.—STEAM-VESSELS OF 20 TONS GROSS REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side, such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet nor more than 12 feet.

1884.—PART II.—SAILING-VESSELS OF 20 TONS NET REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head, a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft the beam on the port side: and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than lanthorn the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet.

1885. SAILING TRAWLERS OF ANY TONNAGE.

As regards sailing vessels engaged in trawling, such vessels having their trawls in the water and not being stationary in consequence of their gear getting fast to a rock or other obstruction, if they do not carry and show the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in Part 2 of the Schedule to the said recited Order in Council of the 30th of December 1884, shall carry and show in lieu of the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in paragraph 2 of the Schedule to the said recited Order, other lights as follows, that is to say:

A white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, and visible on a dark night

with a clear atmosphere for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 3) seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by another ship or vessel in sufficient time to prevent collision.

AIDS TO MEMORY IN FOUR VERSES, BY THOMAS GRAY.

1. *Two Steam-ships meeting.*

When both side lights you see ahead—
Port your helm and show your RED.

2. *Two Steam-ships passing.*

GREEN to GREEN—or, RED to RED—
Perfect safety — Go ahead!

3. *Two Steam-ships crossing*

Note.—This is the position of greatest danger: there is nothing for it but good look-out, caution, and judgment.

If to your starboard RED appear,
It is your duty to keep clear;
To act as judgment says is proper:—
To Port—or Starboard—Back,—or, Stop her!

But when upon your Port is seen
A Steamer's Starboard Light of GREEN,
There's not so much for you to do,
For GREEN to Port keeps clear of you.

4. *All Ships must keep a good look-out, and Steam-ships must stop and go astern, if necessary.*

Both in safety and in doubt
Always keep a good look-out;
In danger, with no room to turn,
Ease her, stop her, go astern.

14*th October* 1867.

APPENDIX C.

DISTRESS AND PILOT SIGNALS.

M. S. Act 1873.

The following sections, together with the schedules referred to therein, of the "Merchant Shipping Acts, Amendment Act, 1873," relate to Signals of Distress and Signals for Pilots. (*See also* "*Regulations for preventing Collisions at Sea. Article* 27.)

Signals of distress.

18. The signals specified in the first schedule to this Act shall be deemed to be signals of distress.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals, except in the case of a vessel being in distress, shall be liable to pay compensation for any labour undertaken, risk incurred, or loss sustained in consequence of such signal having been supposed to be a signal of distress, and such compensation may, without prejudice to any other remedy, be recovered in the same manner in which salvage is recoverable.

Signals for pilots.

19. If a vessel requires the services of a pilot, the signals to be used and displayed shall be those specified in the second schedule to this A

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals for any other purpose than that of summoning a pilot, or uses or causes or permits any person under his authority to use any other signal for a pilot, shall incur a penalty not exceeding twenty pounds.

Power to alter rules as to signals.

20. Her Majesty may from time to time by Order in Council repeal or alter the rules as to signals contained in the schedules to this Act or make new rules in addition thereto, or in substitution therefor, and any alterations in or additions to such rules made in manner aforesaid shall be of the same force as the rules in the said schedules.

SCHEDULES.

SCHEDULE I.—SIGNALS OF DISTRESS.

In the day time.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress in the daytime:—

1. A gun fired at intervals of about a minute;
2. The International Code signal of distress indicated by N C;
3. The distant signal, consisting of a square flag having either above or below it a ball, or anything resembling a ball.

At night.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress at night:

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, of any colour or description, fired one at a time, at short intervals.

SCHEDULE II.—SIGNALS TO BE MADE BY SHIPS WANTING A PILOT.

In the day time.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot in the day time, viz:—

1. To be hoisted at the fore, the Jack or other national colour usually worn by merchant ships, having round it a white border, one-fifth of the breadth of the flag; or
2. The International Code pilotage signal indicated by P T.

At night.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot at night, viz.—

1. The pyrotechnic light, commonly known as a blue light, every fifteen minutes; or
2. A bright white light, flashed or shown at short or frequent intervals, just above the bulwarks, for about a minute at a time.

APPENDIX D.

EXAMINATION IN CHART.

FOR ALL GRADES WHERE THE CHART IS USED (INCLUDING "HOME TRADE" CANDIDATES).

[The candidate will be required to work out the following questions on either a "true" or "magnetic" chart, * whichever may be handed to him by the Examiner; and also determine whether the chart is a "true" or "magnetic" one, and whether it is for the northern or southern, and eastern or western hemispheres.

1. Using deviation [card] [curve] † No. find the course to steer by compass from to ; also the distance.

Answer.—Compass course .
Distance .
Variation .
Deviation .

2. With the ship's head on the above-named compass course a [point] [light-house] bore by compass and bore by the same compass, find the ship's position.

Answer.—Latitude .
Longitude .

3. With the ship's head as above, a [point] [light-house] bore by compass , and after continuing on the same course miles, it bore , find the position of ship and her distance from at the time of taking the second bearing.

Answer.—Latitude .
Longitude .
Distance .

All the foregoing questions must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature .
Date .
Chart used .

ADDITIONAL FOR MASTERS (INCLUDING "HOME TRADE" CANDIDATES).

4. Find the course to steer by compass from to (*see* Question 1) to counteract the effect of a

* The terms "true" and "magnetic" are used for the sake of brevity, and convenience, for indicating charts that have compasses delineated upon them showing the "true" or "magnetic" points of the compass respectively.

† A candidate for a Master's Certificate is expected to use either a card of deviations, or a curve of deviations on a Napier's diagram, whichever the Examiner may think proper to put before him

current which set at the rate of miles per hour, the ship making by log miles per hour; also the distance the ship would then make good in hours towards

Answer.—Compass course

Distance

5. On being off took a cast of the lead; required the correction to be applied to the depth obtained by the lead line before comparing it with the depth marked on the chart.

6. What do you understand the small numbers to indicate that you see placed about the chart, and at what time of tide?

7. What do the Roman numerals indicate that are occasionally seen near the coasts and in harbours?

8. How would you find, approximately, the time of high water at any place, the Admiralty tables not being at hand nor any other special tables available?

All the foregoing questions, and those on Form Exn. 9 C., must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature

Date

APPENDIX E.

DEVIATION OF THE COMPASS.

(For Masters of Home Trade Ships.)

[The Applicant must answer in writing, on paper given him by the Examiner, all the following questions, numbering his answers to correspond with the numbers of the questions.]

1. When taking a Meridian Altitude, how do you know when the sun is on the Meridian; or, in other words, when it is noon?
2. How does the sun bear when on the meredian of an observer in these latitudes (Home Trade Limits)?
3. What do you mean by deviation of the compass, and how is it caused?
4. Having determined the deviation, how do you know when it is easterly, and when westerly?
5. Supposing the sun when on the meridian bore by your compass ——— what would be the deviation of that Compass for the direction of the ship's head at the time, the variation given on the Chart being ———?
6. How could you find the deviation of your Compass when in port, or when sailing along a cost?
7. Name some suitable objects by which you could readily obtain the deviation of your Compass, when sailing along the coasts of the Channel you have been accustomed to use?
8. The bearing of two objects when in a line with each other was found on the Chart to be ——— magnetic; but when brought in a line on board they bore ———by your Compass; required the deviation of your Compass for the direction of the ship's head at the time?
9. What means are there for checking the deviation of your Compass by night?
10. Supposing the North Star (*Polaris*) bore ——— by your Compass, what would be the deviation (approximately) of that Compass for the direction the ship's head at the time, supposing the variation given on the Chart to be ———?
11. Do you expect the deviation to change? if so, state under what circumstances?
12. What is meant by variation of the Compass, and what is the cause of it?

APPENDIX F.

INSTRUCTIONS TO EXAMINERS.

Examination in Colours.

Herewith are—

(*a*) A lanthorn having in it a lamp in which kerosine is to be burnt.

(*b*) A slide having ground glass in it.

(*c*) Nine slides, each having a coloured glass in it. The colours are as follow :—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1).
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

(*d*) Cards, five of each as follow :—

1. White
2. Black.
3. Red.
4. Pink.*
5. Green.
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight the examiner should do it in three ways—

1. The cards should be mixed up. The examiner should then hold up each card separately, and ask the candidate to name the colour, and if the candidate does so without hesitation, he is to be regarded as having passed the day-light test.
2. If the candidate hesitates in any of his answers so as to raise a doubt in the mind of the examiner as to his ability to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

Examination by Artificial light.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn; and, at least, 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour, and if so, what colour ?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star* is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c. ; or to name card No. 7 as red, green, or yellow ; or glass No. 2 as green blue, or yellow ; or glass No. 5 as red, pink, salmon, &c. ; or glass No. 7 as bright red or bright green ; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B.

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black, by daylight; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown), he may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Local Certificate of Competency

AS

MASTER.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of Master in the* _____ *service, I do hereby, in pursuance of Act No. I of* 1859 *of the Legislative Council of India, grant you this CERTIFICATE OF COMPETENCY.*

Given *under my* Hand and Seal,

this _____ *day of* _____ 18____.

By order of the Government of Bengal,

Under-Secy. to the Govt. of Bengal.

No. o ertifi

*Bearer*_____

*Date and Place of Birth*_____

*No. of Register Ticket*_____

*Signature*_____

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liab to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwi to the Port Officer, Calcutta.

*Issued at Calcutta on the*_____*day of*_____18 __.

Registered.

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Local Certificate of Competency

AS

MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of* _____ *Mate in the* _____ *service, I do hereby, in pursuance of Act No. I of* 1859 *of the Legislative Council of India, grant you this CERTIFICATE OF COMPETENCY.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

this _____ *day of* _____ 18——. *Under-Secy. to the Govt. of Bengal.*

No. of Certificate

Bearer _____

Date and Place of Birth _____

No. of Register Ticket _____

Signature _____

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at Calcutta on the _____ *day of* _____ 18___.

Registered,

Port Officer of Calcutta.

NOTICE.

Candidates applying to be examined for Certificates of Competency are hereby informed that no remuneration or gratuity whatever, either directly or indirectly, can be received by any Officer, Messenger, or Servant of the Government, except the lawful fees stated in the Regulations, which are to be paid to the Port Officer when the Candidate makes his application.

Any Officer, Messenger, or Servant of the Government accepting any present or gratuity is liable to summary dismissal, and any Candidate so offering money will be subject to the penalty mentioned in para. 16 of the Regulations relating to the examination of Masters, or para. 35 of those relating to the examination of Engineers and Engine-drivers as the case may be.

Every case in which an applicant has paid, or pays hereafter, any fee or gratuity to any Officer, Messenger, or Servant, on any pretence whatever, other than the prescribed fees for examination, should be reported to the Local Government.

W. B. BESTIC,

Under-Secy. to the Govt. of Bengal.

P. W. (Marine) Dept.

REGULATIONS

RELATING TO THE

EXAMINATION OF MASTERS OF INLAND STEAM-VESSELS.

Preliminary.

UNDER the provisions of the Inland Steam-Vessels Act, 1884, no inland steam-vessel having engines of eighty nominal horse-power or upwards is allowed to proceed on any voyage unless her master possesses a first class master's certificate granted under the Act, or a master's certificate granted under Act I of 1859 (*for the amendment of the law relating to merchant seamen*), or the Merchant Shipping Acts, 1854 to 1883, or a certificate to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869; and no such ship having engines of under eighty nominal horse-power is allowed to proceed on any voyage unless her master possesses a second class master's certificate granted under the Act, or a certificate of the higher grade of the nature referred to above:

Provided that a steam-vessel having engines of under eighty nominal horse-power shall be deemed to have complied with the law if she has as her master and engineer a person possessing both a second class master's certificate and an engine-driver's certificate granted under the Act

Any person who having been engaged to serve as master of an inland steam-vessel proceeds on any voyage in that steam-vessel as master without being at the time entitled to and possessed of the certificate required under the Act, and any person who employs any person as such master without ascertaining that he is at the time entitled to, and possessed of, the certificate required under the Act, is liable to be punished with fine which may extend to *five hundred rupees.*

NOTIFICATION.

No. 27 Marine, dated Calcutta, the 31st January 1890.

UNDER the powers conferred upon him by section 29 of the Inland Steam-Vessels Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to masters of inland steam-vessels.

W. B BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose arrangements have been made for holding examinations periodically at the port of Calcutta.

Examinations continued till all the candidates are examined.

2. The examinations will be held by the Port Officer and one or more other examiners to be appointed by the Government from time to time They will commence early in the forenoon, and will be continued from day to day until all the Candidates whose names appear upon the Port Officer's list on the day of examination are examined.

3. Candidates for examination must make their application upon the appropriate form (Exn. 2*b*), which must be filled up at the Port Office. The Exn 2*b* properly filled in, together with the candidates' testimonials and discharges, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials of character, conduct, and ability required

4 Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges may have to be verified before the candidate can be examined, it is desirable that they should be handed in, together with the Forms Exn 2*b*, as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners and of British seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificates as to Age.

6. Should any doubt exist as to the age of a candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel. In the case of natives of India, who may not be able to speak English, their certificate shall be endorsed to the effect that they are valid only for vessels manned and officered entirely by Asiatics.

Colour Tests.

8. The Government have made the following arrangements for the examination of persons as to their ability to distinguish colours :—*

9. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

10. Any person, including the holders of Certificates of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in Colours only*, must make application to the Port Officer on Form Exn. 2*a*, and pay a fee of one rupee.

11. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a certificate to that effect.

12. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

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* *See* Apendix A.

13. The application of a *Candidate who is presenting himself for Examination for a Master's Certificate* must be made on Form Exn. 2*b*. Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any one of the colours used in the test, he will not be allowed to proceed with the examination

14. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will in such event be returned to him.

15. A candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If the fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

16. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form Exn. 2[a].

17. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination for the Certificate of the higher grade.

18. Should he pass this examination, the following statement will be written on the face of the higher Certificate which may be granted to him, viz.—"This Officer has failed to pass the Examination in Colours."

19. Should be ultimately fail to pass the Examination, a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

20. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency as First Class Masters.

21. *Examination in Colours.*—All candidates for certificates of competency must first be examined in colours.*

22. A candidate for a certificate as first class master of inland steam-vessels must be not less than twenty-four years of age, and must have served as a second class master in charge of a steam-vessel for not less than three years, or he must be not less than twenty-two years of age, hold a certificate of competency as second mate granted under Act I of 1859 (for the amendment of the law relating to Merchant Seamen) or the Merchant Shipping Acts 1854 to 1883, or a certificate to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869, and have served as Mate of an inland steam vessel or master of a river flat for not less than one year.

23. Each candidate will be examined apart, and *viva voce*, in each and all of the following subjects:—

(1)—The rules of the road.
(2)—The management of river steamers under all contingencies.
(3)—The tide table.
(4)—Storm signals.
(5)—The provisions of Act VI of 1884, and the rules framed under sections 21, 29, 50 and 51 of the Act.

Qualifications for Certificates of Competency as Second Class Masters.

Examination in Colours.—All candidates for certificates of Competency must first be examined in colours.*

24. A candidate for a certificate as second class Master of an inland steam-vessel must not be less than twenty-one years of age and must produce satisfactory certificates of

* See Appendix A.

sobriety and intelligence, and that he has served three years as Mate of a small steam-vessel or as chief helmsman of a steam-vessel of over 80 horse power, and shall be examined *viva voce* as to his knowledge in the following subjects: –

(1)—The rules of the road.
(2)—The management of small river steamers.
(3)—Storm signals.

Failure.

Re-examination in case of failure.

25. If a candidate fails, he will not be re-examined *until after a lapse* of three months from the date of such failure.

Certificate of lower grade.

26. If a candidate has failed in his examination, but the subjects in which he has failed are not included in the subjects required for a certificate of a lower grade, he may, if he desires it, receive a certificate of such lower grade.

27. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled so to do, for re-examination for the higher grade of certificate he will be required to pay again the full fee.

Fees.

28. Candidates for examination, in making their application on Form Exn. 2*b*, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials as the case may be, they will be allowed to again present themselves for examination for a certificate of the same grade without paying any further fee.

Fees to be paid by applicants for examination.

29. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected and not allowed to be again examined for twelve months.

30. If a candidate fails in his examination, *no part of the fee will be returned to him.*

31. If the candidate satisfy the examiners as to his knowledge of the prescribed subjects, and generally as to his competency to command an inland river steamer, they shall certify the same to the Government, which will then grant a certificate to the candidate

Form Exn 16. Completion of examination.

32. The fees are as follows:—

	Rs.
First Class Master	16
Second Class Master	6
Renewal of a certificate	5

General.

33. Certificates of competency of first and second class masters shall be made and issued in the forms hereunto annexed.

34. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

INSTRUCTIONS TO EXAMINERS.

Examination in Colours.

Herewith are—

(*a*.) A lanthorn having in it a lamp in which kerosine is to be burnt.
(*b*.) A side having ground glass in it.

(*c.*) Nine slides, each having a coloured glass in it. The colours are as follows:—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1).
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

(*d.*) Cards, five of each as follow:—

1. White.
2. Black.
3. Red.
4. Pink.*
5. Green
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight the examiner should do it in three ways:—

1. The cards should be mixed up. The examiner should then hold up each card separately and ask the candidate to name the colour, and if the candidate does so without hesitation he is to be regarded as having passed the daylight test.
2. If the candidate hesitates in any of his answers so as to raise a doubt in the mind of the examiner as to his ability to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn; and, at least, 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour, and if so what colour?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star* is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c.; or to name card No. 7 as red, green, or yellow; or glass No. 2 as green, blue, or yellow; or glass No. 5 as red, pink, salmon, &c.; or glass No. 7 as bright red or bright green; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black by daylight; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown) the may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

FIRST CLASS MASTER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To

Mr. _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found, after examination, duly qualified to fulfil the duties of First-class Master of an Inland Steam-Vessel under Act VI of* 1884, *I do hereby grant you this CERTIFICATE OF COMPETENCY as such First-class Master.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ *day of* _____ 18____.

(117)

No. of Certificate

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

Any master who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

*Issued at Calcutta on the*_____*day of*_____18____.

Registered,

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

SECOND CLASS MASTER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To

Mr. _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found, after examination, duly qualified to fulfil the duties of Second-class Master of an Inland Steam-Vessel under Act VI of* 1884, *I do hereby grant you this CERTIFICATE OF COMPETENCY as such Second-class Master.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ *day of* _____ 18__.

No. of Certificate

Bearer _____ *son of* _____ *by caste* _____

Date and Place of Birth, showing Village, Thana and District* _____

Residence, showing Village, Thana and District _____

Height _____

Personal description, stating particularly any permanent marks or scars _____

No. of Register Ticket _____

Signature _____

Any master who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

Issued at Calcutta on the _____ *day of* _____ 18____.

Registered,

Port Officer of Calcutta.

* If not known exactly must be stated on the best information or evidence.

REGULATIONS

RELATING TO THE

EXAMINATION OF ENGINEERS AND ENGINE-DRIVERS OF INLAND STEAM-VESSELS.

Preliminary.

UNDER the provisions of the Inland Steam-Vessels Act, an inland steam-vessel having engines of eighty nominal horse power or upwards cannot proceed on any voyage unless her engineer possesses an engineer's certificate granted under the Act or the Indian Steam Ships Act, 1884, or the Merchant Shipping Acts, 1854 to 1883, or to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869; and no such ship having engines of under eighty nominal horse-power can proceed on any voyage unless she has as her engineer a person possessing an engine-driver's certificate granted under the Act or the Indian Steam-Ships Act, 1884, or a certificate of the higher grade of the nature referred to above: Provided that a steam-vessel having engines of under eighty nominal horse power shall be deemed to have complied with the law if she has as her master and engineer a person possessing both a second class master's certificate and an engine-driver's certificate granted under the Act.

Any person who has been engaged to serve as Engineer or engine-driver of an inland steam-vessel proceeds on any voyage in that steam-vessel as engineer or engine-driver, as the case may be, without being at the time entitled to, and possessed of, the certificate required under the Act, and any person who employs any person as engineer or engine-driver without ascertaining that he is at the time entitled to, and possessed of, the certificate required under the Act, is liable to be punished with fine which may extend to *five hundred rupees*.

NOTIFICATION.

No. 28 Marine, dated Calcutta, the 31st of January 1890.

UNDER the powers conferred upon him by section 29 of the Inland Steam-Vessels Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to engineers and engine-drivers of inland steam-vessels.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates of competency granted to persons who pass requisite examinations.

1. Certificates of competency will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed and arrangements have been made for holding the examinations periodically at the port of Calcutta.

Examinations continued till all the candidates are examined.

2. The examinations will commence early in the forenoon and will be continued from day to day until all the candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Application how to be made.

3. Candidates for examination must make their application upon Form Exn. 3, which must be filled up at the Port Office. The Exn. 3 properly filled in, together with the candidate's testimonials, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct for at least the 12 months immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. If the service has been on shore, the testimonial must be signed by an employer; if at sea, by either the master, managing owner, chief or superintending engineer.

5. As such testimonials and discharges may have to be verified before the candidates can be examined, it is

desirable that they should be handed in, together with the Form Exn. 3, as early as possible.

Testimonials of Foreigners

6. The testimonials of servitude of Foreigners and of British Seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificate as to age.

7. Should any doubt exist as to the age of a candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

8. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel.

Verification of services, &c., by Articles.

9. Services which cannot be verified by proper entries in the articles of the ships in which the candidates have served cannot be counted.

Qualifications for Certificates of Competency as Engineers.

Qualification of candidate for Inland Engineer's Certificate.

10. A candidate must be not less than twenty-two years of age:—

(*a*) He must have served an apprenticeship to an engineer, of three years in England or five years in India, and must prove that during the period of his apprenticeship he has been employed on the making and repairing of engines. Or, if he has not served an apprenticeship, he must prove that for not less than three years in England or five years in India he has been employed as a journeyman or master-hand in some factory or workshop on the making or repairing of engines. In either case he must also have served two years thereafter in the engine room of a steamer of over 80 horse power, or as a certificated engine-driver in a steamer of less than 80 horse power.

Or failing the above service he must have served as a certificated engine-driver in charge of a steamer for not less than four years.

(*b*) He must be able to give a description of boilers, and the methods of staying them, together with the use and management of the different valves, cocks, pipes, and connections.

(*c*) He must understand how to correct defects from accident, decay, or other causes and the means of repairing such defects.

(*d*) He must understand the use of the barometer, thermometer, and salinometer, and the principles on which they are constructed.

(*e*) He must state the causes, effects, and usual remedies for incrustation and corrosion.

(*f*) He must be able to state how a temporary or permanent repair could be effected in case of derangement of a part of the machinery, or total breakdown.

(*g*) He must write a legible hand, and understand the first five rules of arithmetic, and decimals, and their application to questions about consumption of stores, and full capacities of tanks and bunkers, the duty of pumps, and the direct strains in engines and boilers.

(*h*) He must be able to pass a creditable examination as to the various constructions of paddle and screw engines in general use; as to the details of the different working parts, external and internal, and the use of each part.

Qualifications for Certificates of Competency as Engine-drivers.

11. Candidates for examination must make their application upon the appropriate Form (Exn. 3*b*), which must be filled up at the Port Office.

12. A candidate for a certificate of competency as engine-driver must have attained the age of twenty-two years.

He must have served an apprenticeship of at least four years if in India or three years in the United Kingdom, and have served as assistant engineer for one year on a steamer of not less than 80 horse power.

Or he must have been three years principal serang or tindal in the engine-room of a steamer, or have been for three years in charge of the engine of a factory or mill under a European manager or engineer, as well as one year principal serang or tindal or assistant engineer in the engine-room of a steamer under a certificated engineer.

13. He must have the testimonial shown in Appendix B filled up by the engineer with whom he has last served, or his other testimonials must contain all the particulars therein required.

14. He must pass a *viva voce* examination before the Board of Examiners as to the working of an engine and the use of its different parts.

15. He must be able, if required, to show his practical qualifications by one week's trial in a steamer after fulfilling the other tests to which he will be subjected.

General Rules as to Examinations.

16. All books necessary for the use of candidates under examination will be provided by the Government, and applicants will not be permitted to take into the examination room any book, paper, document, or memoranda of any description whatever; and, subject to the provisions referred to hereafter, they will also not be allowed to work out their problems on a slate or on waste paper. Candidates not to take books, &c., into examination room.

17. Candidates will be allowed in the time allotted to cancel any part of their work, and when required additional papers will be supplied by the Examiners. These additional sheets must be attached to, and form part of, the examination papers.

18. In the event of any candidate being discovered copying from another, or affording any assistance or giving any information to another, or communicating in any way with another during the time of examination, he will be regarded as having failed in his examination, and will be turned back for three months, in the same manner as if he had failed in the practical part of the examination; and no part of the fees he may have paid for examination will be returned to him. Punishment for breaking rules.

19. If a candidate leaves the room before answering any question which has been given to him, he cannot afterwards be permitted to answer it, but the examiners may substitute other data or another question. Leaving examination room.

20. All applicants presenting themselves for examination for certificates of competency as engineers will be required to give written answers to eight out of a list of ten questions selected from Form Exn. 15*a*,* "Elementary Questions for the first examinations of Engineers for certificates of competency" These questions are intended to furnish a record to some extent of the candidate's knowledge at the time of his examination, and also to induce the candidates to pay more attention to their handwriting and spelling. Questions from Form Exn. 15*a*.

21. The Form Exn. 15*b*., on which these answers will be written, contains also some questions as to the experience of the applicant, to be answered by him in writing.

22. Examiners may add to their *viva voce* questions on the practical management of steam engines and boilers any of those contained in Exn. 15*a*.

* *See* Appendix A.

23. If at the expiration of the time allowed the candidate has worked out correctly the whole of the questions set to him, and given satisfactory answers in the *viva voce* examination, he will be declared to have passed.

24. If at the expiration of the time allowed he has not worked out the whole of the questions set to him, but if the result of the *viva voce* examination taken in connection with the answers to such of the questions as he has worked out is sufficient to satisfy the Examiner that the applicant is competent to take charge of engines, he will be declared to have passed.

25. In other cases he will be declared to have failed.

(Exn. 15) 26. A report of the examination, and the examination papers, will be forwarded to the Government on the Form (Exn. 15).

Notification of having passed will be given to successful candidates. (Exn 16) 27. If the candidate passes, he will receive the Form Exn. 16, upon which the Government will issue the certificate to the candidate, whose testimonials, &c., will be returned at the same time. It is therefore important that the port of destination of the certificate should be the same on both the Form Exn. 16 and the Form Exn. 2. If circumstances should make any alteration necessary, the examiners should see that it is made in both forms, otherwise delay in the issue of the certificate may be caused.

Fees.

Fees to be paid by applicants for examination. 28. Candidates for examination, in making their application on Form Exn. 3 or Exn. 3*b*, will be required to pay the examination fees before any step is taken, whether by inquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them, but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be.

29. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

30. If a candidate fails in his examinations, *no part of the fee he has paid will be returned to him.*

31. The fees are as follow :—

	Rs.
Engineers	12
Engine drivers	10
Renewal of a certificate	5

Failure.

32. If the applicant fails in the *viva voce* or practical part of the examination, he may not present himself for re-examination until he can produce proofs of THREE MONTHS' further service afloat. If he fails in arithmetic or drawing only, he may come up again at any time. Engine-drivers may be examined *de novo* after six months, if the past examination showed that they might reasonably be expected to qualify.

General.

33. Certificates of competency of engineers and engine-driver shall be made out and issued in the forms hereunto annexed.

34. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

Form Exn. 15a.

ELEMENTARY QUESTIONS FOR THE FIRST EXAMINATIONS OF ENGINEERS FOR CERTIFICATES OF COMPETENCY.

To Engineer Examiners.

Examiners will require all candidates to fill up a form, Exn. 15*b*., of which a copy is enclosed, and they will forward the same to the Government along with the report of the examination.

The arithmetical questions for Engineers and the *vivâ voce* examinations for all candidates will be continued as heretofore, and failure in the elementary questions will be treated as failure in arithmetic.

The numbers of the questions for each examination will be selected by the examiners, and they are not to be communicated to the candidate until his examination commences.

Exn. 15b.

Port — Class for which examined

Date — Candidate's name

A. Where and how long did you serve in works at the making or at the repairing of Engines, and in what capacities?

B. How long have you served as fireman or trimmer?

C. How long have you served in the Engine-room at sea, and in what capacities?

D. With what descriptions of Engines have you served at sea—Paddle or Screw or both, Jet Condensing, Surface Condensing, or Non-condensing Engines, Compounds, Trunks, Inverted Cylinders, or Horizontal Engines? What size were the Engines?

E. With what descriptions of Boilers have you served at sea—Rectangular or Cylindrical, Wet-bottomed or Dry-bottomed, Multitubular, Sectional or Flue Boilers?

F. What Engine defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

G. What Boiler defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

For the questions to be answered on the following pages, *See* the book of Elementary Questions. The questions need not be written: only the answers to them.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

ELEMENTARY QUESTIONS.

1.

What parts of an engine are generally made of wrought-iron?

2.

What parts of an engine are generally made of cast-iron?

3.

For what parts of an engine is steel sometimes used?

4.

What parts of an engine are generally made of brass or gun-metal?

5.

Where is "white metal" sometimes used? On account of what property possessed by it is it adopted? What objection is there to its more general use?

6.

For what parts is Muntz metal sometimes used? Is it malleable? For what properties is it valued?

7.

What difference is there in the composition of cast-iron, of wrought-iron, and of steel?

8.

How can cast-iron, wrought-iron, and steel be distinguished from each other?

9.

What are the different properties of cast-iron, of wrought-iron, and of steel.

10.

What is meant by the terms "breaking stress," "proof stress," "safe-working stress"?

11.

What is the cohesive strength or breaking stress of good ordinary wrought-iron?

12.

Tempering steel: how is it done, and in what order do the colours come?

13.

What is case-hardening?

14.

Which of the common metals or alloys can be forged, and which of them are brittle or "short"?

15.

What is meant by "welding"? Which of the common metals can be welded?

16.

The expansion of metals by heat: give examples of this in the engine and in the boiler.

17.

In the construction of cylindrical marine boilers, for what parts have the plates to be worked hot? When the material is steel, what precautionary treatment of these plates is afterwards necessary?

18.

What is double riveting? In what parts of cylindrical marine boilers is double riveting employed? In which of the shell seams is it most necessary?

19.

What is "caulking," and how are seams prepared for caulking?

20.

Describe the different ways of fastening the ends of the main stays of a boiler. What are the merits of, or objections to, the different plans?

21.

What strain per square inch is allowed on boiler stays?

22.

Describe a riveted stay, and state where such stays are commonly used.

23.

Where are thin plates to be looked for in a boiler as it wears, and how is the thinness to be detected?

24.

How are boiler tubes fixed? What are "stay tubes," and how are they secured?

25.

Where is it generally that boiler tubes leak? How is this defect repaired? What are the causes of this leaking?

26.

What are the causes of cracked tube plates? Where are the cracks situated? How are they repaired?

27.

What is the difference between a "dry uptake" and a "wet uptake"? Which requires most repair? Why? Where have you seen a wet uptake?

28.

What is a superheater? What is its construction? What valves are on it? There is sometimes a gauge glass on it; what is that for?

29.

What parts of a marine tubular boiler are first injured by shortness of water?

30.

Where are angle irons sometimes used in the construction of a boiler, and where are flanged plates used?

31.

Priming: to what causes is it attributed? What means are applied to prevent it? What evils may be produced by it?

32.

Funnel draught: what makes it? What checks it?

33.

Flame is sometimes seen at the top of the funnel: what causes this appearance? Is it beneficial or is it detrimental? Why so?

34.

A blast pipe: what is its construction? Where is it placed For what is it used?

35.

How many bottom blow-off cocks are generally fitted to each boiler, and why are they so fitted?

36.

Blow-off cocks are sometimes fitted with a spanner guard: for what purpose is this? Describe how the guard is formed?

37.

Test cocks or water-gauge cocks: where are they placed? At what heights? Must the cocks themselves be at those heights? What provision is made for cleaning these cocks? Should they ever become choked? When there are no test cocks, how is the height of the water ascertained?

38.

What is a dead-weight safety valve? Of what are the rubbing surfaces formed? How is a lock-up valve arranged to admit of lifting it or of turning it round, and to prevent adding to the weight?

39.

About what area of safety valve is now required by the Board of Trade? What area was formerly required, and on what ground has that been altered? What is the effect of suddenly opening a safety valve when steam is up? To about what extent do safety valves rise when blowing off without being eased by hand?

40.

Spring-loaded safety valves: what advantages have they that are not possessed by dead-weight valves? What are the disadvantages as compared with dead-weight valves?

41.

Of what pieces does a glass water gauge mounting consist? How does it act? Where is it placed? At what height? Is it liable to derangement? How is its working tested?

42.

Glass water gauges have sometimes pipe connections top and bottom: what is the object of this arrangement? Should there be cocks at the extremities of these pipes?

43.

Describe a Bourdon's steam gauge. Some gauges have an inverted syphon pipe below them: what is its use?

44.

Why is a small cock sometimes put on the pipe leading to a steam gauge? Where should it be placed, and what error might be made by omitting to use it?

45.

Do steam gauges indicate the total pressure of the steam, or only a portion of that pressure? What is the pressure measured from?

46.

What is meant by the salting of the boiler? How is this prevented? What is the density of ordinary sea water? How is the density ascertained? What is the difference between the formation of scale and the salting of the boiler? What is the maximum density at which boilers should be worked at sea?

47.

Scum cocks and pipes: how are they arranged? Where are they placed? At what height in the boiler? When are they used? When must they be shut? Neglect of these cocks lead to what dangers?

48.

Scale: of what does it consist? Where is it most objectionable? How is it removed? How is its formation prevented? What evil effects are produced by it?

49.

What is a salinometer? Of what does it consist? How does it act? How is it graduated? Can it be used at any temperature indiscriminately?

50.

What harm may be done through the check valve of one of a set of boilers being defective while under way? How would you work to avoid this harm?

51.

How is the leak from a split tube stopped in a boiler at sea? Describe the operation.

52.

What is the use of dampers? Where are they fitted? When should they be used?

53.

When there are no dampers fitted, what is used instead? What evil to the boiler is sometimes attributed to this? When the heating surfaces are clean does this occur?

54.

Describe the piston of a steam cylinder, with its different rings and their uses. There are generally round pieces let in flush on one side of a piston: what are they? How are these pieces fixed?

55.

Cylinder drain cocks: what is their use? There is sometimes a valve upon each cock: what purpose does it serve?

56.

Cylinder escape valves: of what do they consist? How protected? How regulated? When are they most needed? To what danger do they expose the Engineer? What precaution is sometimes used to obviate this danger?

57.

What is a compound engine? What different kinds are there for screw steamers, in respect to the number and arrangement of their cranks and cylinders? What is a triple expansion engine?

58.

What is link motion? What are some of its advantages? In modern engines for the screw propeller when there is no link motion, what takes its place?

59.

What is a separate expansion valve? Why is it not fitted to all engines? What effect has an expansion valve upon the starting and upon the reversing of the engine?

60.

What arrangement is applied to reduce the friction of a slide valve? To what is the friction due?

61.

Describe a loose eccentric; how does it act? In what engines is the loose eccentric still employed?

62.

What is the travel of the eccentric rod? How is it measured on the eccentric? What is the travel of the slide valve when the link motion is in mid gear and the engine still moving?

63.

What are "double beat valves"? Why are they not generally used for safety valves? Are they ever used instead of the slide valve? What objections are there to their use?

64.

What is a circulating pump? Is it always worked by the main engine? Give an example from your last steamer of the three water temperatures generally noted by careful engineers.

65.

An air valve is sometimes fitted to a circulating reciprocating pump: what purpose does it serve?

66.

What is the difference between a bucket air-pump, a piston air-pump, and a plunger air-pump?

67.

Whether are double-acting air-pumps made with plungers, with pistons, or with buckets?

68.

What is an air-pump trunk? When is it necessary? How is it attached to the bucket?

69.

What class of air-pump requires both foot and delivery valves, and in what other class can either of these valves be in some cases dispensed with?

70.

When under way, when the air-pump bucket is at the top of its stroke, at what height is the water in the condenser?

71.

With a surface condenser and a single acting air-pump, what is the effect of a leaky foot valve, and what is the effect of a leaky bucket when there is also a foot valve?

72.

Air-pump pet cock or valve: where is it placed? How does it act? What is its object? Does it in every case reduce the effective capacity of the pump? Is it equally applicable to double acting pumps?

73.

At what temperature is the hot well worked? What is the effect of higher temperatures? What is the effect of lower temperatures? What limits the lowness of temperature? Has a very low temperature any disadvantages?

74.

Bilge injection with common condensers: what are the fittings required? When is it used? What precautions are necessary in using it?

75.

When surface condensers are used, what takes the place of the bilge injection? To what is the connection made? How is its valve formed? Why is this necessary?

76.

What are the practical guides to the proper amount of opening of the inlet valve for the circulating pump?

77.

Feed-pump pet cock or valve: where is it placed? What is its use? How does it act? Is it always a necessary fitting?

78.

What are some of the ways of fastening the ends of surface-condenser tubes? About what size and about what thickness are condenser tubes? What parts of a surface condenser are made of brass?

79.

What is a blow-through valve or cock? To what is it attached? There is sometimes a valve that when opened admits steam from the slide valve casing to the exhaust port: what is its use? To which cylinder is it fitted?

80.

What is a snifting valve? What is its use? Where is it placed? Can it be placed too high? Can it be placed too low? At what height should it be placed? Was there one in your last steamer; if so, where was it? Why are snifting valves generally omitted now?

81.

What connections are generally fitted to the donkey-pump, and to what services can it be applied?

82.

When the engines are stopped with steam up, what are to be shut and what are to be opened?

83.

How is an engine heated up before starting? What precautionary examinations are made before starting?

84.

What is an interceptor or catch-water? Where is it fixed; what is its construction; how does it act; and what attention does it require?

85.

Describe an air-pump bucket, with its valve or valves and its packing. Of what are the valves generally made?

86.

Of what materials are air-pump rods made? Why so?

87.

What is the racing of the engine? When does it occur? What danger attaches to it? What is done to prevent it?

88.

What are marine governors? What is their general construction? How do they act?

89.

What is meant by the "pitch" of a screw propeller? How is it measured?

90.

Explain the difference between a "right hand" and a "left hand" propeller, and state how each of them revolves.

91.

What is the slip of a screw propeller? How is its amount expressed in figures?

92.

Which of the valves about engines and boilers have to be worked by hand, which of them work self-actingly, and which are worked by the motion of the engine?

93.

Why is soda sometimes put into a boiler, and how is it put in which under way? What is the kind of soda used?

94.

Tallow cups for cylinders were sometimes made with two small cocks, or with only one small cock, or with one large hollow plug cock, or with one small cock and a valve; which of these is suitable for a high-pressure cylinder, and which for the cylinder of a condensing engine? Describe how the cup with only one small cock is used. What is now generally used instead of these? How has this change come about?

95.

Does a cylinder escape valve, self-acting, allow all the water to escape; if not, how much is left in the cylinder?

96.

What is a "Steam Lubricator" (sometimes called an Impermeator)? Explain its action; to what part of the engine is it connected; whether will throwing cold water over it make it work faster or slower? Describe the one used in your last steamer?

97.

A common paddle wheel: of what is the centre made? Of what are the arms formed? What is the form of the bolts which attach the floats to the arms? How are the arms attached to the centres?

98.

Why have some paddle wheels one or more cast-iron floats in each wheel? With what engines are these most required? At what part of the circumference are they placed?

99.

Why are paddle wheel floats sometimes made of different breadths in the same wheel? With what description of engine is this most needed? Where are the broad floats placed, and where are the narrow floats placed in the circumference of the wheel?

100.

What difference is there between a radial paddle wheel and one with feathering floats? What is the object of feathering floats? Are all the eccentric rods attached in the same way, and are they all of the same form?

101.

Whereabout is the centre of the eccentric of a paddle wheel with feathering floats placed? In that case are the feathering levers on the striking face or on the back of the float? When the paddle shaft has an outer bearing, how is the eccentric made?

102.

Of what materials are the working surfaces of a paddle wheel with feathering floats? Are they all lubricated? With what?

103.

What is a "Disconnecting Paddle Engine"? At what place is the disconnecting effected? How is it accomplished? In which of the cranks of a disconnecting engine are the crank pins fixed?

104.

Whether is link motion valve gear or the loose eccentric generally used for disconnecting paddle engines? For what steamers are disconnecting paddle engines frequently employed?

105.

What are expansion joints? Where are they necessary? What attention do they require? Of what should the working surfaces be made?

106.

What omission in the construction of expansion joints may lead to a serious accident when steam is first applied? How is this prevented in the construction of a steam trunion pipe for an oscillating engine?

107.

Describe an oil cup with a syphon worsted. How is the worsted arranged? How is it cleaned? How far down the tube does it extend?

108.

Describe a thrust bearing; which of the surfaces wears? Why are there sometimes a number of oil tubes for one thrust bearing?

109.

What parts of a screw shaft are generally covered with brass? Why is this necessary? About what thickness is the brass?

110.

What is the stern tube or screw shaft pipe? Why is a pipe of such a length required? Of what is it made? How is it fixed at each end?

111.

What is a lignum vitæ bearing? How is the wood fitted? Where is such a bearing generally used?

112.

How is a screw propeller fixed on the shaft? What means are used to prevent its getting loose at sea?

113.

Where are sluice valves placed? What large sluice valve is there in almost all screw steamers? From what position should this valve be worked? Why so? What attention should it receive?

114.

With a condensing engine; what valves or cocks are on the skin of the ship in the engine-room and in the stokehole?

115.

What are the necessary fittings of a marine boiler?

116.

With a surface condensing engine what cocks or valves are open some time before the engine is started so as to be ready for starting whenever the order is given?

117.

What is a steam jacket? What cocks are on it? In what engines are jackets most generally used? Do they require to be felted?

118.

What parts of an engine or its fittings should be felted or otherwise protected from radiation?

119.

What are the small cylinders sometimes fitted on the slide valve casing cover of vertical engines? Explain their action. To what are they connected by a pipe? Why so?

120.

Name the principal pipes in connection with the engines and boilers of a steamer, and state to what the ends of these pipes are connected.

121.

Through what cocks or valves, pipes and chambers does the water pass on its way from the sea inlet rose plate to the water space of the boiler, with a jet condenser?

122.

Through what cocks or valves, pipes and chambers does the circulating water of a surface condenser pass?

123.

Through what cocks or valves, pipes and chambers does the steam pass from the boiler until it is in the form of water in the hot well?

124.

Name the pieces of the engine through which the pressure of the steam is transmitted from the piston to the screw propeller. Name them in the order in which they act.

125.

What is an air vessel? How does it act? At what parts of an engine or of its fittings are air vessels generally applied?

126.

What is the construction of a mud box? Where should mud boxes be placed? Why are they necessary? How should the space be divided by the rose plate, and why?

127.

What is a trunk engine? When used in a horizontal engine for a right-hand screw propeller at which side of the vessel should the cylinders be placed? Why so?

128.

What is an oscillating engine? For what steamers are oscillating engines generally adopted? Why? How is the steam conveyed to and from the slide valve casing?

129.

Of what parts does the valve motion gear of an oscillating engine consist?

130.

For what have geared engines sometimes been used? Of what were the cogs of the large wheel made?

131.

At what part of a screw steamer is the pressure that propels it applied to the hull?

132.

At what part of a paddle steamer is the pressure that propels it applied to the hull?

133.

About how much fuel per indicated horse power per hour is required by modern steam engines, common, compound and triple expansion?

134.

What is the explanation of the economy of the surface condenser?

135.

What is the construction of a surface condenser? Of what are its tubes made? How are they fixed? How are they kept tight? What is done with a split tube?

136.

Where do surface condensers foul? How are they cleaned?

137.

What non-conducting substances are employed to prevent radiation, and how are they applied?

138.

In the construction of smoke-box doors and of dry uptakes, what provision is made to lessen the amount of radiation?

139.

How can the formation of black smoke be prevented? Describe smoke preventing apparatus.

140.

What is meant by "circulation" in a boiler, and what are the results of defective circulation?

141.

What means are sometimes adopted to improve the circulation in a boiler?

142.

By what arrangement is the circulation promoted in a "hay-stack" boiler?

143.

Describe a ship's side air-pump discharge valve, in what respects does it sometimes differ from a common stop valve, and what attention does it require?

144.

What is the construction of a feed escape valve, to what is its discharge connected, and how is its loading regulated?

145.

When there is no feed escape valve, what is the arrangement of the feed valves or cocks?

146.

What is the measure of a horse-power? How is indicated horse power ascertained?

147.

Has "nominal horse power" a fixed meaning? What is the use of this expression? What is generally taken as the measure of one horse power nominal?

148.

What is "back pressure" in a cylinder? About how much is it in each of the cylinders in your last steamer? Is excessive cushioning ever a trouble under certain conditions in modern engines? Say when and why and in which cylinder this occurs.

149.

What is meant by "speed of piston"? About how much is the speed of piston in modern marine engines?

150.

What is "atmospheric pressure"? What is its average amount? What instrument tells this amount?

151.

What is "gross pressure" or "absolute pressure"? What pressure is it that is shown by the steam gauge?

152.

What is meant by "cutting off" steam? How is it done? What part of the valve regulates the cut off?

153.

What is a piston slide valve? Describe its construction. Why are such frequently employed in place of the common slide valve? What is a great drawback to the use of these valves?

154.

What fixes the time of closing the exhaust? After the exhaust is closed and before the port opens for steam, what becomes of the steam that is in the cylinder?

155.

What is the "lead" of the valve? What is its object? About what amount is it?

156.

What is the "cover" or "lap" of the valve? What is its object? About what proportion of the stroke of the valve is it made?

157.

What is the "exhaust cover" of a slide valve? What is its effect upon cushioning and upon exhaust?

158.

What is "minus cover" or "minus lap" on the exhaust? What is its effect upon the exhaust and upon cushioning?

159.

What is "cushioning" or "compression" in a steam cylinder? How is it affected by the amount of cover or of minus cover there may be upon the exhaust? How is it affected by the exhaust pressure?

160.

What is "mean effective pressure"? How is its amount ascertained?

161.

What is a dial vacuum gauge? What is its construction? For what is it used? About what amount should it show when the engine is working all right? What effect has the variations it indicates on the performance of the engine?

162.

Does the vacuum gauge enable you to tell what pressure there is in the condenser, or must you have recourse also to the barometer to arrive at that? How would you ascertain the actual amount of back pressure there is in the condenser?

163

What is a barometer? What is its construction? Is a barometer sometimes used instead of a vacuum gauge? In what respect does the weather barometer differ from the vacuum gauge barometer?

164.

The common vacuum gauge and the common steam gauge, in which of them are the graduations marked from atmospheric pressure? Does either of them tell what is the true actual pressure in the boiler or in the condenser?

165.

Do steam and vacuum gauges vary with the variations of the weather barometer? When the weather barometer varies from 29 to 31, how much will the vacuum gauge vary, and how will that affect the working of the engine? Why so?

166.

Vacuum is generally stated as so many inches. What is meant by, say, 20 inches vacuum? What does that tell us about the absolute pressure of the vapour then in the condenser?

167.

From what depth will a pump draw water? Is there any limit? Why?

168.

What is vacuum? Can vacuum move a piston? When the temperature of the water in the condenser is 212°, what is the greatest degree of vacuum there can then be in the condenser?

169.

What is a thermometer, its construction? What is the property of matter that is the principle of its construction? What temperatures are regularly noted by careful engineers?

170.

What is the temperature of (1) melting ice, (2) of boiling water, (3) of steam about 60 lbs. pressure by the steam gauge, (4) of steam about 100 lbs, and (5) of strain about 150 lbs, also (6) of smoke in the funnel, and (7) of water in the hot well?

171.

What is meant by the "conduction" of heat? Give examples of it in the boiler and in the engine.

172.

What is meant by the "convection" of heat? Give examples of it in the boiler and in the engine.

173.

What is meant by "radiation" of heat? Give examples of it in the boiler and in the engine.

174.

Which is convection, which is radiation, and which is conduction in the following cases: (1) Heat from the glowing fuel to the furnace crown. (2) Heat passing from one side of the furnace crown plate to the other. (3) Heat passing from the steam pipes in the engine-room. (4) The heat of evaporation?

175.

What are the effective heating surfaces of a marine boiler? What is an objection to vertical heating surfaces?

176.

What parts of a marine engine are exposed to danger when the temperature is below freezing point?

177.

What precautions are necessary in cold climates when the temperature is below freezing point?

178.

State as many ways as you can by which a boiler might not get its full feed; that is, a boiler, or one of a set of boilers, get short of water, although the feed valve is open its proper amount; to what causes might this be due?

179.

Of what are furnace bars generally made About what thickness are they at top? About what space is between them? Whether are the bars put further apart for Newcastle coal or for Welsh coal?

180.

Which burns faster, Newcastle coal or Welsh coal? Which is the flaming coal? Which makes most smoke?

181.

About how many tons of steam coal will be burnt per day in our furnaces, each 3′ 0″ wide, and of about the usual length? On what grounds do you say so?

182.

About how many tons of steam coal will be burnt per day with good compound engines to drive an ordinary steamer of 40 ft. beam 10 knots an hour by steam alone? On what grounds do you say so? What percentage more coal would be required to propel the same steamer one knot faster?

183.

About how many tons of steam coal will be burnt per day with a good compound engine, surface condensers, the low pressure cylinder 70 inches diameter, doing average work? On what grounds do you say so?

184.

A pair of inverted cylinder direct acting engines, there is a liner half an inch thick between the ahead eccentric rod and the eccentric strap, in overhauling the engine this piece is lost and forgotten; what difference will its omission make in the working of the engine, on the admission, on the cut off, and on the exhaust of the steam? Which will take place earlier, and which later, distinguishing between the up stroke and the down stroke?

185.

A pair of inverted cylinder direct acting engines driving a right-hand screw; on which of the crosshead guide bars is the pressure greatest in the up stroke, and on which in the down stroke?

186.

A screw propeller is getting loose, it has a little play on the shaft, sideways on the key or feather; how will this show in the engine-room?

187.

How would you prove whether the centre line of the trunions of an oscillating cylinder be fair with the centre line of the main shaft?

188.

How can the fairness of a line of screw shafting be tested without lifting the shafts?

APPENDIX B.

TESTIMONIAL.

I hereby certify that has served with me in the engine-room of as principal serang or tindal for a period of , during which time he has discharged his duties to my entire satisfaction.

I consider that he fully understands the working of an engine, and has sufficient tact, presence of mind, and energy to look after and manage the working of the engines of a river steamer having engines not exceeding 80 *nominal horse-power.*

Date (*Signed.*)

No. and description of Certificate.

ANY Engineer giving a testimonial in this form should be very careful in doing so, as the document may materially influence the applicant's elligibility as a candidate.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

ENGINEER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To _____

Whereas *it has been reported to the Lieutenant-Governor of Bengal that you have been found dul qualified to fulfil the duties of Engineer of an Inland Steam-Vessel, I do hereby, in pursuance of Act VI of* 1884 *grant you this CERTIFICATE OF COMPETENCY.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ 18——.

No. of Certificate of Competency

*Bearer*_____

*Date and Place of Birth*_____

*No. of Register Ticket*_____

*Signature*_____

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

Issued at Calcutta on the _____ *day of* _____ 18____.

Registered,

Port Officer of Calcutta.

By the Honourable the Lieutenant-Governor of Bengal.

Government of Bengal.

Certificate of Competency

AS

ENGINE-DRIVER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To _____

Whereas *it has been reported to the Lieutenant-Governor of Bengal that you have been found duly qualified fulfil the duties of Engine-Driver on an Inland Steam-Vessel having engines of under 80 nominal horse-power, I do hereby, in pursance of Act VI of 1884, grant you this CERTIFICATE OF COMPETENCY as Engine-Driver.*

Given *under my* Hand and Seal

By order of the Government of Bengal,

This _____ *day of* _____ 18__.

Under-Secy. to the Govt. of Benga

No. of Certificate

Bearer _____ *son of* _____ *by caste* _____

Date and Place of Birth showing Village, Thana and District* _____

Residence showing Village, Thana and District _____

Height _____

Personal description, stating particularly any permanent marks or scars _____

No. of Register Ticket _____

Signature _____

Issued at Calcutta on the _____ *day of* _____ 18____.

Any Engine-Driver who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

Registered,

Port Officer of Calcutta.

* If not known exactly must be stated on the best information or evidence.

[REGISTERED No. 29.]

No. 6 of 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 5, 1890.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 161A.

GENERAL.—*The 24th January* 1890.—Baboo Bhoirub Nath Palit, Deputy Collector is appointed to perform the functions of a Collector under the Public Demands Recovrey Act VII (B.C.) of 1880 in the district of Julpigoree.

The 29th January 1890.—Mr. M. Finucane, Director of Land Records, Bengal, acted in the first grade of Magistrates and Collectors from the 14th to the 19th instant, both days inclusive.

Mr. W. Fiddian, Magistrate and Collector, Pubna, acted in the first grade of Magistrates and Collectors from the 14th to the 19th instant, both days inclusive.

Mr. B. Dé, Officiating Magistrate and Collector, Khoolna, acted in the second grade of Magistrates and Collectors from the 14th to the 19th instant, both days inclusive, *vice* Mr. W. Fiddian.

The 31st January 1890.—Mr. J. B. Worgan, District and Sessions Judge, Cuttack, is allowed leave for fifteen days, under article 308 of the Civil Service Regulations, with effect from the date on which he availed himself of it.

Baboo Hurry Mohun Sen, Deputy Magistrate and Deputy Collector, Dacca, is allowed leave for six months, under article 369 of the Civil Service Regulations, in extension of the leave granted to him under the order of the 23rd September 1889.

The 3rd February 1890.—Baboo Gossain Das Hazra, Sub-Deputy Collector, Barh, Patna, is allowed leave for three months, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

Moulvie Fazlar Rahman, Sub-Deputy Collector, Alipore, Julpigoree, is transferred to Patna, and is posted to the Barh sub-division of that district.

In modification of previous notifications, Mr. R. C. Sterndale is hereby appointed substantively *pro tempore* Cantonment Magistrate of Dum-Dum, and to have charge as Sub-divisional Officer of the villages outside Cantonment limits which constitute the Dum-Dum sub-division.

Mr. C. H. Vowell, C.S., reported his departure from India on furlough on the 19th January 1890.

The 4th February 1890.—Captain W. H. Chase, Northern Bengal Volunteer Rifle Corps, is allowed leave of absence for eight months, with effect from the 1st instant.

Mr. F. J. Monahan, Officiating Joint-Magistrate and Deputy Collector, Serajgunge, Pubna, is vested with the powers of a Collector under Act X of 1870 in that district.

POLICE.—*The 3rd February* 1890.—In modification of the order of the 28th January 1890, first class Inspector E. Robertson, of the Calcutta Police, is appointed to act for Mr. J. E. Millard, Superintendent of the Detective Department, but will remain in charge of the First Division, Town Police, during the absence of Mr. J. Costello, on leave, or until further orders.

Mr. J. E. Millard, Superintendent of the Detective Department, Calcutta Police, in charge of the Third Division, Town Police, is appointed to act for Mr. James Costello, Superintendent of the First Division, Town Police, during his absence on privilege leave. Mr. Millard will, however, continue to hold charge of the Third Division, Town Police.

The 4th February 1890.—Mr. W. H. Cornish, District Superintendent of Police, Maldah, is allowed leave for two days, under article 291 of the Civil Service Regulations, in extension of the leave granted to him under the order of the 17th December last.

Mr. W. A. Gayer, Officiating Assistant Superintendent of Police, Moorshedabad, is transferred to Backergunge.

REGISTRATION.—*The 31st January* 1890.—Moulvi Gowhar Ally, Deputy Magistrate and Deputy Collector, Maldah, is appointed to be also Sudder Sub-Registrar of Maldah, with retrospective effect from the 22nd May last, *vice* Moulvi Zakir Hossein, transferred.

EDUCATION.—*The 4th February* 1890.—Baboo Madhu Sudan Das, Law Lecturer, Ravenshaw College, Cuttack, is allowed leave for six weeks, without allowances, with effect from the 24th ultimo.

Baboo Jogneswar Chandra is appointed to act as Law Lecturer, Ravenshaw College, Cuttack, during the absence, on leave, of Baboo Madhu Sudan Das, or until further orders.

The following notifications are republished from the *Assam Gazette* :—

No. 434*G.*—*The 23rd January* 1890.—Mr. E. Muspratt is appointed to act as Commandant of the Naga Hills Military Police Battalion during the absence, on medical leave, of Lieutenant D. C. F. Macintyre, with effect from the 1st May 1889.

No. 435*G.*—Mr. J. Kennedy, C.S., Deputy Commissioner of Sylhet, was employed on special duty at Shillong from the 1st to the 5th September 1889, both days inclusive.

This reduces the amount of privilege leave granted to Mr. Kennedy in General Department notification No. 239, dated the 12th July 1889, by five days.

No. 1.—*The 23rd January* 1890.—Baboo Nritya Gopal Chatterji, B.L., Extra Assistant Commissioner, made over the executive charge of the Cachar Treasury to Mr. H. Le Mesurier, C.S., on the 31st December 1889.

No. 2.—Mr. L. St. J. Brodrick, Assistant Superintendent of Police, made over the executive charge of the Naga Hills Treasury to Surgeon W. W. White, M.D., on the 31st December 1889.

No. 4.—Mr. R. R. Pope, C.S., reported his return to duty from furlough in the forenoon of the 7th January 1890.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT—(OPIUM).

NOTIFICATION.

The 4th February, 1890.—In consequence of the retirement of Mr. G. Field, Sub-Deputy Opium Agent, second grade, the following promotions are made, with effect from the 28th September, 1889:—

Mr. H. F. Campbell, Sub-Deputy Opium Agent, third grade, to be a Sub-Deputy Opium Agent of the second grade.

Mr. H. J. Lloyd, Sub-Deputy Opium Agent, fourth grade, to be a Sub-Deputy Opium Agent of the third grade.

Mr. P. J. Luard, Sub-Deputy Opium Agent, fifth grade, to be a Sub-Deputy Opium Agent of the fourth grade.

Mr. J. Christian, Assistant Sub-Deputy Opium Agent, first grade, to be a Sub-Deputy Opium Agent of the fifth grade.

Mr. W. T. Ryves, Assistant Sub-Deputy Opium Agent, second grade, to be an Assistant Sub-Deputy Opium Agent of the first grade.

Mr. C. S. Delmerick, Assistant Sub-Deputy Opium Agent, third grade, *sub. pro tem.* in the second grade, to be confirmed in that grade.

Mr. G. W. Dick-Lauder, Assistant Sub-Deputy Opium Agent, third grade, to be an Assistant Sub-Deputy Opium Agent, second grade, *sub. pro tem.*

Mr. C. H. S. Burt, Assistant Sub-Deputy Opium Agent, Probationary grade, *sub. pro tem.* in the third grade of Assistant Sub-Deputy Opium Agents, to be confirmed in that grade.

Mr. O. O'Donnell, Assistant Sub-Deputy Opium Agent, probationary grade, to be an Assistant Sub-Deputy Opium Agent, third grade, *sub. pro tem.*

Mr. E. C. Godfrey, Assistant Sub-Deputy Opium Agent, probationary grade, *sub. pro tem.*, to be confirmed in that grade.

Mr. G. W. Oliphant, Officiating Assistant Sub-Deputy Opium Agent, to be an Assistant Sub-Deputy Opium Agent, probationary grade, *sub pro tem.*

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 4th February, 1890.—In consequence of the death, on the 2nd January, 1890, of Mr. W. Cracroft, Sub-Deputy Opium Agent, fourth grade, the following promotions are made in the Opium Department, to take effect from the 3rd idem :—

Mr. C. Paterson, Sub-Deputy Opium Agent, fifth grade, to be Sub-Deputy Opium Agent, fourth grade.

Mr. J. E. Hand, Assistant Sub-Deputy Opium Agent, first grade, to be Sub-Deputy Opium Agent, fifth grade.

Mr. T. E. D. Innes, Assistant Sub-Deputy Opium Agent, second grade, to be Assistant Sub-Deputy Opium Agent, first grade.

Mr. W. H. T. Howey, Assistant Sub-Deputy Opium Agent, second grade *sub. pro tem.*, to be confirmed in that grade.

Mr. R. W. Pyne. Assistant Sub-Deputy Opium Agent, third grade, to be Assistant Sub-Deputy Opium Agent, second grade, *sub. pro tem.*

Mr. C. J. C. Ricker, Assistant Sub-Deputy Opium Agent, third grade *sub. pro tem.*, to be confirmed in that grade.

Mr. E. A. Gennoe, Assistant Sub-Deputy Opium Agent, probationary grade, to be Assistant Sub-Deputy Opium Agent, third grade, *sub. pro tem.*

Mr. F. W. Harris, Assistant Sub-Deputy Opium Agent, probationary grade *sub. pro tem.*, to be confirmed in that grade.

Baboo Keshri Narain, Officiating Assistant Sub-Deputy Opium Agent, to be Assistant Sub-Deputy Opium Agent, probationary grade, *sub. pro tem.*

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 4th February 1890.—The following rules framed by the Board of Revenue under clause (*c*), section 9 of the Sea Customs Act VIII of 1878, to provide for the weighment of salt by licensed weighmen at the Port of Calcutta, having received the sanction of the Licutenant-Governor, are published for general information :—

I. From the date of the publication of these rules, no person, other than a weighman licensed under them, shall be employed to weigh salt either on board importing vessels or at the Sulkea warehouses.

II. A weighman includes an assistant.

III. The duty of supplying licensed weighmen may be entrusted to contractors or sirdar weighmen, who will be appointed on the recommendation of the Superintendent of the Preventive Service and receive a license. Contractors and sirdars who have not been licensed by the Collector of Customs will not be recognised by Customs officers.

IV. Any person wishing to become a licensed weighman will be supplied, on application to the Collector of Customs, with a form which he will be required to fill up, and such application should ordinarily be supported by a recommendation from some person directly interested in the importation and weighment of salt. If he is considered suitable, a license will then be granted to the applicant.

V. A licensed weighman, who is guilty of refusal or neglect of duty, may be suspended or dismissed.

VI. Licensed weighmen will make their own arrangements with those persons who require their services, and in this respect Government will not exercise any control over them ; but they are strictly prohibited from receiving any reward or present from the buyers, or their representatives, under penalty of dismissal and of a criminal prosecution.

VII. When on duty a licensed weighman will be required to wear a brass badge, and will be bound to produce his license if asked to do so.

VIII. A complete list of licensed contractors, sirdar weighmen, and weighmen will be supplied to any person interested in the weighment of salt upon application.

Form of Contractor's License.

A. B. is hereby appointed a licensed contractor for the supply of licensed weighmen under the rules prescribed by the Board of Revenue.

Form of Application for Weighman's License.

I, , son of , resident of in the district of , at present residing at , desiring to obtain a license authorizing me to weigh salt on board ships as well as at the Sulkea warehouses, beg respectfully to submit this petition.

I undertake to perform my duties faithfully to Government, and to obey any lawful commands that I may receive.

Form of Weighman's License.

A. B. is hereby appointed a licensed weighman under the rules prescribed by the Board of Revenue.

Descriptive Roll.

NAME.	Father's name.	Residence.	Present residence.	By whom recommended

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L.P.; CALCUTTA.

DECLARATION.

The 31st January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz. for the construction of the proposed central distillery at Khoolna, in the village of Tootpara, pergunnah Hogla, zillah Khoolna, it is hereby declared that for the above purpose a piece of land measuring, more or less, 3 beegahs 9 cottahs and 10 chittacks of standard measurement, bounded on the North by the house of Ram Charan Ghose; East by the Strand Road on the bank of the river Roopsa; South by the land of Ram Charan Ghose and others; and West by Kali Charan Boona's land, is required within the aforesaid village of Tootpara.

A plan of the required land may be inspected at the Collector's office.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 31st January 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz. for a distillery in the village of Bankoora-Rampore, pergunnah Bishanpore, thana Bankoora, zillah Bankoora, it is hereby declared that for the above purpose a piece of land measuring, more or less, 2 beegahs and 4 gandas of standard measurement, bounded on the North by Dasu Bauri's house and a piece of waste land; East by Jagat Baishnabi's garden; South by waste *debattar* land of "Raghu Nath Jieu"; and West by the tank called "Duber Band," is required within the aforesaid village of Bankoora-Rampore.

A plan of the required land may be inspected at the Collector's office.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 162A.

The 30th January 1890.—The following gentlemen are appointed to be Honorary Magistrates of the Bench at Khoorda, in the district of Pooree, and are vested with the powers of a Magistrate of the third class:—

Chowdhury Aziz Mohamed. | Pandit Jogobandhu Mohapater.
Baboo Khrustna Mohan Patnaik.

The Lieutenant-Governor accepts the resignation tendered by Ray Bhagbut Mohanti Bahadur of his appointment as an Honorary Magistrate of the Bench at Khoorda, in the district of Pooree.

Baboo Kherod Chundra Roy is appointed to be an Honorary Magistrate of the Independent Bench at the head-quarters of the Madaripore sub-division of the district of Furreedpore, and is vested with the powers of a Magistrate of the third class.

The 31st January 1890.—Baboo Hemango Chandra Bose, Subordinate Judge, Hooghly, is allowed leave for six months, under article 369 of the Civil Service Regulations, with effect from the afternoon of the 14th December 1889.

Baboo Jodu Nath Das, Subordinate Judge of Patna, is allowed leave for one month and twelve days, under article 306(*b*) of the Civil Service Regulations, with effect from the date on which he availed himself of it.

The 1st February 1890.—Mr. Taheiruddin Ahmed, substantive *pro tempore* Munsif of Arrareah, in the district of Purneah, is appointed to be a substantive *pro tempore* Additional Munsif in the district of Dacca, to be ordinarily stationed at the Sudder station.

Baboo Nibarun Chandra Banerjee, Additional Munsif of Dacca, is appointed to be a Munsif in the district of Purneah, to be ordinarily stationed at Arrareah.

Baboo Sri Hari Lahiri, B.L., is appointed to act, until further orders, as a Munsif in the district of Purneah, to be ordinarily stationed at Arrareah, *vice* Baboo Nibarun Chandra Banerjee.

Baboo Ashutosh Chatterjee is appointed to be an Honorary Magistrate of the Kooshtea Bench, in the district of Nuddea, and is vested with the powers of a Magistrate of the third class.

The Lieutenant-Governor accepts the resignation tendered by Baboo Upendra Chundra Roy of his appointment as an Honorary Magistrate of the Narail Bench, in the district of Jessore.

Baboo Mohendro Nath Banerjee is appointed to be an Honorary Magistrate of the Municipal Bench at Kotrung, in the district of Hooghly, and is vested with the powers of a Magistrate of the third class.

Baboo Bungshidhur Sen is appointed to be an Honorary Magistrate of the Narail Bench, in the district of Jessore, and is vested with the powers of a Magistrate of the third class.

The 4th February 1890.—Baboo Rajendra Lal Ghosh, B.L., is appointed to act as a Munsif in the district of Gya, to be ordinarily stationed at the Sudder station of that district, during the absence, on leave, of Shah Latafut Hossein, or until further orders.

Baboo Bepin Behary Mookerjee, Deputy Magistrate and Deputy Collector, Bhagulpore, is vested with powers under sections 110, 133, 143, 144, 174, 186, 191 and 524 of the Code of Criminal Procedure.

Baboo Bepin Behary Bose is appointed to be an Honorary Magistrate of the Independent Bench at Jessore, and is vested with the powers of a Magistrate of the third class.

Under the authority vested in him by the final clause of section 357 of the Code of Criminal Procedure, Act X of 1882, the Lieutenant-Governor empowers Moulvie Sarfraz Hossein Khan and Moulvie Mohamad Quaim, Honorary Magistrates of the Jhowgunge Bench, Patna, to take down evidence in criminal cases in the English language.

GRANT OF LEAVE TO MUNSIFS.—*The 31st January* 1890.—Shah Latafut Hossein, Munsif of Gya, is allowed leave for two months, under article 369 of the Civil Service Regulations, with effect from the date on which he may be relieved.

The 1st February 1890.—Baboo Gobind Deb Mukerjee, Munsif of Sudharam, in the district of Noakholly, is allowed leave for six months, under articles 266 and 369 of the Civil Service Regulations, with effect from the 25th January 1890.

Baboo Hari Narain Roy, Munsif of Sibgunge, in the district of Rajshahye, is allowed leave for one year, under article 371 of the Civil Service Regulations, with effect from the date on which he may be relieved.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 1st February 1890.—The following revised rule is substituted for Rule XV of the Rules made by the Lieutenant-Governor under the power vested in him by section 4 of Act III (B.C.) of 1879 (entitled "an Act to provide for the periodical inspection of Steam-boilers and Prime-movers attached thereto in the Town and Suburbs of Calcutta and in Howrah"), and since extended by notifications to places in the districts of Hooghly, Howrah, and the 24-Pergunnahs, within a radius of 30 miles from Calcutta, to the sub-divisions of Raneegunge, Giridhi, and Gobindpore, and the district of the Sonthal Pergunnahs :—

XV. The Inspector shall give one week's notice of every such intended thorough examination ; and if after that notice the boilers are not empty, cool, clean, and ready for inspection on the date named, the Inspector shall prohibit the boilers from working, and shall report the case to the Commissioners. Further, if any request be made to remove fittings or settings, and such be not complied with, the Inspector shall in like manner stop the working of the boilers.

Provided that the inspection of boilers in the Raneegunge, Giridhi, and Gobindpore sub-divisions, and in the district of the Sonthal Pergunnahs, shall be made during the months of November to May inclusive, and the Inspector shall give 14 days' notice of the day when he will make such inspection.

If any boiler needs inspection in the Raneegunge, Giridhi, and Gobindpore sub-divisions, and in the district of the Sonthal Pergunnahs, during the months of June to October inclusive, either as being a new boiler requiring a certificate, or as being a boiler which the owner for any other reason wishes to have inspected, it may, on the application of the owner, manager, or agent, be inspected during that period.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[Second Publication.]

NOTIFICATION.

The 21st January 1890.—Under section 2 of Act II (B.C) of 1867 (an Act to provide for the punishment of public gambling and the keeping of common gaming houses), the Lieutenant-Governor is pleased to authorize the extension, from the 1st February 1890, of the provisions of the said Act to the villages of Saidpore and Kuja Saidpore (commonly known as the town and bazar of Saidpore), within the jurisdiction of the police-station of Nilphamari and the district of Rungpore. The boundaries of the tract within which the said Act shall be in force are as follows:—

North—A straight line drawn from the Saidpore Rifle Range to Pénduram Bairagi's house.

South—A straight line drawn from the east of Baboopara to the village road east of Nanku Havildar's para.

East—A straight line drawn from Penduram Bairagi's house to the east of Baboopara.

West—A straight line drawn from the village road east of Nanku Havildar's para to the Saidpore Rifle Range.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[Second Publication.]

NOTIFICATION.

The 22nd January 1890.—It is hereby notified that the Lieutenant-Governor authorises the extension of the provisions of section 34 of Act V of 1861 to the town comprising the places known as Makundprosad, Jagarsing and Gurujang, in the district of Pooree, within the boundaries noted below, with effect from the 1st April 1890—

Bounded on the north by Tangiapara, Nuagan, Kumbharbast and Kunjiama; on the south by Sanpala, Khorda, and Jaganathpur; on the east by Bartola and Kholadwar; on the west by Sardhapur.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[Third Publication.]

NOTIFICATION.

The 18th January 1890.—Under section 2 of Act II (B.C.) of 1867 (an Act to provide for the punishment of public gambling and the keeping of common gaming-houses), the Lieutenant-Governor authorizes the extension, from the 1st February 1890, of the provisions of sections 11 to 14 of the said Act to the town of Rampore Hât (including Brahamanigram, Kalisanra, and Khalasiparah), in the district of Beerbhoom.

2. For the purposes of the above Act, the boundaries of the place shall be as follows:—

North—East Indian Railway Rifle Butts.
South—Sanghatta khal.
East—Khair tank.
West—Village Suialla.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

DECLARATION.

The 4th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for a police outpost in the village of Khaprail Bazar, pergunnah Midnapore, zillah Midnapore, it is hereby declared that for the above purpose a piece of land measuring, more or less, 7 cottahs and 8 chittaks of standard measurement, bounded on the east by the house of Issur Panday, on the north and west by public roads, and on the south by Ram Moyra and Baburam Garari's house, is required within the aforesaid village of Khaprail Bazar.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—BENGAL.

IRRIGATION.

The 4th February 1890.

No. 31.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for a chowkidar's shed on the Lathan Distributary at the 7th mile 30th chain, it is hereby declared that for the above purpose a piece of land measuring about 243 feet in length and 140 feet in width, and containing an area of 3 roods and 5 poles, more or less,

situate in mouzah Katarea, pergunnah Pero, bounded on the north by lands belonging to Ramdeyal Rai and Ramtahal Rai; on the east by lands belonging to Ramdeyal Rai; on the south by lands belonging to Loochal Churihor; and on the west by the Lathan Distributary, is required in the district of Shahabad.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

J. M. McNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal, P. W. Dept.

ESTABLISHMENT.

The 29th January 1890.

No. 27.—Mr. T. E. Owen, Executive Engineer, first grade, and Officiating Under-Secretary in the Railway Branch of this Department, is granted six months' leave on urgent private affairs, with effect from the 1st of March 1890, or such date as he may avail himself of it.

No. 28.—Mr. H. B. Taylor, Executive Engineer, temporary rank, employed on the Assam-Behar Section of the Eastern Bengal State Railway, is temporarily attached to the Public Works Secretariat on special duty.

CIVIL BUILDINGS.

The 31st January 1890.

No. 29.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for the Post Office at Jajepur, in the village of Naharapore, pergunnah Jajepur, zillah Cuttack, it is hereby declared that for the above purpose a piece of land measuring, more or less, 1 rood and 29 poles of standard measurement, bounded on the north and east by municipal roads, and on the west and south by the mehal land of Avimanu Punda, Judhisty Punda, Bhim Punda, Arjoon Punda, Nakul Punda, and Banchanidhi Punda, is required within the aforesaid village of Naharapore.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

COMMUNICATIONS.

The 31st January 1890.

No. 30.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for the construction of a permanent bungalow in the village of Bandgoan on the second section of the Ranchi and Chybassa road, pergunnah Porahat, zillah Chybassa, it is hereby declared that for the above purpose a piece of land measuring, more or less, 34 bighas 10 cottahs and 14 chittacks of standard measurement, bounded on the north, west, south, and east by lands of Baboo Jugmohan Singh, is required within the aforesaid village of Bandgoan.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

The 4th February 1890.

No. 32.—*Notification.*—The Lieutenant-Governor is pleased to direct the formation of a Public Works Division, to be called the Sikkim Division, and to have its head-quarters at Gantok.

The Sikkim Division will comprise all works in Sikkim.

Mr. J. C. White is appointed to be Executive Engineer of the Sikkim Division, in addition to his duties as Assistant Political Officer at Gantok.

MILITARY.

The 4th February 1890.

No. 33.—*Notification.*—The declarations, dated the 12th July 1887, made under section 6 of Act X of 1870 of the Government of India, which were published at page 632 of the *Calcutta Gazette* of the 13th idem, for the acquisition of lands for encamping grounds at Hilsa, Islampore and Khizirserai on the Futtooa-Gya road, are hereby cancelled.

RAILWAY.

The 4th February 1890.

No. 34.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for doubling the Kidderpore Dock line of the Eastern Bengal State Railway, Southern Section, at Ballygunge, in mouzah Punchannogram, pergunnah Dehee Punchannogram, zillah 24-Pergunnahs, it is hereby declared that for the above purpose a piece of land measuring, more or less, 5 bighas and 10 cottahs of standard measurement, bounded on the north by land belonging to Chunder Kanto Ghose; east by land belonging to Nibaron Ghose, Bhoirub Mundle, Chunder Kanto Ghose and others; south by a pucca house belonging to Nibaron Ghose; and west by land belonging to Eastern Bengal State Railway, is required within the aforesaid mouzah Punchannogram at Ballygunge.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

ESTABLISHMENT.

The 4th February 1890.

No. 35.—Mr. H. N. C. Cloete, Executive Engineer, has been granted by Her Majesty's Secretary of State for India an extension of three months' furlough.

No. 36.—Mr. T. H. Wickes, Superintending Engineer, is, on return from furlough, appointed to be Superintending Engineer of the Eastern Circle.

No. 37.—Mr. W. B. Gwyther, Executive Engineer, attached to the First Calcutta Division, is transferred to the Public Works Secretariat for employment on special duty.

No. 38.—Mr. W. H. Nightingale, Officiating Superintending Engineer, Eastern Circle, on being relieved by Mr. Wickes, will revert to his appointment as Inspector of Local Works in the Bhagulpore Division.

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

PUBLIC WORKS DEPARTMENT,—MARINE.

NOTIFICATION No. 30Mne.

The 3rd February 1890.—In accordance with the provisions of section 36 (2) of Act X of 1889, the following abstract account of the receipts and charges of the Ports of Cuttack and Pooree for the year 1888-89, which has been received from the Collector of Cuttack, is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal.

Statement showing the Receipts and Charges of the Joint Port Fund of the Cuttack and Pooree Ports for the year 1888-89.

ITEMS.	Amount.	Total.	ITEMS.	Amount.	Total.
	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
Port dues—vessels	3,916 10 9		Debit balance on 31st March 1888 ...	.....	23,768 9 0
Sale proceeds of a boat	25 0 0				
		3,941 10 9	Vessels and Boat Establishment—		
Sale proceeds of old stores	4 8 0		Establishment	2,330 10 6	
		4 8 0	Dockyard services and supplies ...	1,372 13 3	
			Stores	9 0 0	
			Contingencies	50 9 0	
					3,763 0 9
			General Management—		
			Salary of Port Officer	3,000 0 0	
			Ditto Establishment ...	772 3 1	
			Percentage charges	84 4 5	
			Contingencies	123 1 0	
			Service postage stamps	37 4 0	
			Travelling allowance of Port Officer and others	234 1 0	
					4,250 13 6
			Medical Establishment—		
			Establishment	457 5 0	
			Contingencies	174 12 6	
					632 1 6
			Light-house Establishment—		
			Establishment	312 0 0	
			Contingencies	25 11 3	
					337 11 3
			Pension to Mr. T. Geary, from 1st April 1888 to March 1889, at Rs. 34-0-9 per month	408 9 0	
			Cost of repairing Pooree light-house ...	29 3 0	
					437 12 9
Total Receipts ...	.....	3,946 2 9			
Debit balance on 31st March 1889 ...	.....	29,243 13 3	Total Expenditure ...	.....	9,421 7 0
GRAND TOTAL ...	.....	33,190 0 0	GRAND TOTAL ...	.....	33,190 0 0

NOTIFICATION No. 33Mne.

The 4th February 1890.—Under the powers conferred upon him by section 64 of Act VI of 1884 (The Inland Steam-vessels Act), and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to exempt inland steam-vessels commanded by licensed pilots from the provisions of section 28, sub-section (1), clause (*a*), and section 26, sub-section (2), clause (*a*) of the said Act.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal.

NOTIFICATION No. 34Mne.

The 4th February 1890.—Under the powers conferred upon him by section 64 of Act VI of 1884 (The Inland Steam-vessels Act), and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to declare that persons holding certificates as serangs, granted by the Commissioners for making Improvements in the Port of Calcutta before the date of this notification, shall be allowed to take charge of inland steamers measuring not more than 200 tons gross for two years from this date, after the expiry of which period no one will be permitted to be in charge of any inland steam-vessel who has not in the meantime obtained a certificate of competency under the Act.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal.

[First Publicatoin]

NOTIFICATION No. 29Mne.

The 3rd February 1890.—The following Notice to Mariners is published for general information.

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 16).

BAY OF BENGAL.

ORISSA COAST.

Date of exhibition of new light from Chandipore flagstaff.

IN continuation of Notice to Mariners, No. 49, dated the 31st May 1889, issued by this Office, it is intended to exhibit the new light on the Chandipore flagstaff from the 1st May 1890.

The height of the new light above high-water mark will be 62 feet.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 30th January* 1890.

[Second Publication.]

NOTIFICATION No. 12Mne.

The 24th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 9).

AFRICA—NORTH-EAST SHORE.

GULF OF ADEN.

Permanent Light-ship off Ras Marbut, Aden Harbour.

Information has been received from the Political Resident at Aden that on the 15th February the temporary Light-vessel moored off Ras Marbut, Aden, Harbour, will be replaced by the permanent Light-ship. The vessel is moored in 18 feet at low water, and shows at an elevation of 39 feet above the sea a flashing White Light visible every minute. The vessel is painted Red, but has no Red Ball at mast-head and exhibits no Red Flag during the day as stated at page 90, Chapter IV, 3rd Edition of the Gulf of Aden Pilot.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 22nd January* 1890.

[Second Publication.]

NOTIFICATION No. 14Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 10).

AFRICA—EAST COAST.

RED SEA—WESTERN SHORE.

A light placed on the island of Difnein, Musawwa Channel.

INFORMATION has been received from the Consul-General for Italy, through the Director of Indian Marine, that a light visible at 6 miles distance, to indicate the North entry of the Musawwa Channel, has been placed on the N.-E. end of the Island of Difnein. The light is in latitude 16° 37′ 8″ N. and longitude 39° 18′ 15″ E. Arc of illumination 195 degrees, leaving a dark sector between the 65° and 250°.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Second Publication.]

NOTIFICATION No. 15Mne.

The 27th January. 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 11).

AUSTRALIA—EAST COAST.

ULLADULLA HARBOUR.

Fixed light on Warden head, and discontinuance of pier light.

THE British Admiralty has given notice (No. 456 of 1889) that on 1st December 1889 a light would be exhibited from a light-house recently erected on Warden head, south side of entrance to Ulladulla harbour.

The light is a *fixed* White light, visible in clear weather from a distance of about 12 miles.

Position: Approximate lat. 35° 22½′ S.; long. 150° 31½′ E.

Also, that on the same date, the light (fixed *green*) previously shown from the pier head, Ulladulla harbour, would be discontinued.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Second Publication.]

NOTIFICATION No. 16Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 12).

AFRICA—EAST COAST.

ZANZIBAR ISLAND.

Fixed light on Mwana Mwana Island.

INFORMATION has been received from the British Admiralty (No. 452 of 1889) that a light is now exhibited from a light-house (construction commenced in 1881) on the north extreme of Mwana Mwana island, north-west coast of Zanzibar island.

The light is a *fixed* white light.

Position: Lat. 5° 45′ 10″ S.; long. 39° 13′ 10″ E.

NOTE.—The regular exhibition of this light should not be relied on.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Second Publication.]

NOTIFICATION No. 17Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 13).

INDIA—SOUTH.

CEYLON—EAST COAST.

A "Torpedo Buoy" placed at the entrance to Trincomalee Harbour.

THE Colonial Government of Ceylon has given notice that on and after 25th December 1889 until 28th February 1890, a Red Buoy, with a red flag and the words "Torpedo Buoy" painted on it, will be placed in the entrance to Trincomalee Harbour between Ostenburg Point and Little Sober Island, and 260 yards from the former.

The water in the triangle formed by this Red Buoy, the E. Point of Small Sober Island and Clappenburg Point, will be obstructed by mines.

All vessels should pass between the Buoy and Ostenburg Point.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Second Publication.]

NOTIFICATION No. 19Mne.

The 28th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 14).

BAY OF BENGAL.

BURMA COAST.

Date of alteration of Savage Island light—Port of Akyab.

WITH reference to Notice to Mariners, No. 50, dated the 31st May 1889, issued by this office, a telegraphic communication has been received from the Port Officer, Akyab, that the transfer of Savage island light, at the entrance of the Port of Akyab, will commence from the 27th instant.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 27th January* 1890.

[Second Publication.]

NOTIFICATION No. 20Mne.

The 28th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 15).

BAY OF BENGAL.

BURMA COAST.

Position of a water-logged Native vessel and pieces of wreckage.

A TELEGRAPHIC communication has been received from the Port Officer, Rangoon, that the Master of the steam-ship *Euphrates* reports having passed on the 23rd instant a water-logged native vessel in latitude 15° 23′ north, longitude 94° 59′ east; also pieces of wreckage when 8 miles off Krishna light-vessel. Shipmasters are cautioned accordingly.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 27th January* 1890.

EASTERN BENGAL STATE RAILWAY SYSTEM.

NOTIFICATION.

No. 1.—Mr. F. D. Kiernander, Assistant Traffic Superintendent, is granted two months' privilege leave, under Articles 277 to 291 of the Civil Service Regulations, 1st edition, with effect from 20th January 1890, or such subsequent date as he may avail himself of the same.

G. F. O. BOUGHEY, *Lieut.-Col., Manager.*

SEALDAH, CALCUTTA, *the 29th January* 1890.

JAIL DEPARTMENT.

No. 1006.—*The 30th January* 1890.—Mr. H. M. Owen made over charge of the Midnapore Central Jail to Mr. C. H. C. Sevenoaks on the forenoon of the 26th January 1890.

M. S. EMERSON,
For Offg. Inspector-General of Jails, Bengal.

CIVIL MEDICAL DEPARTMENT, BENGAL.

No. 993, *dated* 31*st January* 1890.—In Bengal Medical Department Notification No. 10739, dated 21st November 1889, published in the *Calcutta Gazette*, dated 27th November 1889, at page 974, against the name of Civil Hospital Assistant Soshi Kumar Sen's *for* "Sub-division and Dispensary, Fenny, Backergunge," *read* "Sub division and Dispensary, Fenny, Noakholly."

J. M. COATES, M.D.,
For Inspector-General of Civil Hospitals, Bengal.

Sheriff's Office, the 22nd January 1890.

NOTICE is hereby given that the First Criminal Sessions of the year 1890 of the High Court of Judicature at Fort William in Bengal for the Town of Calcutta and Factory of Fort William, and the places subordinate thereto, will be holden at the Court-house in the Town of Calcutta, on Monday, the seventeenth day of February next, at 11 o'clock in the forenoon, and so on from day to day until the said Sessions be over. And it is hereby proclaimed that all persons who will prosecute any of the prisoners to be brought up for trial at the said Sessions be present then and there to prosecute.

H. B. H. TURNER, *Sheriff.*

শরিফ আফিস, সন ১৮৯০ সাল তারিখ ২২শে জানুয়ারি।

সকলকে সমাচার দেওয়া যাইতেছে যে সুবে বাঙ্গালার ফোর্ট উইলিয়ম দুর্গের অধীন শহর কলিকাতার ও অন্যান্য স্থানের ফৌজদারী বিচার নিষ্পত্তি জন্য আগামী সন ১৮৯০ সালের ১৭ই ফেব্রুয়ারি সোমবার বেলা ১১ ঘটিকার সময় এবং যে পর্য্যন্ত সেশিয়ানের কার্য্য শেষ না হয় প্রতিদিন উক্ত সময়ে কলিকাতার হাই কোর্টের আপন আদালত ঘরে সন ১৮৯০ সালের প্রথম ক্রমিনেল সেশিয়ান বসিবেক এবং এতদ্দ্বারা প্রচার করা যাইতেছে যে, যে সকল ব্যক্তি কোন কয়েদির বিরুদ্ধে ফৌজদারী মিছিল করিবেক তাহারা উক্ত স্থানে উক্ত সময়ে হাজির থাকিয়া মোকদ্দমা করে ইতি।

এইচঃ বিঃ এইচঃ টারনার, শরিফ।

TREASURY NOTICE.

UNCOVENANTED DEPUTY COLLECTOR BABOO MONMATHA KUMAR BOSE has been placed in charge of the Beerbhoom Treasury, and is authorized to draw bills on other treasuries.

N. S. ALEXANDER, *Commissioner.*

COMMR.'s OFFICE, BURDWAN DIVN., *the* 30*th January* 1890.

EDUCATION DEPARTMENT, BENGAL.

Subordinate Educational Service.

The 28*th January* 1890.—Babu Nityananda De, Sub-Inspector of Schools under the District Board of Midnapore (class VI), has been granted by the Board leave of absence for four months, under Article 369 of the Civil Service Regulations, with effect from the 1st December 1889.

The 30*th January* 1890.—Babu Braja Syam Mazumdar, Departmental Sub-Inspector of Schools, 24-Pergunnahs (class VI), having returned to duty on the forenoon of the 1st January 1890, the unexpired portion of the leave granted to him under the orders of the 8th January 1890 is cancelled.

Babu Dwarka Nath Bose, B. A., Second Master of the Furreedpore Zillah School (class VI), is allowed leave of absence for one month and ten days, under Article 306 (*b*) of the Civil Service Regulations, with effect from the 22nd December 1889.

Babu Srinath Das, Third Master of the Furreedpore Zillah School (class VII), is appointed to act as Second Master of the same institution, and in class VI, *vice* Babu Dwarka Nath Bose, B A., on leave.

Babu Narendra Deb Ray, Fourth Master of the Furreedpore Zillah School, is appointed to act as Third Master of the same institution, and in class VII, *vice* Babu Srinath Das.

Maulavi Syed Reazut Hussein, Fifth Master of the Mozufferpore Zillah School (class VI), is appointed temporarily to be Third Master of the same institution, *vice* Babu Hari Nath Ray, retired.

Babu Uma Charan Ghosh, Second Master of the Comillah Zillah School (class VI), is declared to have been absent on leave from the 28th October to the 15th November 1889, both days inclusive, viz., twelve days under Article 369 and seven days under Article 372 of the Civil Service Regulations.

Babu Tripura Charan Banerjea, Third Master of the Comillah Zillah School, is declared to have acted as Second Master of that institution, and in class VI, during the absence, on leave, of Babu Uma Charan Ghosh.

A. CROFT,
Director of Public Instruction.

NOTIFICATION OF THE BOARD OF REVENUE.

No. 113B.

NOTICE is hereby given that the Third Sale of Opium, the Provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall-street, on Monday the 3rd March 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory ...	... 2,250
Ditto at the Ghazeepore Factory ...	... 2,500
Total	... 4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. The may be ascertained by reference to the Notification issued onthe 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Boar of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th March 1890, respectively, that is to say no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the8thMarch 1890 and no Bank of Bengal Receipts in full payment of lots will be accepted afte 3-30 P.M. of Tuesday, the 18th March 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the Opium manufactured at the Patna and Ghazeepore Factories will be brought to sale in the present year about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so :—

DATES.	Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Wednesday, 2nd April 1890. ..	2,250	2,500	4,750
On or about Thursday, 1st May ,, ...	2,250	2,500	4,750
On or about Monday, 2nd June ,, ...	2,250	2,500	4,750
On or about Wednesday, 2nd July ,, ...	2,250	2,500	4,750
On or about Monday, 4th August ,, ...	2,250	2,500	4,750
On or about Monday, 1st September ,, ..	2,250	2,500	4,750
On or about Wednesday, 1st October ,, ...	2,250	2,500	4,750
On or about Monday, 3rd November ,, ...	2,250	2,500	4,750
On or about Monday, 1st December ,, ...	2,250	2,500	4,750
Total ...	20,250	22,500	42,750

By order of the Board of Revenue, L. P.,
K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L. P., *Calcutta, the 28th January* 1890.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that at the election held on the 21st August 1889, Baboo Raghubans Sahai was elected a Commissioner in Ward No. III of the Chupra Municipality, in place of Baboo Ganga Sahai, deceased.

J. BOXWELL, *Offg. Commissioner.*

PATNA COMMR.'S OFFICE, BANKIPORE, *the 30th January* 1890.

NOTIFICATION.

IT is hereby notified for general information that an election will be held, under section 27 of Act III (B.C.) of 1884, on 10th of March 1890, in Ward No. II (Kaporiapottee), in the Nattore Municipality, in the district of Rajshahye, for the purpose of electing a Commissioner in the place of Baboo Sarbananda Saha, deceased.

E. E. LOWIS, *Commr., Rajshahye Division.*

The 28th January 1890.

NOTIFICATION.

IT is hereby notified for general information that at the bye-election held on the 15th instant in Ward No. IV of the Baranagore Municipality, in the district of the 24-Pergunnahs, Baboo Hara Kumar Ghosal has been duly elected a Commissioner for the Ward in the place of Baboo Promatha Nath Ghosal, deceased.

A. BHATTACHARJEE, *Personal Assistant in charge.*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the 28th January* 1890.

NOTIFICATION.

IT is hereby notified for general information that at the election held under section 27, Act III (B.C.) of 1884, on Monday, the 6th January 1890, Baboo Debendra Nath Ganguli has been elected a Commissioner for Ward No. III of the Dainhat Municipality, in the district of Burdwan, *vice* Baboo Ram Jadu Ghuttuck, resigned.

N. S. ALEXANDER, *Commissioner.*

BURDWAN COMMR.'S OFFICE, *the 24th January* 1890.

ERRATUM.

IN the notification published at page 99, Part I of the *Calcutta Gazette* of the 29th January 1890, regarding the re-distribution of the members for election in the Kandi and Burwan thanas of the Kandi Local Board, in the district of Moorshedabad—*Read* "29th November 1887" *for* "29th March 1887."

A. BHATTACHARJEE, *Personal Assistant, for Commissioner.*

CALCUTTA, *the 3rd February* 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 5, 1890.

PART IA.

Orders and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following order, issued by the Government of India in the Home Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION—ESTABLISHMENTS.

Calcutta, the 30th January 1890.

No. 57.—In Home Department Notification No. 22, dated the 16th instant, permitting Mr. N. S. Alexander to resign Her Majesty's Bengal Civil Service, *for* "15th March 1890" *read* "6th March 1890."

A. P. MACDONNELL,
Secretary to the Govt. of India.

The following orders, issued by the Government of India in the Department of Finance and Commerce, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATIONS.

LEAVE AND APPOINTMENTS.

The 30th January 1890.

No. 489.—Mr. J. C. E. Branson, Deputy Accountant-General, Bombay, is granted furlough for eighteen months, under article 340, Civil Service Regulations, from such date in March 1890 as he may avail himself of it.

The 31st January 1890.

No. 544.

ORDER—By the Government of India, Department of Finance and Commerce.
Read the following:—

INDIA OFFICE;
London, 9th January 1890.

Financial.
No. 4.

To His Excellency the Most Honourable the Governor-General of India in Council.

MY LORD MARQUIS,—I have to inform you that the rate of exchange for the adjustment of financial transactions between the British and Indian Governments for the year 1890-91 has been fixed, with the concurrence of the Lords Commissioners of Her Majesty's Treasury, at one shilling and five pence (1*s.* 5*d.*) the rupee; and I request that you will give

the necessary instructions for the due observance of this rate in respect to all transactions to which it is applicable.

I have, &c.,
(Signed) CROSS.

Ordered that copies of this Despatch be forwarded to the Military and Public Works Departments and to the Comptroller and Auditor-General for information.

Ordered also that this Despatch be published in the *Gazette of India* for general information.

E. J. SINKINSON,
Secretary to the Government of India.

The following orders, issued by the Government of India in the Military Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

Fort William, the 31st January 1890.

APPOINTMENTS.

MEDICAL DEPARTMENT.

No. 96.—Brigade-Surgeon H. Potter, M.D., Indian Medical Service, Bengal Establishment, to be Medical Store-keeper, Mian Mir. Dated 14th January 1890.

FURLOUGH AND LEAVE.

No. 106.—The undermentioned officers have been granted extensions of furlough or leave by the Secretary of State for India :—

* * * * *

Surgeon-Major R. G. Mathew (m. c.), for six months.

LONDON GAZETTE.

No. 108.—The following extracts are published for general information :—

Supplement to the "London Gazette," dated the 1st January 1890, Page 1.

India Office, January 1, 1890.

The Queen has been graciously pleased to make the following promotion in, and appointments to, the Most Eminent Order of the Indian Empire :—

* * * * *

To be Companions.

* * * * *

Brigade-Surgeon George King, M.B., Bengal Medical Service, Superintendent of the Royal Botanical Gardens, Calcutta.

VOLUNTEER CORPS.

APPOINTMENTS.

No. 115.—*Calcutta Light Horse*—

Troop Sergeant-Major George Charles Hodgson to be Second Lieutenant.

No. 116.—*Calcutta Volunteer Rifle Corps*—

Messrs. Alfred Burton Truefitt and Walter Gasper Gregory to be Second Lieutenants, to complete the establishment.

PROMOTIONS.

No. 121.—*Calcutta Volunteer Rifle Corps*—

Lieutenant Martin Zachariah Martin to be Captain, and Second Lieutenants James Thomas Meade, John James FitzWilliam, Marcus Tullius Cox and Henry Albert Stewart to be Lieutenants, to complete the establishment.

E. H. H. COLLEN,
Secretary to the Govt. of India.

[REGISTERED No. 29.]

No. 8 of 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 19, 1890.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 165A.

GENERAL.—*The 13th February* 1890.—Baboo Soshi Sikar Dutt, Deputy Magistrate and Deputy Collector, Kandi, Moorshedabad, is allowed leave for two months, under section 370 of the Civil Service Regulations, with effect from the date on which he availed himself of it.

Mr. C. Johnston, Assistant Magistrate and Collector, Moorshedabad, is appointed temporarily to have charge of the Kandi sub-division of that district, during the absence, on leave, of Baboo Soshi Sikar Dutt, or until further orders.

The 15th February 1890.—Mr. C. A. Wilkins, District and Sessions Judge, Bhagulpore, on leave, is appointed to act, until further orders, in the first grade of District and Sessions Judges, with effect from the 13th instant, *vice* Mr. J. R. Hallett.

Mr. C. S. Bayley, Joint-Magistrate and Deputy Collector, is promoted substantively *pro tempore* to the first grade of Joint-Magistrates and Deputy Collectors, with effect from the 28th January 1890, *vice* Mr. F. A. Slack, on deputation, but will continue to be seconded.

Mr. E. B. Harris, Joint-Magistrate and Deputy Collector, Mozufferpore, is promoted substantively *pro tempore* to the first grade of Joint-Magistrates and Deputy Collectors, with effect from the 28th January 1890, *vice* Mr. C. S. Bayley, on deputation.

Mr. W. R. Bright, Assistant Magistrate and Collector, on furlough, is appointed substantively *pro tempore* to be a Joint-Magistrate and Deputy Collector of the second grade, with effect from the 28th January 1890, *vice* Mr. E. B. Harris.

The 18th February 1890.—Mr. T. D. Beighton, District and Sessions Judge, Dacca, is allowed furlough for seven months, under article 340 of the Civil Service Regulations, with effect from the 21st March 1890, or such subsequent date as he may avail himself of it.

Mr. A. E. Staley, Joint-Magistrate and Deputy Collector, is posted temporarily to the Sudder station of the district of the 24-Pergunnahs.

Mr. Staley is appointed to act as District and Sessions Judge of Dacca, during the absence, on furlough, of Mr. T. D. Beighton, or until further orders.

The following officers are appointed provisionally under Statute 33 Vic., Cap. 3, to be Assistant Magistrates and Collectors:—

Rai Nund Kissore Das, Bahadoor, Assistant Superintendent, Tributary Mehals, Cuttack.

Mr. Taheiruddin Ahmed, Barrister-at-Law, Officiating Additional Munsif of Dacca.

Rai Nund Kissore Das, Bahadoor, will continue to act in his present appointment of Assistant Superintendent of the Tributary Mehals, Cuttack, until further orders.

Mr. W. Maude, Officiating Joint-Magistrate and Deputy Collector, Tajpore, Durbhunga, is posted temporarily to the Chota Nagpore Division.

Mr. S. L. Maddox, Assistant Magistrate and Collector, Patna, is appointed temporarily to have charge of the Tajpore sub-division of the Durbhunga district, with effect from the forenoon of the 14th instant.

Mr. J. Windsor, Assistant Magistrate and Collector, Chumparun, is vested with the powers of a Collector under Act X of 1870 in the Bettiah sub-division of that district.

POLICE.—*The 13th February* 1890.—Mr. W. F. S. Allen, Officiating Assistant Superintendent of Police, Hazaribagh, is transferred to the district of Lohardugga, with effect from the date on which he joined his appointment.

The 14th February 1890.—Mr. R. L. Ward, Assistant Superintendent of Police, in charge of the district police of Bogra, is transferred to Pubna, and appointed to have charge of the district police of that district until further orders.

Baboo Jadub Chunder Deb, Assistant Superintendent of Police, 24-Pergunnahs, is transferred to Bogra, and appointed to have charge of the district police of that district until further orders.

Inspector Jinnat Hossein Khan is promoted from the third to the second grade of Inspectors, with effect from the 19th December 1889, *vice* Mr. R. H. Conran, retired.

The 18th February 1890.—In modification of the order dated the 21st January 1890, Mr. C. E. Gouldsbury, District Superintendent of Police, Purneah, is transferred to Julpigoree.

The following reversions of Police Officers are sanctioned:—

With effect from the 23rd January 1890, consequent on the return from leave of Colonel W. L. N. Knyvett, Deputy Inspector-General—

Mr A. H. Giles, Officiating Deputy Inspector-General, to the first grade of District Superintendents.

Mr. W. H. Cornish, Officiating first grade District Superintendent, to the second grade.

Mr. J. B. Goad, Officiating second grade District Superintendent, to the third grade.

Mr. H. Munro, Officiating third grade District Superintendent, to the fourth grade.

Mr. G. B. Havelock, Officiating fourth grade District Superintendent, to the fifth grade.

Mr. F. H. Tucker, Officiating fifth grade District Superintendent, to the first grade of Assistant Superintendents.

Mr. C. C. Plowden, Officiating first grade Assistant Superintendent, to the second grade.

With effect from the 25th January 1890, consequent on the return from leave of Mr. F. Wilcox, second grade District Superintendent—

Mr. A. E. C. Bolst, Officiating second grade District Superintendent, to the third grade.

Mr C. A. Fisher, Officiating third grade, to the fourth grade.

Mr. I. H. W. D. Clark, Officiating fourth grade District Superintendent, and with him Mr. R. F. Guise, Officiating fourth grade District Superintendent, to the fifth grade.

Mr. A. S. Judge, Officiating fifth grade District Superintendent, to the first grade of Assistant Superintendents.

Mr. A. Shuttleworth, Officiating first grade Assistant Superintendent, to the second grade.

JAILS.—*The 18th February* 1890.—Mr. H. M. Owen, Assistant Superintendent of the Bhagulpore Central Jail, is allowed leave for six months, under article 370 of the Civil Service Regulations, with effect from the date on which he may avail himself of it.

REGISTRATION.—*The 15th February* 1890.—Baboo Hari Prasanna Gupta, acting Rural Sub-Registrar of Bhatiyari, in the district of Chittagong, is confirmed in that appointment.

EDUCATION.—*The 18th February* 1890.—Mr. N. L. Hallward, M A., is appointed to be a member of the Bengal Educational Service and is posted as Professor in the Dacca College.

Mr. H. R. James, M. A., is appointed to be a member of the Bengal Educational Service and is posted as Professor in the Patna College.

ZOOLOGICAL.—*The 18th February* 1890.—Colonel J. Waterhouse is appointed to be a member of the Committee of Management of the Zoological Gardens at Alipore.

MEDICAL.—*The 15th February* 1890.—Assistant Surgeon Gunga Gobind Sarkar is appointed temporarily to have medical charge of the civil station of Bogra, with effect from the forenoon of the 3rd December 1889.

The 17th February 1890.—Assistant Surgeon Tamizuddin Ahmed, of the Bengal Provincial establishment, is transferred to the Imperial establishment.

The following notification is republished from the *Assam Gazette*:—

No. 293*R.*—*The 5th February* 1890.—Under the provisions of section 127 of the Assam Land and Revenue Regulation, 1886, the Chief Commissioner invests Mr. H. LeMesurier, Assistant Commissioner, Cachar, with the power to attach and sell moveable property under section 69 of the Regulation.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT.—(FORESTS.)

NOTIFICATION.

The 4th February, 1890.—Whereas by the notifications severally specified below, the undermentioned forests, situated in the Darjeeling district, were declared to be Reserved forests under the sections of the Indian Forest Act (VII of 1878) recorded against each of them, and whereas the Lieutenant-Governor is not satisfied as to the manner in which enquiries regarding rights in the said forests have been recorded, he is pleased to appoint the Deputy Commissioner of Darjeeling to be the Forest Settlement Officer, who will, under the provisions of Chapter II of that Act, determine the boundaries to be finally laid down, and enquire into and determine the existence, nature, and extent of any rights alleged to exist in favor of any person in, or over, any land comprised within the boundaries specified below, or in, or over, any forest produce to be found therein in cases where claims to such rights are preferred by any individual or community under section 6 of the said Act; and will also himself ascertain, as far as possible, and enquire into the existence of any rights mentioned in sections 4 or 5 of the said Act, within the said boundaries, which are not claimed under section 6, so far as the same may be ascertainable from the records of Government and the evidence of any persons likely to be acquainted with the same; and will otherwise perform the duties of a Forest Settlement Officer under that Chapter.

The Lieutenant-Governor is further pleased, under section 16 of the Indian Forest Act, to appoint the Commissioner of the Rajshahye Division to hear appeals from the decisions of the Forest Settlement Officer as above appointed.

(1) GOOMPAHAR FOREST.

(Includes lands described in notifications under the Indian Forest Act:—Section 34, dated the 23rd January, 1879, as Goompahar forest, exclusive of area mentioned in notification dated the 24th November, 1884 under section 26; section 19, dated the 19th July, 1880, as Pograinbong forest, and section 19, dated the 16th December, 1883 as Goom forest)

Description of boundaries.

North.—The source of the Little Rangit river, (Nepal frontier pillar No. 21 at Mani Bhanjan), down that river till it meets the boundary of the Permaigiri khas land; then a demarcated line eastwards along the southern boundaries of the following lands:—Permaigiri khas land, Mim Tea Estate, Tumsong khas land, Lingia Tea Estate, Khail Tea Estate, Christina Tea Estate, Rishihat khas land, Burbattia khas land to the Kuhil Jhora; then the Kuhil Jhora to the Hill Cart Road.

East.—The Hill Cart Road; then a demarcated line passing round Batasidhara village to the north-west boundary point of the Goom Tea Company's location; along the boundary of that location to the Goompahar ridge; across that ridge to the old (Upper) Goompahar Cart road; along that road to the head of a small jhora tributary to the Bing jhora; and down the small jhora to the south boundary.

South—A demarcated line separating the forest from the following lands:—Tungsong and Pubong Tea Estates, Palongdong and Pagraingbong khas lands to the Nagri ridge at the head of the Kundongbong jhora; the Silimbong and Chamang Tea Estates, and the lands leased to Atchay Lall Moodi to the Nepal frontier.

West.—The Nepal frontier to the starting point.

(2) SENCHAL FOREST.

(Includes the Senchal, Rangirun, Pachim, Sonada and Rungbul blocks of the Rangnu Tukdah and Senchal forest, notified under section 34 in the notification of the 23rd January, 1879, and the Dooteria forest, notified under section 34 in the notification of same date.)

Description of boundaries.

North-West—From the boundary post on the Bing jhora, up that jhora to the saddle at Jor-bungalow, skirting and excluding the bazar and Raja of Burdwan's land; then down the Rangnu river to its junction with the Senchal jhora.

North-East—Up the Senchal jhora to the Pashok road; then along the Pashok road to the Sureil turning; then up the ridge to Tiger Hill and on to Senchal G. T. S.; then down the main Senchal ridge to the head of the Rishap (or Sureil) spur at the source of the Runum jhora; down that jhora to the old Military road.

South—The old Military road to the Pachim jhora; then a demarcated line to the old cart road trace; then along that trace to its junction with the Darjeeling-Himalayan Railway near the Rungmuk jhora; then the Darjeeling-Himalayan Railway (excluding road location) to the Dooteria spur at the top of Dooteria path; then the north boundary of the Dooteria Tea Estate to the starting point.

Note.—The Kinchintongdhara north and south blocks, which were declared to be Reserved forest in the notification, dated the 30th March, 1886, under section 19 of the Act, also form part of the Senchal forest.

(3) TUKDAH FOREST.

(Includes the Rangirun, Dawaipani, Tukdah, Hoom, Poomong, Runjo (part), Tiger hill, Rangbi and Rishap (part) blocks of the Rangirun, Tukdah and Senchal forest, notified under section 34 in the notification of the 23rd January, 1879, and parts of the additions made to that forest by the notifications under section 19, dated the 25th March, 1881 [parts of the Runjo and Rishap blocks.)]

Description of boundaries.

North—From the point on the Senchal jhora at the south of the land leased to Mr. Wilson, along the eastern boundary of the land so leased to the Rangnu river; the Rangnu river to its junction with the Kejok jhora; then along boundaries of the Charlesfield, mineral springs and Tukdah Tea Estates, and the Tukdah and Lopchu khas lands.

East—A demarcated line separating the forest from the Mangwa, Linding and Hoom khas lands; then from the Rangli Rangliot Tea Estate, and from the Poomong Government land to the Rangjo river; then a continuation of the line up to the Sureil road; then, along that road to a point about a mile from the Sureil bungalow; then a line due south to the top of the Rishap spur.

South—Along the crest of the Rishap spur to the head of the Runum jhora.

West—From the Runum jhora to the Senchal jhora, along the eastern boundary of the Senchal forest.

(4) MAHALDERAM FOREST.

(Includes the Sepoydhura and Chattakpur blocks of the Rangirun, Tukdah and Senchal forest as notified in the notification under section 34, dated the 23rd January, 1879, and part of the additions to the same made by the notifications under section 19, dated the 25th March, 1881, [now known as the Suriel and Mamrim blocks.)]

Description of boundaries.

North—Senchal and Tukdah forests.

East—A demarcated line running due south from a point on the Rishap ridge to the Sureil-Kurscong road; then that road to a point a short distance south of the Reaing river; then a straight demarcated line across the Mamrim valley to a survey point (stone post No. 66) on the Mahalderam-Sitong spur.

South—The Mahalderam-Sitong ridge to the old Military road; then southwards along that road to the north demarcated boundary of the Raja of Burdwan's land; then along that demarcated boundary to the Darjeeling-Himalayan Railway.

West—The Darjeeling-Himalayan Railway to the Runum jhora, excluding locations along the Hill Cart Road.

(5) RANGIT FOREST.

(Includes lands described in notification, dated the 23rd January, 1879, under section 34, as the Badamtam and Seem forests, and the Sumbong and Pashok blocks of the Sumbong, Pashok and Giljong forests.)

Description of boundaries—Badamtam block.

North—The Rangnit and Great Rangit rivers.

East—The Rangnu river.

South—The Rangnu river and the Badamtam Tea Estate.

West—The Badamtam Tea Estate.

Seem block.

North—A demarcated line from the Pusongpung spur to the Sumbong spur.

East and South-east—A demarcated line along the Sumbong spur meeting the boundary of the Sumbong block.

South-West and West—A demarcated line along the Pusongpung spur.

The Sumbong and Pashok blocks.

North—The Great Rangit river.

East—The Teesta river.

South—The Rangiak jhora; then a demarcated line along the boundary of the Pashok Tea Estate; then the Rungbong jhora; then a demarcated line along the boundary of the Lopchu Tea Estate to the Sumbong spur, on which it meets the boundary of the Seem block.

West—A demarcated line following the boundaries of the Glenburn and Sumbong Tea Estate to the Great Rangit river.

(6) MANGWA FOREST.

(Part of the land included in the notification, dated the 23rd January, 1879, under section 34, as the Sumbong, Pashok and Giljong forest.)

Description of boundaries.

North—The Rangiak jhora.

East—The Teesta river.

South—The Rangnu river.

West—A demarcated line along the boundary of the Linding and Mangwa Government waste lands.

(7) REAING FOREST.

(Part of the land included in the notification, dated the 23rd January, 1879, under section 34, as the Sumbong, Pashok and Giljong forest, known as the Rangnu and Reaing blocks, and the Berrik block, forming part of the land so notified as the Sukna-Teesta forest.)

Description of boundaries.

North—The Rangnu river.

East—The Teesta river.

South—The foot-path from the Teesta valley to Mongpu, from the Teesta river to the Reaing river.

West—The Reaing and Rangjo rivers; then a demarcated line forming also the boundary of the lands in the occupation of the Teesta Valley Tea Company.

(8) SITONG AND SIBHOK HILLS FOREST.

(Part of the land included in the notification, dated the 23rd January, 1879, under section 34, as the Sukna-Teesta forest, and known as the Kundong (part), Sitikhola, Numbong, Sitong, Andera, Ruyem, Chawa, Gola and Upper Ghoramara blocks, and an addition to the Kundong block of that forest, notified under section 19 in the notification dated 30th April 1881.)

Description of boundaries.

North—The foot-path from Mongpu to the Teesta Valley, from the Reaing river to the Teesta river.

East—The Teesta river.

South—The Sibhok or Chawa river; then the spur or ridge drained on the north by that river to the Latpunjor spur; then up that spur to Latpanchor, and along the ridge to Sitong.

West—A demarcated line forming the boundary of the land in occupation of the Government Cinchona Department; then the Reaing river.

(9) RILLI FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Nazzeokh and Tunang forests, and part of the Teesta-Cnel forest, notified under section 19 in notification, dated the 17th June, 1881, now known as the Gooling and Ponbu blocks.)

Description of boundaries.

North and West—The Rilli river and the Teesta river.

East—A demarcated line along the ridge from the junction of the Rere Oong with the Rilli river to Tunang; then along a ridge from Tunang to the junction of the Nuboong and Rey Oong rivers; then along the watershed between the Seth and Siok jhoras; then along the watershed between the Door and Siok jhoras to the trigonometrical station at Nazzeokh; then along the watershed between the Gooling and Runeyoth jhoras to the Runeyoth jhora, and southward across that jhora to the ridge forming the watershed between the Runeyoth and Peen jhoras, and along that watershed to Ramtik; then along a spur to the junction of the Ramtik and Pursum jhoras.

South—The Pursum jhora.

(10).—KALIMPONG FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Rinkinpung and Kalimpong forests.)

Description of boundaries.

North.—The Teesta river.

East.—The Tor Chu; then a demarcated line running nearly parallel to the Teesta river at a distance from about half to one mile to the head of the Seerjam Chu; then following a ridge to Rinkinpung trigonometrical station and another spur running in an easterly direction to the Rilli river; then the Rilli river to its junction with the Rere Oong.

South.—The Rilli river.

West.—The Teesta river.

(11).—DUMSONG FOREST.

(Includes the land described in the notification, dated the 23rd January, 1879, under section 34, as the Dumsong forest)

Description of boundaries.

North.—The Rungpo Chu.

East.—A demarcated line on a ridge from the Rungpo Chu passing by Kabu and Pedong hill to the road at Dochung; then along the road from Dochung towards Kalimpong.

South.—A demarcated line running from the Dochung-Kalimpong road to the watershed between the Teesta and Rilli rivers, meeting that watershed about three quarters of a mile south-west of Echa; then generally running first in a northerly and then in a westerly direction to the Tor Chu.

West.—The Tor Chu and the Teesta river.

(12).—RISSOOM FOREST.

(Includes the lands described in the notification dated the 23rd January, 1879, under section 34, notified as the Payong and Mayrong forests, and part [Rissoom and Khempung blocks] of the Khempung forest).

Description of boundaries.

North.—The Dumsong forest; then a demarcated line from the boundary of the Dumsong forest running from the old Pedong-Kalimpong road to the Pakathaw Monastery.

East and South.—A demarcated line along the watershed of the Mayrong Chu and Rushett Chu to a point near Ladam; then the same watershed for about one mile to the head of the Singkáuim Chu; then the ridge at the head of the Rilli river to the Labah ridge

South.—The watershed between the Rilli river and the Jeet Chu and Chumung Chu to the head of the Hool Chu.

West.—Down the ridge east of the Hool Chu to the Rilli river; then the Rilli river to its junction with the Singkauim Chu; then a demarcated line to the starting point.

(13).—LOOLAGAON FOREST.

(Includes the lands described in the notification dated the 23rd January, 1879, under section 34, as the Loolagaon forest and part [the Siehoor block] of the Khempung forest, also part [the Pemling, Bokhim, and Chumung blocks] of the Jeet and Chee Chu forest, which was declared to be a Reserved forest under section 19 by the notification of the 28th August, 1882.)

Description of boundaries.

North.—The Rilli river; then the Khempung block of the Rissoom forest to Nunkfoo trigonometrical station.

East and South.—Down the ridge southwards from the Nunkfoo trigonometrical station to a demarcated line continuing westwards from the south-west point of the boundary of the Labah block, Pankasari Reserved forest round the heads of the valleys of the Chumung Chu, Mahaka Chu, Purmagree jhora, and other streams running into the Ghees Nadi, and of the Turoo Oopg, to a point on the watershed of the Rilli river on one side and the Jeet and Lessoo rivers on the other side.

West.—A demarcated line passing west of Rieun trigonometrical station to the Rere Oong, then to the Rungno Chu, and then northwards to the Rilli river, which forms part of the north boundary.

(14).—DHOBIJHORA FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Dhobijhora forest, and the addition to the same gazetted under section 19 in the notification dated the 8th November, 1883.)

Description of boundaries.

North.—The Old Kurseong-Darjeeling Military road.

East.—A demarcated line separating the forest from Juman Sing's lands.

South.—A demarcated line separating the forest from the land known as Giddapahar.

West.—A demarcated line to the Old Kurseong-Darjeeling Military road, separating the forest from land of the Castleton Tea Estate; then the Old Kurseong-Darjeeling Military road, excluding the land demarcated out as the Dow Hill Government school location.

(15).—SIBA KHOLA FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Sibakhola forest.)

Description of boundaries.

North-East.—The Sibakhola river.

South.—A demarcated line separating the forest from the lands of the Gayabari Tea Estate and of the Maharajah of Burdwan known as Kurjung.

West.—The Hill Cart Road.

(16).—MANJUA FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Manjua forest [excluding the land described in the notification under section 26 by the notification dated the 18th February, 1882], and the addition to that forest which was declared under section 19 in the notification dated the 10th August, 1883.)

Description of boundaries.

North.—A demarcated line separating the forest from the remainder of the land known as Pinglu Tar.

East.—The Balasan river.

South.—A demarcated line from the junction of the Kalijhora and the Balasan river, separating the forest from the lands in the occupation of the new Fallodhi Tea Estate.

West.—A demarcated line separating the forest from the lands in the occupation of the Singbulli and Murmah Tea Estates.

(17).—KOOHEIN FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Koohein forest.)

Description of boundaries.

North.—A demarcated line from the Mechi river to the south-east corner of the Rangdo Estate, separating the forest from the lands of that estate.

East.—A demarcated line separating the forest from the lands of the Phugurhi Tea Estate.

South.—The Kuhein jhora.

West.—The Mechi river (Nepal frontier).

(18).—MANJHA FOREST.

(Includes the lands describedin the notification, dated the 23rd January, 1879, under section 34, as the Khyrbani and Lohaguree forests; also the lands described in that notification as the Manjha forest with the modifications in the Manjha forest made by the following notifications:—Additions under section 19, by notifications dated 10th August 1883 [9 acres] and dated 26th May, 1886, [1·75 acres]; exclusions under section 26, by notifications dated 18th February, 1882, [34 acres]; 6th June, 1885, [1·75, acres]; 29th December, 1885, [3 acres], and 12th March, 1887, [1·75 acres].

Description of boundaries.

North.—A demarcated line separating the forest from the lands in the occupation of the Tingling Tea Estate; then to a stream tributary to the Potong jhora; then that stream to its junction with the Potong jhora; then the Potong jhora to where the demarcated line separating the lands in the occupation of the new Fallodhi Tea Estate from the forest takes off from that jhora; then the said demarcated line to the Balasan river.

East.—A demarcated line on the Balasan river.

South.—A demarcated line separating the forest from the Balasan block of the Balasan forest, and from the lands in the occupation of the New Terai Tea Association, Indian Terai Tea Company, and Manjha Tea Estate.

West.—The boundary of the Central and Upper Mechi blocks of the Mechi forest; then demarcated lines separating the forest from the lands in the occupation of the Mechi and Lohagarhi Tea Estates to the Mechi river; then the Mechi river.

(19).—MECHI FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Mechi forests [two areas] and a detached area [the Surjbur forest]; also the additions to the Mechi forest made by the notifications under section 19, dated the 12th August, 1880, of the areas named Nipania and Gurabadi).

Description of boundaries.

North.—A demarcated line starting from the Mechi river forming part of the west boundary of the lands in the occupation of the Mechi Tea Estate.

East.—The Lohagurhi block of the Manjha forest; then a demarcated line separating the forest from the lands in the occupation of the Manjha, Morapur and Nipania Tea Estates.

South.—A demarcated line following the boundaries of adjoining jote lands to the Mechi river (Nepal frontier).

West.—The Mechi river (Nepal frontier).

Surjbur block.

North, East and South.—A demarcated line following the boundaries of adjoining jote lands.

West.—The Mechi river (Nepal frontier).

(20).—BALASAN FOREST.

(Includes part of the lands described in the notification dated the 23rd January, 1879, under section 34, as the Balasan and Dulkajhar forest, [the areas now known as the Balasan and Tarabari blocks].

Description of boundaries.

North.—A demarcated line across the Balasan river from Panighatta to the New Terai Tea Company's godown.

East.—A demarcated line separating the forest from lands leased for tea cultivation and from jote lands.

South.—A demarcated line across the New and Old Balasan rivers to the right bank of the latter.

West.—A demarcated line following approximately the right bank of the Balasan river, and forming also the boundary of the Tirihana block of the Pantapari forest; M and M Terai Tea Estate and New Terai Tea Association lands.

(21).—DALKAJHAR FOREST.

(Includes part of the lands described in the notification dated 23rd January 1879, under section 34, as the Balasan and Dalkajhar forest [viz., the areas now known as the Khadma, Taipu, Dalka (part), Central, Lalfa Bagdogra (part), Harlia, Dauhara (part), Bengdubi (part), and Rishabari (part) blocks]; also the additions to that forest made by the notifications under section 19, dated 12th August 1880, of the following lands:—Rishabari, Major Wardroper's and Kanoo Chowdry's jotes [forming parts of the areas now known as the Rishabari, Bagdogra and Bengdubi blocks]; Multa forest [forming the present Multa block and part of the Dalka block]; and the portions of the Bengdubi forest [forming parts of the present Dauhara and Bengdubi blocks].)

Description of boundaries.

North.—A demarcated line from the Rakti Nadi forming the boundaries of Jabra Khadma, Ord-Terai and Tirihana Tea Estates; then by the Tirihana block of the Pantapari forest.

East.—The Pantapari and Boiranti blocks of the Pantapari forest; then the Harlia Nadi.

South.—A demarcated line to the Taipu Nadi; then the Taipu Nadi to its junction with the Kaldor Nadi on the boundary between Sanesi Than and Kishtapur Tea Estates; then the Kaldor Nadi; then a demarcated line to the junction of the Lalfa with the Multa Nadi.

West.—The Multa Nadi; then a demarcated line excluding Jhakuadhura jote and across the Multa Nadi to the Rakti Nadi; then the Rakti Nadi.

Note.—From the area included in the above boundaries, the following jotes are excluded by demarcation:—

(1). Shamlal; (2). Tepua Chamaru; (3). Ragho.

(22).—PANTAPARI FOREST.

(Includes part of the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Balasan and Dalkajhar forest [the portion now known as the Tirihana block]; also part of the lands described in the notification of 12th August 1880 under section 19, as the Bengdubi forest [the portions now known as the Pantapari, Latua Boiranti and Barobhita blocks].)

Description of boundaries.

North.—The Tarabari block of the Balasan forest.

East.—The left bank of the Old Balasan river.

South.—A demarcated line from the left bank of the Old Balasan river to the Harlia Nadi, separating the forest from jote lands.

West.—The Bengdubi and Dauhara blocks of the Dalkajhar forest; then a demarcated line separating the forest from the Tirihana and M and M Terai Tea Estates.

(23).—BAMONPOKRI FOREST.

(Includes the lands described in the notification dated the 23rd January, 1879, under section 34, as the Bamonpokri forest.)

Description of boundaries.

North.—A demarcated line separating the forest from lands known as Mount Pereira.

East.—The Rakti Nadi.

South.—A demarcated line from the Rakti Nadi to the Rangichung Nadi, separating the forest from lands in the occupation of the Marionbari Tea Estate.

West.—The Rangichung Nadi.

(24).—Rakti FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Rakti Forest.)

Description of boundaries.

North.—The Silligori-Pankabari road.

East and South-East.—The eastern branch of the Rakti river.

West.—The Rangichung and Bissurbatti jhoras; then a demarcated line east to the Rangichung jhora; then that jhora; then another demarcated line east to the junction of the two branches of the Rakti river; then the Rakti river.

(25).—LAMAGUMBA FOREST.

(Includes the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Lamagumba Forest.)

Description of boundaries.

North and East.—A demarcated line from the junction of the Chochi jhora with the Rohoni river separating the forest from the lands in the occupation of the Selim Hill Tea Estate.

South.—A demarcated line separating the forest from the lands in the occupation of the Lamagumba Tea Estate.

West.—The Rohoni river.

Note.—From the area described within the boundaries above given is excluded the location of 6 acres, 2 roods, 3 poles, held by the Selim Tea Company.

(26).—SUKNA FOREST.

(Includes a portion of the lands described in the notification, dated the 23rd January, 1897, under section 34, notified as the Sukna-Teesta forest, now known as the Kuklong, Sukna, Rungdung, Kynanuka, Adulpur and Chamta blocks.)

Description of boundaries.

North.—A demarcated line starting from the point of the Gumti on the Hill Cart Road at the head of the Kuklong Nadi along the Hill Cart Road for a short distance, and then across the Rungdung valley to the junction of the Chibla Khola with the Punchanai river, the whole forming the boundary between the forest and the lands in the occupation of the Sepoydhura Tea Estate.

East.—The Panchanai river to the north-east point of the Kynanuka jote boundary; then a demarcated line along the boundaries of that jote round to the Sukna trigonmetrical station on the Hill Cart Road; then the Hill Cart Road to a point near Methibari.

South.—A demarcated line separating the forest from Methibari and Chamta Tea Estates to the Chamta Nadi.

West.—The Chamta Nadi to the Sukna-Adulpur road; then a demarcated line to the Kuklong Nadi skirting the village lands of Kynanuka; then the Kuklong Nadi, which separates the forest from the lands in the occupation of the Terai Tea Company, Terai Tea Association, and Selim Hill Tea Estate.

(27) —MAHANADI FOREST.

(Includes a portion of the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Sukna-Teesta forest, now known as the Pundig, Mahanadi, Mohurgong, Hatisurra and Panchanai blocks.)

Description of boundaries.

North.—A demarcated line from the Panchanai river to the Mahanadi river, separating the forest from the lands in the occupation of the Narbong Tea Estate.

East.—The Mahanadi river to the Sukna-Teesta road crossing.

South.—A demarcated line along that road to the Panchanai river.

West.—The Panchanai river.

(28).—CHAMPASARI FOREST.

(Includes a portion of the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Sukna-Teesta forest, now known as the Gulma, Singimari, Upper Champasari and Lower Champasari blocks.)

Description of boundaries.

North.—The Sukna-Sibhok forest road from the Mahanadi river to the Gulma river.

East.—The Gulma river to the Sukna-Teesta road crossing at Champasari.

South.—A demarcated line along the Sukna-Teesta road to the Mahanadi river.

West.—The Mahanadi river.

(29).—CHOKLONG AND LATPANCHOR FOREST.

(Includes a portion of the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Sukna-Teesta forest now known as the Lower Ghoramara, Gulma valley, Choklong, Jogijhora, Kuhi, Bandarjhola, Mana (part) and Latpanchor blocks; also the lands gazetted under section 19, in the notification, dated the 12th August, 1880, as the Manering forest, now forming part of the Mana block)

Description of boundaries.

North.—A demarcated line along the Mamrim ridge from the north-east point on the boundary of the Mahalderam Tea Estate to Sitong Hill.

East.—The Mimbong and Sitong blocks of the Sitong forest, and the Upper Ghoramara and Chawa blocks of the Sibhok Hill forest; then the boundary between Darjeeling Hills and Terai pergunnahs to the Sukna-Sibhok forest road.

South.—The Sukna-Sibhok forest road, from the Ghoramara Nadi to the Mahanadi river.

West.—The Mahanadi river and Manajhora; then a demarcated line forming part of the east boundary of Mahalderam Tea Estate.

(30).—SIBHOK FOREST.

(Includes a portion of the lands described in the notification, dated the 23rd January, 1879, under section 34, as the Sukna-Teesta forest, now known as the Janaikuri, Somardanga, Sibhok North, Sibhok East, Sibhok West, and part of the Shilibhita blocks; also the lands gazetted under section 19, in the notification, dated the 12th August, 1880, as the Shilibhita forest, now forming part of the Shilibhita block)

Description of boundaries.

North.—The Sibhok or Chawa river.

East.—The Teesta river along the boundary between the Darjeeling and Julpigori districts.

South.—The Janaikuri Nadi; then a demarcated line to the junction of the Jial jhora with the Ghoramara Nadi; then the Ghoramara Nadi to its junction with the Gulma river.

West.—The Gulma river to the Sukna-Sibhok forest road; then the boundary between Darjeeling Hills and Terai pergunnahs to the Sibhok river.

P. NOLAN,
Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT—(OPIUM).

NOTIFICATION.

The 17th February, 1890.—It is hereby notified that at the examination for admission into the Opium Department held simultaneously at Calcutta and Allahabad in January, 1890, in pursuance of the notification dated the 5th October, 1889, the following candidates passed and obtained the highest aggregate of marks :—

(1) Mr. Albert Datta.
(2) „ Alfred Burt.
(3) „ A. H. Biss.
(4) „ J. E. Powell.

These gentlemen will be appointed to fill vacancies in the Opium Department as they occur, according to the order in which their names appear. The last named will, however, be appointed after the native gentleman to be selected by the Lieutenant-Governor has been appointed, as stated in paragraph 7 of the above-quoted notification.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—The Lieutenant-Governor directs, under section 101 of the Bengal Tenancy Act VIII of 1885, that a survey shall be made and a record of rights prepared in respect of all lands included in the boundaries of the following estate in the district of Nuddea :—

Name of estate.	Situation in pergunnah.
841, Chur Goalgram.	Shahanjial.

The particulars to be recorded in the survey and record of rights shall be the following :—

1. The name of each tenant.
2. The class to which he belongs : that is to say, whether he is a tenure-holder, ryot holding at fixed rates, occupancy ryot, non-occupancy ryot or under-ryot; and if he is a tenure-holder, whether he is a permanent tenure-holder or not, and whether his rent is liable to enhancement during the continuance of his tenure.
3. The situation, quantity and boundaries of the land held by him.
4. The name of his landlord.
5. The rent payable.
6. The mode in which that rent has been fixed, whether by contract, by order of a Court, or otherwise.
7. If the rent is a gradually increasing rent, the time at which, and the steps by which, it increases.
8. The special conditions and incidents, if any, of the tenancy.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—With reference to the Government notification dated the 17th February 1890, published in the *Calcutta Gazette* of the 19th February 1890, the Sub-divisional Officer of Kushtea is hereby appointed under rule I, Chapter VI of the rules made by Government under the Bengal Tenancy Act, to be the Settlement Officer of Estate Goalgram, No. 841, in the district of Nuddea.

P. NOLAN,
Secretary to the Govt. of Bengal.

DECLARATION.

The 17th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for the Sherpur Town Post Office in the village of Sherpur, pergunnah Sherpur, zillah Mymensingh, it is hereby declared that for the above purpose a piece of land measuring, more or less, 1 bigah 13 cottahs and 4 chittacks of standard measurement, bounded on the north by a ditch and unoccupied homestead land of Har Kumar Chaudhri; on the south by a drain and a road belonging to Krisna Chandra Patranavis; on the west by a Municipal tank and the school compound; and on the east by a drain and a road belonging to Krisna Chandra Patranavis, is required within the aforesaid village of Sherpur.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

P. NOLAN,
Secy. to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 166A.

The 12th February 1890.—Baboo Satkari Haldar, B.L., is appointed to act as a Munsif in the district of the 24-Pergunnahs, to be ordinarily stationed at the Sudder station of that district, during the absence, on leave, of Baboo Revati Churn Banerjee, or until further orders.

The 15th February 1890.—Baboo Amar Chunder Mukerjee, Munsif of Palamow, in the district of Lohardugga, is vested with the powers of a Magistrate of the second class.

The orders of the 22nd and the 25th January 1890, published in the *Calcutta Gazette* of the 29th idem, granting Baboo Gopi Krishna Banerjee, Munsif of Bagirhat, in the district of Jessore, leave on medical certificate for two months, and appointing Baboo Satkari Haldar, B.L., to act as Munsif of Bagirhat, are cancelled.

Baboo Ananta Ram Ghose, Munsif of Gya, is appointed to act as Subordinate Judge of Dinagepore, during the absence, on leave, of Baboo Hara Gobind Mukerjee, or until further orders.

Baboo Ananta Ram Ghose is vested with the powers of a Munsif, and with those of a Judge of a Court of Small Causes for the trial of suits cognizable by such a Court up to the value of Rs. 100 within the local limits of the Sudder Munsifi of Dinagepore.

Baboo Gopal Chunder Mukerjee, B.L., is appointed to act as a Munsif in the district of Gya, to be ordinarily stationed at the Sudder station, during the absence, on deputation, of Baboo Ananta Ram Ghose, or until further orders.

Baboo Shanta Nath Bhattacharjea is appointed to be an Honorary Magistrate of the Independent Bench at Nattore, in the district of Rajshahye, and is vested with the powers of a Magistrate of the third class.

Moulvie Obedullah is appointed to be an Honorary Magistrate of the Perozepore Bench, in the district of Backergunge, and is vested with the powers of a Magistrate of the third class.

The Lieutenant-Governor accepts the resignation tendered by Sayed Habibar Rahman of his appointment as an Honorary Magistrate of the Perozepore Bench, in the district of Backergunge.

Baboo Prosonno Chundra Chackravarti is appointed to be an Honorary Magistrate of the Gaibanda Bench, in the district of Rungpore, and is vested with the powers of a Magistrate of the third class.

Baboo Tulsi Dass Mukerjee, Sub-divisional Magistrate, Nilphamari, in the district of Rungpore, is vested, under section 407 of the Code of Criminal Procedure, with powers to hear appeals from convictions by Subordinate Magistrates of the second and third classes.

The 17th February 1890.—Baboo Monmohun Chakravarti, Temporary Deputy Magistrate and Deputy Collector, Pooree, is vested with the powers of a Magistrate of the first class.

The 18th February 1890.—Baboo Tara Prosonno Das, B.L., is appointed to act as a Munsif in the district of Midnapore, to be ordinarily stationed at the Sudder station, during the absence, on leave, of Baboo Kanti Chandra Bhaduri, or until further orders.

Baboo Jogesh Chunder Mookerjee, Officiating Sub-Deputy Collector, Madhubani, Durbhunga, is vested with the powers of a Magistrate of the third class.

Under the authority vested in him by the final clause of section 357 of the Code of Criminal Procedure, Act X of 1882, the Lieutenant-Governor empowers Moulvie Karam Hossein, Officiating Deputy Magistrate, Durbhunga, to take down evidence in criminal cases in the English language.

Baboo Amrita Lal Pal, Subordinate Judge of Gya, is allowed leave for two days under article 306(*b*) of the Civil Service Regulations, in extension of the leave granted to him under the order of the 4th April 1889.

GRANT OF LEAVE TO MUNSIFS.—*The 14th February* 1890.—Baboo Kanti Chandra Bhaduri, Munsif of Midnapore, is allowed leave for two months, under article 306 (*b*) of the Civil Service Regulations, with effect from the 1st February 1890.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION

The 18th February 1890.—It is hereby notified that under the provisions of section 641 of the Code of Civil Procedure (Act XIV of 1882), the Lieutenant-Governor exempts Maharajah Girija Nath Roy of Dinagepore from personal attendance in Civil Courts.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT, BENGAL.

IRRIGATION.

The 17th February 1890.

No 43.—*Notification.*—With reference to Bengal Government Resolution, No. 238*I.A.*, dated the 11th February 1890, appointing a Commission to enquire into certain matters relating to the "Circular and Eastern Canals," and to notification No. 350, dated the 17th September 1889, imposing certain tolls at Khoolna on boats using that route, *it is hereby notified* that the last quoted notification above is cancelled. Final orders on the points under enquiry, which include "the boundaries within which tolls are levied," will be issued subsequently.

No 44.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for constructing a retired line of embankment in the village of Sreenagore, taruf Bansra, pergunnah Medunmull, zillah 24-Pergunnahs, it is hereby declared that for the above purpose a piece of land 2,140 feet long, 132 feet broad, measuring, more or less, 19 bighas 12 cottahs and 5 chittacks of standard measurement, bounded on the north and south by the Government embankment, and east and west by the paddy lands of Baboos Radha Mohun Banerjee and Tarruck Nath Banerjee, is required within the aforesaid village of Sreenagore.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 45.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for constructing a retired embankment in the village of Jehanabad, taraf Bonomallypore, pergunnah Medunmull, zillah 24-Pergunnahs, it is hereby declared that for the above purpose a piece of land 820 feet long, 135 feet broad, measuring, more or less, 7 bighas 13 cottahs and 12 chittacks of standard measurement, bounded on the north and south by the lands of Baboos Bussonto Kumar Roy Choudry and others of Paripore, and east and west by the Government embankment, is required within the aforesaid village of Jehanabad.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 46—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for constructing a retired embankment in the villages of Bahadurpore and Banitola, pergunnah Mooragatcha, zillah 24-Pergunnahs, it is hereby declared that for the above purpose a piece of land 2,267 feet long and 120 feet broad, measuring, more or less, 18 bighas 17 cottahs and 13½ chittacks of standard measurement, bounded on the north, south, and west by the paddy lands of the estate of late Baboo Harraprosaud Choudry, and east by the paddy lands of the above named Choudry and Government embankment, is required within the aforesaid villages of Bahadurpore and Banitola.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

ESTABLISHMENT.

The 17th February 1890.

No. 47.—The following extract from a notification by the Government of India, Public Works Department, is republished for information :—

No. 78, dated the 14th February 1890.—Public Works Department Notification No. 397, dated 20th December 1889, is cancelled.

The following promotions and reversions are made in the Superior Accounts, Branch :—

NAMES.	FROM	TO	WITH EFFECT FROM
Lieut.-Col. H. R. LeM. Carey, s.c.	Examiner, Class IV, grade I temporary.	Examiner, Class IV, grade I, permanent.	8th November 1889.
Mr. W. E. Curry	Deputy Examiner, 1st grade, *sub pro tem.*	Deputy Examiner, 1st grade, permanent.	8th November 1889.

No. 49.—The following notifications by the Government of India, Public Works Department, are republished for information :—

No. 64, dated the 8th February 1890.—*Corrigendum*—In notification No. 390, dated the 13th December 1889, appointing Mr. H. Martindell and Baboo Nogendra Nath Mookerjee, passed students, Seebpore College, to the Public Works Department, *for* Apprentice Engineers, *read* Assistant Engineers, third grade.

No. 72, dated the 11th February 1890.—Mr. A. Greenlees, Assistant Engineer, first grade, State Railways, is permitted at his own request to resign his appointment in the Public Works Department.

No. 75, dated the 12th February 1890.—Mr. E. J. Neuville, Deputy Examiner of Accounts, attached to the office of the Examiner of Public Works Accounts, Burma, is granted furlough out of India for two years, under Article 371 of the Civil Service Regulations.

The 18th February 1890.

No. 50.—Mr. H. Barlow, Assistant Engineer, Buxar Division, is transferred to the Office of the Superintending Engineer, Sone Circle, with effect from the afternoon of the 3rd instant.

No. 51.—*Promotions.*—The Lieutenant-Governor is pleased to make the following promotion and reversions in the Engineer Establishment with effect from the dates specified :—

Names.	From	To	With effect from	Nature of promotion.
Mr. J. P. Coy ...	Assistant Engineer, 1st grade.	Executive Engineer, 4th grade.	30th Nov. 1889 ...	*Sub pro tem.*
„ W. B. Gwyther ..	Executive Engineer, 4th grade, *sub pro tem.*	Executive Engineer, 4th grade (temporary rank).	Ditto ...	Reversion.
„ W. H. Rushton ...	Executive Engineer, 4th grade (temporary rank).	Assistant Engineer, 1st grade.	Ditto ...	Ditto.
„ M. H. Arnott ...	Ditto ditto ...	Ditto ditto ...	3rd Dec. 1889 ...	Ditto.
„ W. A. Inglis ...	Executive Engineer, 2nd grade, *sub pro tem.*	Executive Engineer, 3rd grade.	19th Dec. 1889 ...	Ditto.
„ A. S. Thomson ...	Executive Engineer, 3rd grade, *sub pro tem.*	Executive Engineer, 4th grade.	Ditto ...	Ditto.
„ T. Butler ...	Executive Engineer, 4th grade, *sub pro tem.*	Executive Engineer, 4th grade (temporary rank).	Ditto ...	Ditto.
Rai Sahib Kirth Chunder Chowdry.	Executive Engineer, 4th grade (temporary rank).	Assistant Engineer, 1st grade.	Ditto ...	Ditto.

IRRIGATION.

The 18th February 1890.

No. 53.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for constructing a retired line of embankment at Chatiani, it is hereby declared that for the above purpose a piece of land having an aggregate length of about 4,200 feet by 88½ feet in breadth, measuring, more or less, 25 bighas 15 cottahs and 13 chittacks of standard measurement in the village of Chatiani, pergunnah Plassey, district Moorshedabad, is required.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 54.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for repairing the Bhagirathi embankment at the Baharamgunge Cut in the 38th mile, it is hereby declared that for the above purpose 2 pieces of land measuring, more or less, 10½ cottahs of standard measurement in the village of Baharamgunge, pergunnah Ashudnagore, district Moorshedabad, are required.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 55 —*Declaration*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz for constructing the lower junction retired line of embankment at Mohula, it is hereby declared that for the above purpose a piece of land having an aggregate length of about 3,120 feet by 108 feet in breadth, measuring, more or less, 23 bighas 7 cottahs and 14 chittacks of standard measurement, in the village of Mohula, pergunnah Choonakhally, district Moorshedabad, is required.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Government of Bengal.

RAILWAY.

The 17th February 1890.

No. 48.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the public expense for a public purpose, viz., for a stone-quarry for the Bengal Northern Railway Company, in the village of Kadomdih, pergunnah Patkun, zillah Manbhoom, it is hereby declared that for the above purpose a piece of land measuring, more or less, 14 bigahs 14 cottahs and 10 chittacks, or

equivalent to 4 acres 3 roods and 19 poles (English measure) of standard measurement, bounded on the—

West—By waste land of Kadomdih,
North—By cultivated land,
East—By waste land,
South—By waste and cultivated land of Kadomdih,

is required within the aforesaid village of Kadomdih.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

The 18th February 1890.

No. 52.—It is hereby notified, under section 4 of Act X of 1870, to all whom it may conern, that a survey for a line of railway is about to be made from Sini station on the Bengal-Nagpore Railway in the district of Manbhoom to Howrah, passing near the following places:—

In the Manbhoom district.

Goomharia.		Moholia.
Jugsoli.		Ghatsila.
Domjori.		Narsingurh.
	Chakulia	

In the Midnapore district.

Ektal.		Soosooma.
Gopalpoor.		Midnapore.
Jhargoon.		Boli Chuk.
Dhangoram.		Punch Kura.
	Kola Ghat.	

In the Howrah district.

Bagnan.		Baoria.
Moiskrika Ghât.		Rajgung Hat...
Rajapoor Haut.		Echapoor.
	Howrah.	

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—(MARINE.)

NOTICE.

The 13th February 1890.—Persons intending to make a pilgrimage to Mecca are hereby informed that information has been received by the Government that great distress is at present prevailing in the surrounding country owing to the scarcity of food, consequent upon the want of a sufficient rainfall during the last three years, and that, owing to the forlorn condition of the people, assaults on travellers and merchants on the Jeddah and Mecca roads are now of frequent occurrence.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

NOTIFICATION No. 43Mne.

The 17th February 1890.—In exercise of the powers conferred upon him by section 4, sub-section (1), clause (*b*) of Act X of 1889 (The Indian Ports Act), and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to extend the provisions of section 32 of the said Act to the navigable rivers and channels leading to the port of Calcutta as defined in the notification of this Government, dated the 24th June 1886.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

NOTIFICATION No. 44Mne.

The 18th February 1890.—A competitive examination for admission of one locally selected candidate into the Bengal Pilot Service will be held at the Port Office on the 31st of March 1890, in accordance with the regulations published in the *Calcutta Gazette* of the 24th June 1885, Part I, page 610, and subsequently modified under notification No. 88Mne., dated the 18th June 1889, published at page 526, Part I of the *Calcutta Gazette* of the 19th idem.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

[First Publication]

NOTIFICATION No. 41Mne.

The 17th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R E.,
Secretary to the Government of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 21).

BAY OF BENGAL.

BURMA COAST.

Regarding Savage island light; and a white light on Fakir Point.

IN continuation of Notice to Mariners, Nos. 17 and 18, respectively dated the 4th February 1890, information has been received from the Port Officer, Rangoon, that the transferring of the light on Savage island to the temporary structure having been completed, that light will be exhibited as before. A white light will also be shewn from Fakir Point to guide vessels leaving or entering the port at night.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 15th February* 1890.

[First Publication.]

NOTIFICATION No. 42Mne.

The 17th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secretary to the Government of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 22).

BAY OF BENGAL.

ORISSA COAST.

Inner bar buoy replaced in position.

IN continuation of Notice to Mariners, No. 2, dated the 4th January 1890, issued by this Office, information has been received from the Collector of Customs, Balasore, that the Inner bar (red) buoy has been replaced in position.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 15th February* 1890.

[Second Publication.]

NOTIFICATION No. 31Mne.

The 4th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 17).

BAY OF BENGAL.

BURMA COAST.

Alteration of light on Savage Island—port of Akyab.

IN continuation of Notice to Mariners, No. 14, dated the 27th January 1890, issued this Office, information has been received from the Port Officer, Akyab, that the light Savage island will be obscured from the 27th idem, preparatory to its removal to temporary structure, and will be re-exhibited after 10 to 15 days. During this peric blue light will be burnt every ½ of an hour.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th February* 1890.

[Second Publication.]

NOTIFICATION No. 32Mne.

The 4th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 18).

BAY OF BENGAL.

BURMA COAST.

Blue lights on Savage island discontinued.

IN continuation of Notice to Mariners No. 17, dated the 4th instant, a telegraphic communication has been received from the Port Officer, Akyab, that the blue lights on Savage island were discontinued from the 2nd idem.

By direction of the Government of Bengal,

OLIVER LASH, B.P.,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th February* 1890.

[Second Publication.]

NOTIFICATION No. 38Mne.

The 11th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secy. to the Govt of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 19).

CHINA SEA.

SINGAPORE, WESTERN APPROACH—SALAT SINKI.

Bell buoy withdrawn; and a light-vessel moored on Ajax shoal.

THE British Admiralty has given notice (No. 23 of 1890) that on 1st February 1890 a light-vessel will be moored on Ajax shoal, west side of Salat Sinki, western approach to New harbour, Singapore:—

The light will be a *flashing* white light, showing a *flash every thirty seconds*; it will be elevated 38 feet above the sea, and should be visible in clear weather from a distance of 10 miles.

The light-vessel will be painted yellow, with the word *Ajax* in white letters on a black ground on her sides. She will carry a caged ball, painted red, at the masthead, as a day mark.

Position, lat. 1° 13′ 55″ N., long 103° 40′ 20″ E.

Also, that on the same date, the Bell buoy now marking Ajax shoal will be withdrawn.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 10th February* 1890.

[Second Publication.]

NOTIFICATION No. 39Mne.

The 11th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 20).

BAY OF BENGAL.

CHITTAGONG COAST.

Spar buoy replaced temporarily.

INFORMATION has been received from the Port Officer, Chittagong, that the Spar buoy referred to in Notice to Mariners No. 28, dated 18th March 1889, having sunk, a second class iron buoy has been laid down off the western edge of the sand in about 6½ fathoms low water; lat. 21° 31′ North, long. 91° 39′ East: Chart No. 859.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 10th February* 1890.

[Third Publication]

NOTIFICATION No. 29Mne.

The 3rd February 1890.—The following Notice to Mariners is published for general information.

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 16).

BAY OF BENGAL.

ORISSA COAST.

Date of exhibition of new light from Chandipore flagstaff.

IN continuation of Notice to Mariners, No. 49, dated the 31st May 1889, issued by this Office, it is intended to exhibit the new light on the Chandipore flagstaff from the 1st May 1890.

The height of the new light above high-water mark will be 62 feet.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 30th January* 1890.

Detailed account of Security deposit held by the Comptroller-General on the 31st December 1889 on account of Examiner, Public Works Accounts, Bengal, published in conformity with Government of India, Public Works Department, order dated 28th May 1880.

LOAN.	Stock held by the Comptroller-General.	Government Promissory Notes held by the Comptroller-General in safe custody.	Total.
	Rs	Rs.	Rs.
Government Promissory Notes of 4 per cent. of 1865 and other years.	56,900	25,200	82,100

Detailed account of Security deposits held by the Comptroller-General on the 31st December 1889.

NAMES OF DEPOSITORS.	Amount of investment, of 4 per cent. of 1865 and other years.	Names of the officers to whom the interest is sent.
First Calcutta Division.	Rs.	
Kasee Nath Mookerjee, Cashier ..	2,000	Executive Engineer, First Calcutta Division.
Boikonto Nath Ghosal, Sircar ...	500	Ditto, ditto.
Kalipodo Mookerjee, Store keeper ...	500	Ditto, ditto.
J. A. Catchick, ditto ...	1,200	Ditto, ditto.
Second Calcutta Division.		
Chuni Lal Dass	2,000	Ditto, Second Calcutta Division.
Calcutta Workshop.		
Tarak Nath Banerjee, Cashier ...	2,000	Superintendent, Calcutta Workshop.
Beman Bihary Sircar	500	Ditto, ditto.
Kanti Chundra Mukerjee	2,000	Ditto, ditto.
Bindabon Sye Duffadar	100	Ditto, ditto.
Burrakur Iron Works.		
Amulya Nath Mookerjee, Cashier ...	2,000	Superintendent, Burrakur Iron Works.
Burdwan Division.		
Charoo Chundro Mitter, Cashier ...	2,000	Executive Engineer, Burdwan Division.
Chota Nagpore Division.		
Ashutosh Mookerjee, Cashier ...	2,000	Executive Engineer, Chota Nagpore Division.
Dacca Division.		
Devendro Nath Singha, Cashier ...	2,000	Executive Engineer, Dacca Division.

NAMES OF DEPOSITORS.	Amount of investment of 4 per cent. of 1885 and other years.	Names of the officers to whom the interest is sent.
Northern Drainage and Embankment Division.	Rs.	
Ashutosh Banerjee, Cashier	2,000	Executive Engineer, Northern Drainage and Embankment Division.
Paly Churn Pyne	500	Ditto, ditto.
Shaik Munnoo, Duffadar	100	Ditto, ditto.
Circular and Eastern Canals.		
Tara Prossonna Dutta, Cashier ...	2,000	Executive Engineer, Circular and Eastern Canals Division.
Nuddea Rivers.		
Raj Mohan Roy, Cashier	2,000	Executive Engineer, Nuddea Rivers.
Cossye.		
Bipin Bihari Dutt, Cashier	2,000	Executive Engineer, Cossye Division.
Hurry Prosonno Chatterjee, Store-keeper...	1,000	Ditto, ditto.
Dehree Workshop.		
Kedar Nath Chatterjee, Cashier ...	2,000	Executive Engineer, Dehree Workshop.
Hodges, Radford, Contractor ...	500	Ditto, ditto.
Arrah Division.		
Gonga Dhur Bhuttacharjee, Cashier ..	2,000	Executive Engineer, Arrah Division.
Nundo Gopal Chatterjee, ditto ...	2,000	Ditto, ditto.
Ganado Prosad Gangooly, ditto ...	1,000	Ditto, ditto.
Buxar Division.		
Bama Churn Banerjee, Cashier ...	1,000	Executive Engineer, Buxar Division.
Raj Koomer Banerjee, ditto ...	2,000	Ditto, ditto.
Sarodaprosad Ghosh, ditto ...	1,000	Ditto, ditto.
Eastern Sone Division.		
Kally Das Dey, Cashier ...	2,000	Executive Engineer, Eastern Sone Division.
Keshub Lal Banerjee, ditto ...	1,000	Ditto, ditto.
Gunduck Division.		
Prosonno Coomar Mitter, Cashier ...	1,500	Executive Engineer, Gunduck Division.
Mahanuddy Division.		
Sham Shundur Shahoo, Cashier ...	1,700	Executive Engineer, Mohanuddy Division.
Brahmini-Byturni Division.		
Bijoy Gopal Ghose, Storekeeper ...	500	Executive Engineer, Brahmini-Byturni Division.
Syed Mufuzul Rohomun, Cashier ...	2,000	Ditto, ditto.
McNeill & Co.	2,000	Ditto, ditto.
Revenue Superintendent, Orissa.		
C. H. Romaniah Naidoo, Head Clerk ...	1,000	Revenue Superintendent, Orissa.
Revenue Superintendent, Midnapore.		
Rakhal Dass bose, Tehsildar ...	200	Revenue Superintendent, Midnapore.
Collector and Supervisor of Tolls, Calcutta Canals.		
Sreedhur Chunder Gangooly, Darogah ...	500	Toll Collectors, Calcutta Canals.
Ashutosh Sen, ditto ...	1,000	Ditto, ditto.
Jogendra Nath Bose, ditto ...	1,000	Ditto, ditto.
Pasupati Banerjee, ditto ...	1,000	Ditto, ditto.
Office of Examiner, Public Works Accounts, Bengal.		
Budun Behary Chatterjee, Sircar ...	100	Examiner, Public Works Accounts, Bengal.
Toll Collector, Nuddea.		
Nil Madhub Chakravati	500	Toll Collector, Nuddea.
Balasore Division.		
Jadunath Ghosh, Cashier	1,000	Executive Engineer, Balasore Division.
Total ...	56,900	

Detailed account of Government Promissory Notes held by the Comptroller-General in safe custody.

NAMES OF DEPOSITORS.	Amount of investment of 4 per cent. of 1865 and other years.
First Calcutta Division.	Rs.
McNeill and Company	1,000
Atkinson Brothers	1,000
Gopal Chundra Haldar	600
Rai Gungabistu Roy, Bahadoor	5,000
Second Calcutta Division.	
J. B. Norton	100
Calcutta Workshop.	
Chundra Coomar Lahiri	400
Joggo Nath Prosad Sing	200
Kristo Nath Ghosh and Woomesh Chundra Ghosh	400
Bepin Gopal Mitter	200
Beman bihari Sircar	1,500
Bengal Coal Company, Limited	200
Burdwan Division.	
Kedar Nath Lahiri	200
Aghore Chundra Gangooly	200
Preonath Ghosh	500
Mehar Lal Das	500
Sreemonto Haldar, Nabin Chundra Bhattacharjee, and Sree Nath Sircar	500
Dacca.	
Bengal Stone Company, Limited	1,100
Preo Nath Ghosh	1,100
Circular and Eastern Canals.	
Nilkunto Chatterjee	500
Chittagong Division.	
Nogendro Coomar Sen	500
Brahmini-Byturnee Division.	
Managing Agent, India General Steam Navigation Company ...	2,000
Cossye Division.	
Hoare, Miller and Company	2,000
Balasore Division.	
Hoare, Miller and Company	3,000
Schœne, Kilburn and Company	1,500
Nuddea Rivers.	
Preo Nath Ghosh	1,000
TOTAL ...	25,200

H. LEM. CAREY, *Lieut.-Col*, B.S.C.,
Examiner, Public Works Accounts, Bengal.

JAIL DEPARTMENT.

No. 1468.—*The* 14*th February* 1890.—Dr. Picachy made over charge of the Purneah Intermediate Jail to Surgeon D. G. Crawford on the forenoon of the 3rd February 1890.

A. D. LARYMORE,
Offg. Inspector-General of Jails, Bengal.

CIVIL MEDICAL DEPARTMENT, BENGAL.

No. 1522.—*The* 11*th February* 1890.—Medical Department Notification No. 89, dated 4th January 1890, published in the *Calcutta Gazette* dated 8th ultimo, is cancelled.

A. HILSON, M.D.,
Inspector-General of Civil Hospitals, Bengal.

TREASURY NOTICE.

DEPUTY COLLECTOR BABOO NAGENDRA NATH GUPTA has been placed in charge of the Rajshahye Treasury and authorized to draw bills on other Treasuries.

HARI MOHON CHANDRA, *Personal Assistant.*

COMMR.'S OFFICE, RAJSHAHYE DIVISION, JULPIGORI, *the* 15*th February* 1890.

EDUCATION DEPARTMENT, BENGAL.

Subordinate Educational Service.

The 14*th February* 1890.—Babu Rasamay Mitra, M.A., Second Master of the Hoogly Collegiate School (substantive *pro tempore* in class V), is appointed substantively to that class, with effect from the 26th August 1889, *vice* Babu Gauri Sankar Ghosal, deceased

Babu Mahendra Lal Ghosh, Head Clerk in the office of the Inspector of Schools, Presidency Circle (class VI and officiating in class V), is appointed substantive *pro tempore* in class V, with effect from the 26th August 1889, *vice* Babu Ram Prakash Lal, promoted.

Babu Hari Nath Sen, B.A., Deputy Inspector of Schools, Nuddea (class VI and officiating in class V), will continue to officiate in class V, with effect from the 26th August 1889, *vice* Babu Hari Har Das, promoted.

Babu Golak Chandra Chakravarti, Third Master of the Krishnagar Collegiate School (class VI), is appointed to act in class V, with effect from the 18th November 1889, *vice* Babu Upendra Nath Maitra, promoted.

Babu Bhagwan Chandra Dutt, B.A., Third Master of the Patna Collegiate School, is appointed to act in class V, with effect from the 21st December 1889, *vice* Babu Debendra Nath Mookerjea, *seconded.*

Babu Uma Charan Ghosh, Second Master of the Comillah Zillah School (class VI), is appointed to act in class V, with effect from the 30th December 1889, *vice* Babu Girish Chandra Nag, on privilege leave.

Babu Nanda Lal Das, B.A., Third Master of the Howrah Zillah School (class VII), acted in class VI from the 21st June to the 5th August 1889, both days inclusive, *vice* Babu Bhola Nath Samanta Rao, on privilege leave.

Babu Nanda Lal Das is appointed to act in class VI, with effect from the 12th November 1889, *vice* Babu Dwarka Nath Banerjea, promoted.

Pundit Gobinda Sastri, Temporary Assistant Professor, Sanskrit College (substantive *pro tempore* in class VI), is confirmed in his appointment with effect from the 11th July 1887, and in class VI with effect from the 1st July 1889, *vice* Babu Rajendra Chandra Sastri, M.A., transferred.

Babu Adhar Chandra Banerjea, B.A., Fourth Master of the Krishnagar Collegiate School (substantive *pro tempore* in class VI), is appointed substantively to that class, with effect from the 26th August 1889, *vice* Babu Rasamay Mitra.

Babu Bihari Lal Chaube, Second Pundit of the Patna College (substantive *pro tempore* in class VI), will continue as substantive *pro tempore* in that class, with effect from the 26th August 1889, *vice* Mr. G. O'Connell, *seconded.*

Babu Dwarka Nath Ghosh, Sub-Inspector of Schools, Balasore (class VII and officiating in class VI), is appointed substantive *pro tempore* in class VI, with effect from the 26th August 1889, *vice* Babu Mahendra Lal Ghosh.

Babu Sital Prasad Dutt, Sub-Inspector of Schools, Midnapore (class VII and officiating in class VI), will continue to officiate in class VI, with effect from the 26th August 1889, *vice* Babu Nitya Nanda Day, on furlough.

Babu Gadadhar Gorai, Fourth Master of the Beerbhoom Zillah School (class VII), is appointed to act in class VI, with effect from the 6th September 1889, *vice* Babu Bhubaneswar Gupta, on furlough.

Maulavi Farak Ahmed, Sub-Inspector of Schools, Chittagong (class VII), has acted in class VI from the 4th to the 10th November 1889, *vice* Babu Kedar Nath Ray on leave on medical certificate, and from the 11th November 1889, *vice* Babu Kali Kamal Chatterjea, on privilege leave.

Babu Rajendra Mohan Dutt, First English Teacher of the Dacca Madrassa (class VII and officiating in class VI), will continue to act in class VI from the 11th November to the 21st December 1889, *vice* Babu Kedar Nath Ray, on leave on medical certificate, and from the 22nd December 1889, *vice* Babu Ram Krishna Chatterjee, on furlough.

Babu Suresh Chandra Deb, Head Clerk in the office of the Inspector of European Schools on probation (class VII), is appointed to act in class VI, with effect from the 18th November 1889, *vice* Babu Goluk Chandra Chakravarti.

Babu Satkari Chandra Ghosh, B.A., Additional Master of the Hindu School (class VII), is appointed to act in class VI, with effect from the 26th November 1889, *vice* Babu Bindu Lal Banerjea, promoted.

Babu Manmatha Kumar Ghosh, B A., Second Master of the Baraset Government School (class VII), acted in class VI from the 1st to the 21st December 1889, both days inclusive, *vice* Babu Ram Krishna Chatterjea, on furlough.

Babu Manmatha Kumar Ghosh is appointed to act in class VI, with effect from the 30th December 1889, *vice* Babu Uma Charan Ghosh.

Babu Jogesh Chandra Das, B A., Third Master of the Jessore Zillah School, acted in class VII from the 21st June to the 5th August 1889, *vice* Babu Nanda Lal Das, and from the 6th August to the 5th October 1889, both days inclusive, *vice* Babu Sital Chandra Chatterjea, on privilege leave.

Babu Jogesh Chandra Das is appointed to act in class VII, with effect from the 4th November 1889, *vice* Maulavi Farak Ahmed.

Babu Khetra Mohan Banerjea, B.A., Second Teacher of the Calcutta Normal School, acted in class VII from the 6th July to the 5th August 1889, both days inclusive, *vice* Babu Sital Chandra Chatterjea, on privilege leave.

Babu Khetra Mohan Banerjea is appointed to act in class VII, with effect from the 12th November 1889, *vice* Babu Nanda Lal Das.

Babu Jeut Lal, Ninth and Temporary Eighth Master of the Arrah Zillah School, is declared to have acted in class VII from the 4th August to the 22nd October 1889, both days inclusive, during the absence, on leave, of the late Maulavi Muhammad Jan.

Babu Raj Krishna Bose, Assistant in the office of the Director of Public Instruction (substantive *pro tempore* in class VII), is appointed substantively to that class, with effect from the 26th August 1889, *vice* Babu Adhar Chandra Banerjea.

Babu Surya Kumar Ray, B A., Additional Fourth and now officiating Fourth Master of the Chittagong College (officiating in class VII), is appointed substantive *pro tempore* in that class, with effect from the 26th August 1889, *vice* Babu Kali Kumar Ganguli, promoted.

Babu Bijoy Krishna Banerjea, Sub-Inspector of Schools, Hoogly (officiating in class VII), will continue to officiate in that class, with effect from the 26th August 1889, *vice* Babu Bhushan Chandra Karmakar, under suspension.

Babu Sri Lal Som, B.A., Seventh Master of the Hoogly Collegiate School (officiating in class VII), will continue to officiate in that class, with effect from the 26th August 1889, *vice* Babu Sital Prasad Dutt.

Babu Narayan Chandra Mukerjea, B.A., Second and now officiating Head Master of the Rungpore Zillah School (officiating in class V), is appointed to class VII, with effect from the 23rd October 1889, *vice* Maulavi Muhammad Jan, deceased, but he will continue to officiate in class V until further orders.

Babu Aghar Nath Ghosh, B A., Second Master of the Chaibassa Zillah School, is appointed to act in class VII, with effect from the 18th November 1889, *vice* Babu Suresh Chandra Deb.

Babu Surendra Nath Sinha, B.A., Second Master of the Purneah Zillah School, acted in class VII from the 1st to the 21st December 1889, both days inclusive, *vice* Babu Satkari Chandra Ghosh.

Babu Mahendra Nath Sil, Fourth Master of the Howrah Zillah School, is appointed to act in class VII, with effect from the 30th December 1889, *vice* Babu Manmatha Kumar Ghosh.

The 15th February 1890.—Babu Kalinath Chaudhuri, Deputy Inspector of Schools, Rajshahye (class IV), is allowed leave of absence for one month and six days, under Article 371 of the Civil Service Regulations, in extension of that granted to him under orders of the 27th April 1889.

The 17th February 1890.—Babu Indra Kumar Chatterjea, Sub-Inspector of Schools under the District Board of Hoogly (class VI), has been granted by the Board leave of absence for one month, under Article 369 of the Civil Service Regulations, with effect from the 7th January 1890.

Babu Tarak Nath Sen, Deputy Inspector of Schools, Dacca (class III), is allowed leave of absence for two months, under Article 370 of the Civil Service Regulations, with effect from the 2nd February 1890, or any subsequent date on which he may avail himself of it.

Babu Tarak Bandhu Chakravarti, Deputy Inspector of Schools, Mymensingh, and now Temporary Head Clerk in the office of the Inspector of Schools, Eastern Circle (class V), is appointed to officiate as Deputy Inspector of Schools, Dacca, *vice* Babu Tarak Nath Sen, on leave.

Babu Kali Kamal Chatterjea, Departmental Sub-Inspector of Schools, Furreedpore (class VI), is appointed to officiate as Head Clerk in the office of the Inspector of Schools, Eastern Circle, *vice* Babu Tarak Bandhu Chakravarti, on deputation.

Babu Mohini Mohan Bose, B.A., Head Master of the Bogra Zillah School (class V), is allowed leave of absence for one month, under Article 306(*b*) of the Civil Service Regulations, in extension of that granted to him under orders of the 22nd November 1889.

Mr. Dwija Das Dutt, M.A., Lecturer in the College classes of the Bethune Girls' School (class V), is allowed leave of absence for two months and-a-half, under Article 372 of the Civil Service Regulations, with effect from the date on which he may avail himself of it.

A. CROFT, *Director of Public Instruction.*

NOTIFICATION.

IN accordance with the Government of Bengal Notification of the 23rd July 1887, notice is hereby given that the next half-yearly examination of compounders will be held at 11 A.M. on Wednesday, the 2nd April 1890, and subsequent days, at the Campbell Medical School.

2. Every candidate must produce one of the following certificates—

(*a*). From the Superintendent of a Vernacular Medical School that he has attended regularly for one year the compounder class of the school.

(*b*). From the legally qualified Medical Manager of a Chemists' and Druggists' establishment, recognised by the Inspector-General of Civil Hospitals, Bengal, that he has been apprenticed for a period of three years in his establishment.

(*c*). From a Civil Surgeon, that he has assisted in the dispensing of drugs at the Sudder dispensary of a Civil station for a period of five years.

3. Applicants must register their names and submit their certificates, together with a fee of Rs 3, at least one week before the 2nd April 1890, at the office of the undersigned

NOTE.—The students belonging to the compounder class of a Vernacular Medical School will be exempted from paying this fee on producing a certificate from the Superintendent that they have already paid the school entrance fee.

4. Should any candidate fail to pass the required examination he will forfeit his fee.

N. B—The attention of candidates is drawn to Rules in section (*b*) of the Government notification of the 23rd July 1887, or paragraph 2 (*b*) of this notification, from which they will observe that the Chemists' and Druggists' establishments, from the legally qualified Medical Managers of which they obtain their certificates, will have to be recognised by the Inspector-General of Civil Hospitals, Bengal, prior to the candidates applying to the Superintendent to register their names to appear at the examination.

S. COULL MACKENZIE, M.D.,
Supdt., Campbell Medical School.

CAMPBELL MEDICAL SCHOOL, CALCUTTA, *the 12th February* 1890.

NOTICE.

THE following candidates have passed the examination for the admission of females to the certificate class of the Medical College, Calcutta, held on the 11th February 1890, and two following days:—

1. Ellen L. Bridge.
2. Sarah E. Bridge.
3. Jochebed Cohen.
4. Leah Rebeiro.
5. L. M. A. Carroll.*

* Subject to re-examination in Arithmetic in February 1891.

A. CROFT, *Director of Public Instruction.*

NOTIFICATION OF THE BOARD OF REVENUE.

No. 113B.

NOTICE is hereby given that the Third Sale of Opium, the Provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall-street, on Monday the 3rd March 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory ...	... 2,250
Ditto at the Ghazeepore Factory ...	... 2,500
Total	... 4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. The may be ascertained by reference to the Notification issued onthe 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Boar of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th March 1890, respectively, that is to say no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 8th March 1890 and no Bank of Bengal Receipts in full payment of lots will be accepted afte 3-30 P.M. of Tuesday, the 18th March 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the Opium manufactured at the Patna and Ghazeepore Factories will be brought to sale in the present year about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so :—

DATES.		Manufactured at the Patna Factory about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Wednesday, 2nd April	1890.	2,250	2,500	4,750
On or about Thursday, 1st May	,,	2,250	2,500	4,750
On or about Monday, 2nd June	,,	2,250	2,500	4,750
On or about Wednesday, 2nd July	,,	2,250	2,500	4,750
On or about Monday, 4th August	,,	2,250	2,500	4,750
On or about Monday, 1st September	,,	2,250	2,500	4,750
On or about Wednesday, 1st October	,,	2,250	2,500	4,750
On or about Monday, 3rd November	,,	2,250	2,500	4,750
On or about Monday, 1st December	,,	2,250	2,500	4,750
Total		20,250	22,500	42,750

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L. P., *Calcutta, the 28th January* 1890.

Notification under Section 30 *of Act XII of* 1882 (*the Indian Salt Act*).

IN exercise of the powers conferred by the second paragraph of Notification No. 769, dated 11th February 1888, issued by the Governor-General of India in Council (in the Department of Finance and Commerce), under section 23 of Act XII of 1882, and published at pages 67-72 of the *Gazette of India*, dated 11th February 1888, the Commissioner of Salt, Abkari and Separate Revenue, Madras Presidency, under section 30 of Act XII of 1882, authorizes each of the persons named below to exercise the powers of a Salt Revenue Officer :—

Locality.	Name.	Rank.	Powers to be conferred on each.	REMARKS.
Machgaon ...	Upendra Mahanty...	Peon ...	Salt Revenue Officer.	*Vice* Boncla Appanah, who has forfeited his appointment
	Sydoo Khan ...	Do. ...	Ditto ...	*Vice* Sheikh Ramzan, who has forfeited his appointment.
	Bhagoo Bhai ...	Do. ...	Ditto ...	*Vice* Gopiswami, deceased.

E. MILLETT, *Assistant Secretary.*

BOARD OF REVENUE (SEPARATE REVENUE), *Madras, the 3rd February* 1890.

Notification under Section 30 *of Act XII of* 1882 (*The Indian Salt Act*).

IN exercise of the powers conferred by the second paragraph of notification No. 769, dated 11th February 1888, issued by the Governor-General of India in Council (in the Department of Finance and Commerce), under section 28 of Act XII of 1882, and published

at pages 67-72 of the *Gazette of India*, dated 11th February 1888, the Commissioner of Salt, Abkari, and Separate Revenue, Madras Presidency, under section 30 of Act XII of 1882, authorises each of the persons named below to exercise the powers of a Salt Revenue Officer :—

Locality.	Names.	Rank.	Powers to be conferred on each.	REMARKS.
Manikpatna Circle	Sheik Muzthaza ...	Sub-Inspector, fifth grade.	Salt Revenue Officer.	Newly appointed.
	Rabash Behari Patnaik.	Peon, third grade	Ditto ...	*Vice* Kanha Charan Patnaik, resigned.
	Gopabhandu Patnaik	Duffadar, second grade.	Ditto ...	*Vice* P. Venkataswami, resigned.
	Narain Das ...	Peon, third grade	Ditto ...	*Vice* Anantha Padan, resigned.

E. MILLETT, *Assistant Secretary.*

BOARD OF REVENUE (SEPARATE REVENUE), *Madras, the 3rd February* 1890.

Notification under Section 30 *of Act XII of* 1882 (*The Indian Salt Act*).

IN exercise of the powers conferred by the second paragraph of notification No. 769, dated 11th February 1888, issued by the Governor-General of India in Council (in the Department of Finance and Commerce), under section 28 of Act XII of 1882, and published at pages 67-72 of the *Gazette of India*, dated 11th February 1888, the Commissioner of Salt Abkari and Separate Revenue, Madras Presidency, under section 30 of Act XII of 1882, authorises each of the persons named below to exercise the powers of a Salt Revenue officer :—

Locality.	Names.	Rank.	Powers to be conferred on each.	REMARKS.
Chandbally Circle	Kanoo Charan Pari	Duffadar, second grade.	Salt Revenue Officer.	*Vice* Abdul Gofoor, reduced.
	Peer Mahomed ...	Peon, third grade	Ditto ...	*Vice* Gulzar Singh, who has forfeited his appointment.
	Kangali Charan Dass	Ditto ...	Ditto ...	*Vice* Fohal Singh, dismissed.
	Bhajan Naik ...	Ditto ...	Ditto ...	*Vice* Gouri Naik, dismissed.

E. MILLETT, *Assistant Secretary.*

BOARD OF REVENUE (SEPARATE REVENUE), *Madras, the 4th February* 1890.

Notification under Section 30 *of Act XII of* 1882 (*The Indian Salt Act*).

IN exercise of the powers conferred by the 2nd paragraph of Notification No. 769, dated 11th February 1888, issued by the Governor-General of India in Council (in the Department of Finance and Commerce), under section 28 of Act XII of 1882, and published at pages 67—72 of the *Gazette of India*, dated 11th February 1888, the Commissioner of Salt, Abkari and Separate Revenue, Madras Presidency, under section 30 of Act XII of 1882, authorizes the person named below to exercise the powers of a Salt Revenue Officer :—

Locality.	Name.	Rank.	Powers to be conferred.	REMARKS.
Balasore Circle ...	Sheik Imam Bux ...	Peon, 3rd grade	Salt Revenue Officer.	*Vice* Sheik Abdal Rahiman, who has forfeited his appointment.

E. MILLETT, *Assistant Secretary.*

BOARD OF REVENUE (SEPARATE REVENUE), MADRAS, *the 10th February* 1890.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IN supersession of the notification published at page 21, Part I of the *Calcutta Gazette* of the 1st ultimo, it is hereby notified for general information that a bye-election will be held on the 13th March next, in Ward No. III of the Goberdanga Municipality in the district of the 24-Pergunnahs, to elect a Commissioner for that Ward in the place of Baboo Dijaraj Chatterjea, who has ceased to be a Commissioner, for not attending six consecutive meetings.

A. BHATTACHARJEE, *Personal Assistant in charge.*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the 11th February* 1890.

NOTIFICATION.

IT is hereby notified for general information that at the election held on the 23rd September last, Moonshee Mahabir Pershad and Moonshee Ram Nowmee Pershad were elected to be Commissioners of Ward No. I of the Hajipore Municipality, in the place of Baboo Doorga Pershad, who has been transferred, and Baboo Baijnath Pershad, who has ceased to be a Commissioner under section 20 of the Municipal Act.

J. BOXWELL, *Offg. Commissioner.*

PATNA COMMISSIONER'S OFFICE, BANKIPORE, *the 11th February* 1890.

NOTIFICATION.

IT is hereby notified for general information that an election will be held under section 27 of the Municipal Act III (B.C.) of 1884, on 25th March 1890, in Ward No. I of the Rampore Beauleah Municipality in the district of Rajshahye, for the purpose of electing a Commissioner for the said Municipality in the place of Baboo Taran Krisna Choudhury, who has ceased to be a Commissioner under section 20 of the Municipal Act.

E. E. LOWIS, *Commissioner.*

COMMR'S OFFICE, RAJSHAHYE DIVISION, *Camp Dhubgorie (Julpigori), the 14th February* 1890.

NOTIFICATION.

IT is hereby notified for general information that the following gentlemen are appointed to be members of the Managing Committee of the Charitable Dispensary at Suri, in the district of Beerbhoom, under Rule 22 of the Dispensary Manual:—

Magistrate and Chairman of the District Board	...	*Chairman.*
Vice-Chairman of the District Board	...	*Vice-Chairman.*
Baboo Madan Gopal Sing	...	*Secretary.*
„ Dhan Kristo Ghose	...	*Members.*
„ Dakhina Ranjan Mukerji	...	
„ Kamalakhya Chatterji	...	

N. S. ALEXANDER, *Commissioner.*

BURDWAN COMMR'S. OFFICE, BURDWAN, *the 13th February* 1890.

NOTIFICATION.

IT is hereby notified for general information, under rule 23 of the Rules for the management of Charitable Dispensaries, that in supersession of previous order, the undermentioned gentlemen have been appointed to be members of the Committee for the management of the charitable dispensary at Goalundo in the district of Furreedpur:—

The Sub-divisional Officer, Goalundo	... ...	*Ex-officio.*
The Civil Medical Officer, ditto.	... ...	
Mr. W. R. Haughton.	Baboo Jogendra Chandra Banerjea.	
„ Richard William Morse.	„ Purna Chandra Chakrabarti.	
Baboo Atal Behari Ghosh, 1st Munsif.	„ Jodu Nath Sen.	

A. L. CLAY, *Offg. Commissioner.*

DACCA COMMISSIONER'S OFFICE, CAMP PEROZEPORE, *the 11th February* 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 19, 1890.

PART IA.

Orders and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following orders, issued by the Government of India in the Home Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATIONS—MEDICAL.

The 13th February 1890.

No. 82.—The services of Surgeon W. H. B. Robinson, Bengal Establishment, are replaced at the disposal of the Military Department.

No. 84.—In exercise of the power conferred by section 17A of Act XXXVI of 1858 (an Act relating to Lunatic Asylums), as amended by Act XX of 1889, the Governor-General in Council is pleased to appoint the Lunatic Asylum at Dacca to be an Asylum to which any Magistrate or Judge exercising jurisdiction in the districts of Sylhet and Cachar may send lunatics.

POLICE.

The 10th February 1890.

No. 128.—The services of Mr. A. Shuttleworth, Assistant Superintendent of Police Bengal, are placed at the disposal of the Chief Commissioner of Assam.

A. P. MACDONNELL,
Secy. to the Govt. of India.

The following order, issued by the Government of India in the Revenue and Agricultural Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.—FORESTS.

Calcutta, the 14th February 1890.

No. 79-*F.C.*—The following temporary promotions are made during the absence, on three months' privilege leave, of Mr. A. L. Home, Conservator of Forests, 3rd (officiating 2nd) grade, Bengal, with effect from 30th December 1889, and until further orders:—

* * * * * *

Mr. H. H. Davis, Deputy Conservator, 1st grade, Bengal, to officiate in the 3rd grade of Conservators, and to hold charge of the Bengal Forest Circle.

* * * * * *

E. C. BUCK,
Secretary to the Government of India.

The following order, issued by the Government of India in the Foreign Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 14th February 1890.

No. 220-G.—The following changes are made in the graded list of the Political Department:—

* * * * * *

Consequent on the return from furlough of Captain C. W. Ravenshaw, Political Agent of the third class, and with effect from the 8th December 1889—

Mr. E. G. Colvin reverts from Officiating Political Agent of the third, to Officiating Political Assistant of the first class.

* * * * * *

Consequent on augmentation, with effect from the 1st January 1890—

* * * * * *

Mr. E. G. Colvin, Officiating Political Assistant of the first, to officiate as a Political Agent of the third class.

* * * * * *

W. J. CUNNINGHAM,
Offg. Secy. to the Govt. of India.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 19, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 4th February 1890—In accordance with the provisos in sections 252 and 276 of Act III (B.C.) of 1884, it is hereby notified for general information that the Lieutenant-Governor is pleased to direct that the provisions contained in the second clause of section 252 and in section 276 of the said Act, shall come into operation within the limits of the English Bazar Municipality in the district of Maldah, after the expiration of a period of six months from the date of the publication of this notification.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 11th February 1890.—It is hereby notified that the declaration, dated 27th May 1889, published at page 121, Part IB of the *Calcutta Gazette* of the 5th June 1889, for the acquisition of a plot of land in the town of Serampore, district Hooghly, which was required for the construction of a municipal latrine in that town, is hereby cancelled.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 11th February 1890.—It is hereby notified that, under section 7, Act III (B.C.) of 1885, the following gentlemen have been elected to be members of the District Board of Howrah :—

Local Boards by which elected.		Names of Members.
Uluberiah	...	Baboo Ambica Churn Bose. „ Mohendra Nath Roy. Mahamahopadhyaya Mohesh Chundra Nayaratna, C.I.E.
Howrah	...	Baboo Shib Chandra Mullick. „ Charu Charan Mukerjee.

The following gentlemen are appointed, under section 7 of the Act, to be members of the Board :—

The Deputy Inspector of Schools ... } *Ex-officio.*
The Civil Surgeon ... ... }
Baboo Gurudas Kundu Chowdhry.
Munshi Mudat Ali.
Baboo Hem Chunder Ghose.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th February 1890.—Whereas a notification, dated the 11th August 1889, was published at page 168, Part IB of the *Calcutta Gazette* of the 14th idem, declaring the intention of the Lieutenant-Governor to extend the provisions of Part VI of Act III (B.C.) of 1884 to the Dinapore Nizamut Municipality in the district of Patna, and whereas no objection has been raised to the proposal within one month from the date of the publication of the above notification within the Municipality, it is hereby notified for general information that, in the exercise of the power vested in the Local Government by section 221 of the Act, and in accordance with the recommendation of the Commissioners of the Dinapore Nizamut Municipality, made at a meeting, the Lieutenant-Governor sanctions the extension of Part VI of the Municipal Act to the said Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 13th February 1890.—It is hereby notified for general information that, in accordance with the recommendation of the Commissioners of the Raneegunge Municipality, in the district of Burdwan, made at a meeting, and in the exercise of the power conferred on him by sections 9 and 11 of Act III (B.C.) of 1884, the Lieutenant-Governor intends to revise the limits of the said Municipality so as to include within them the villages of Paresgunje and Saldanga, the boundaries of which are given below, unless good reasons are shown to the contrary within one month from the date of the publication of this notification within the Municipality:—

VILLAGE PARESGUNJE.

On the North—The lands of the village Ronye;
On the South—East Indian Railway main line;
On the East—The lands of the village Baktiarnagore and Paresgunje Bridge in Babooisole road; and
On the West—Village Komarbazar.

VILLAGE SALDANGA.

On the North—The lands of the village Searsole and Baradahi tank;
On the South—Khautsuli Bazar;
On the East—The lands of Khautsuli; and
On the West—The Raneegunge feeder road.

The boundaries of the Raneegunge Municipality, after the inclusion within its limits of the said villages of Paresgunje and Saldanga, will be as follows:—

On the North—A line from Baradahi tank to the bridge at Gorabazar on the feeder road;
On the South—A line from the third culvert of the Igarah road to the bridge south of the flour mill in the Bankoora road; thence to the railway bridge at Paresgunje;
On the West—A line from the Gorabazar bridge to the Gopalband bridge; thence *vid* the west bank of Jumnaband tank and the railway pumping station to the third culvert on Igarah road; and
On the East—A line from Paresgunje bridge by the east bank of Rajarband tank and the bridge on the Mangulpore road to Baradahi tank.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 14th February 1890.—It is hereby notified that, under section 19, clause (3) of the Bengal Local Self-Government Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint Baboo Surendra Nath Mozumdar to be a member of the District Board of Purneah in the place of Baboo Bhobotosh Banerjee, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—It is hereby notified that, under section 19, Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint Baboo Aghore Chandra Mukerjee to be a member of the Sudder Local Board, in the district of Monghyr, *vice* Sheik Rahmat Ali, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—It is hereby notified that, under section 16, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Moonshee Abdool Hafez to be a Commissioner of the Sasseram Municipality in the district of Shahabad, *vice* Shah Amjad Hossein, deceased.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Barada Kant Sen to be a Commissioner of the Nattore Municipality in the district of Rajshahye, *vice* Moulvie Wakiluddin Ahmed, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—It is hereby notified that, under section 27, Act III (B.C) of 1884, the Lieutenant-Governor is pleased to appoint Mr. J. Hay to be a Commissioner of the South Barrackpore Municipality, in the district of the 24-Pergunnahs, *vice* Mr. R. Leighton, who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—It is hereby notified that, under section 19, Act III (B.C) of 1885, the Lieutenant-Governor is pleased to appoint Munshi Eshau Ali and Munshi Mosaheb Lal to be members of the Beguserai Local Board, in the district of Monghyr, *vice* Munshi Goorsahai Sing and Baboo Hari Pershad, resigned.

H. J. S. COTTON,
Offg Secy. to the Govt. of Bengal.

NOTIFICATION.

The 17th February 1890.—It is hereby notified for general information that, in exercise of the power vested in the Local Government under section 351 of Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to confirm the proposal of the Commissioners of the Comillah Municipality, made at a meeting, to impose a penalty not exceeding Rs. 20 for the infringement, after notice, of bye-law No. 9 of the bye-laws framed by the Commissioners under section 350 of the Act, and published under Government notification, dated 12th November 1889, at page 246, Part IB of the *Calcutta Gazette* of the 20th idem.

The bye-law thus amended is as follows:—

"9. Every owner or occupier of a house or premises living within the latrine area, except those who resort to public latrines, must construct a privy of his own within his premises, at least 1½ feet above ground, and must provide it with a proper moveable receptacle of metal or earthenware.

"The penalty for infringement, after notice, shall be a fine not exceeding Rs. 20."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Benga

NOTIFICATION.

The 18th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) 1884, the Lieutenant-Governor is pleased to appoint Baboo Ram Sadan Bhattacharjea be a Commissioner of the Purulia Municipality, in the district of Manbhoom, *vice* Mr. C. Farewell, who has ceased to be a Commissioner under section 20 of the Act.

H. J. S COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified for general information that, in t exercise of the power vested in the Local Government by section 4 of Act XX of 1887, t Lieutenant-Governor has been pleased to declare that the provisions of section 3 of the A with respect to wild birds shall apply, so far as regards the rules framed for the cantonme of Dum-Dum, to deer and hares.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Benga

NOTIFICATION.

The 18th February 1890.—The following rules framed by the Military authorities of the Dum-Dum Cantonment under section 3 of Act XX of 1887, for the protection of wild birds and game within the limits of the Cantonment, are hereby confirmed by the Lieutenant-Governor under clause (4) of the said section of the Act, and are published for general information under clause (5) of section 6 of the General Clauses Act I of 1887 :—

Rules.

1. "Wild bird," for the purpose of these rules, shall include jungle fowl, peafowl, pheasants, partridges, quail, snipe, plover, wild duck, teal and ortolans.

2. The Local Government having, by notification of this date, declared that the provisions of section 3, Act XX of 1887, shall apply to hares and deer, the following rules will apply to those animals also as well as to wild birds.

3. The "breeding season" for the purposes of these rules shall extend from the 15th March to the 15th August.

4. Whoever, during the breeding season, has in his possession in the Cantonment of Dum-Dum any wild bird, deer or hare recently killed, or exposes for sale any such bird or animal living or dead, shall be liable to a fine not exceeding Rs. 5 for each bird or animal.

5. Whoever, during the breeding season, imports into the Cantonment the plumage of any kind of wild bird recently killed or taken, or the fur or skin of any hare or deer recently killed or taken, shall be liable to a fine not exceeding Rs. 5 for each bird or animal.

6. In the case of a second conviction, the fine may extend to Rs. 10 for each bird or animal.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified that, under section 7, Act III (B.C.) of 1885, the following gentlemen have been elected to be members of the District Board of Patna :—

Local Boards by which elected.	Names of Members.
Patna	Moulvie Abdul Hamid. Munshi Gajadhur Prosad. Moulvie Zahiruddin. Kazi Syed Reza Hossein, Khan Bahadoor.
Barrh	Moulvie Afzaluddin Ahmed. Sheikh Bahadur Ali Khan.
Behar	Munshi Kesho Dyal. Sheikh Amid Ali. Baboo Durga Prosad. Moulvie Mowla Bux.
Dinapore	Mr. Sharfuddin. Moulvie Sayad Zahiruddin.

The following gentlemen are appointed, under section 7 of the Act, to be members of the Board :—

The Joint-Magistrate ... ...
„ Road Cess Deputy Collector ... ...
„ Executive Engineer ... ... } *Ex-officio.*
„ Civil Surgeon ... ...
„ Deputy Inspector of Schools ... ...
Syed Tajamul Hossein Khan.
Moulvie Syed Fazl Imam, Khan Bahadur.
„ Syed Yusuf Imam.
„ Nasiruddin Ahmed.
Rai Ieri Prosad.
Moulvie Nesar Ali.
Baboo Girjapat Sahai.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Patna Local Board, in the district of Patna, under section 25 of Act III (B.C.) of 1885, of Munshi Gajadhar Prosad to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Barrh Local Board, in the district of Patna, under section 25 of Act III (B.C.) of 1885, of Shaikh Bahadur Ali Khan to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Behar Local Board, in the district of Patna, under section 25 of Act III (B.C.) of 1885, of Moulvie Shamsul Huq to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Dinapore Local Board, in the district of Patna, under section 25 of Act III (B.C.) of 1885, of Mr. Sharfuddin to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—In the notification, dated the 7th January 1890, published at page 7, Part IB of the *Calcutta Gazette*, dated the 8th idem, containing the names of the gentlemen elected and appointed to be members of the Local Boards in the district of Burdwan, *for* "Baboo Bunwarilall Hali," "Baboo Annada Chundra Das," and "Mr. C. Earfe," *read* "Baboo Bunwari Lal Hati," "Baboo Ananda Chundra Das," and "Mr. C. Earpe."

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified for general information that the Lieutenant-Governor is pleased, in the exercise of the power conferred on him by section 60 of the Bengal Local Self-Government Act III (B.C.) of 1885, to extend the provisions of section 99 of the said Act to the District Boards of the following districts :—

Burdwan.	Moorshedabad.	Tipperah.
Bankoora.	Dinagepore.	Noakhally.
Beerbhoom.	Rajshahye.	Chittagong.
Midnapore.	Rungpore.	Monghyr.
Hooghly.	Bogra.	Bhagulpore.
Howrah.	Pubna.	Malda.
24-Pergunnahs.	Julpaigoree.	Cuttack.
Khoolna.	Dacca.	Balasore.
Nuddea.	Backergunge.	Pooree.
Jessore.	Mymensing.	

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified for general information that under Rule 32 of the Rules framed under section 138 (*a*) of the Bengal Local Self-Government Act, 1885, the Lieutenant-Governor is pleased to fix Tuesday, the 15th April 1890, as the date for holding an election, under Rule 46 of the aforesaid Rules, in thana Raneegunge, in the district of Burdwan, for the purpose of filling a vacancy in the representation of that thana on the Local Board of Raneegunge.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 18th February 1890.—It is hereby notified that, under section 27, Act III (B.C. of 1884, the Lieutenant-Governor is pleased to appoint Baboo Ambica Charan Bose t be a Commissioner of the Moheshpore Municipality, in the district of Jessore, *vice* Babo Jaminipati Roy Chowdhury, deceased.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 18th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Ghatal Municipality for a public purpose, viz., for erecting houses for the municipal mehters as well as for the construction of a road to those houses, in the village of Konenagore, pergunnah Barda, district Midnapur, it is hereby declared that for the above purpose 3 plots of land, measuring 5 cottahs and 13 chattacks of standard measurement, are required. The lands are bounded as follows :—

1st Plot.—Measuring 4 cottahs and 13 chattacks, is bounded on the North and East by the lakheraj land of Rama Nath Roy; on the South by the embankment of Choudhury's tank ; and on the West by the Choudhury's tank.

2nd Plot.—Measuring 10 chattacks, is bounded on the North by the lakheraj land of Rama Nath Roy ; on the South by paddy land; East by a public drain; and the West by the lakheraj land of Rama Nath Roy.

3rd Plot.—Measuring 6 chattacks, is bounded on the North and East by the public drain ; on the West by lakheraj land of Rama Nath Roy ; and on the South by the paddy land.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 17th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the expense of the Calcutta Municipality for a public purpose, viz., widening Beny Madhub Nandan Brothers' 1st Lane, it is hereby declared that for the above purpose pieces of land Nos. 52, 51, 50, 49, 40, 39 and 4, Beny Madhub Nandan Brothers' 1st Lane, and No. 7, Russa Road North, in Bhowanipore, Dihi Punchannogram, district 24-Pergunnahs, measuring, more or less, 4 cottahs 13 chittacks and 8 square feet only, are required. The boundaries of the lands are as follows :—

Portion marked A on plan.—On the North, portion of No. 7, Russa Road North; on the South, Beny Madhub Nandan Brothers' 1st Lane ; on the East, partly Russa Road North, and partly portion of No. 7, Russa Road North ; and on the West, partly Beny Madhub Nandan Brothers' 1st Lane, and partly portion of No. 7, Russa Road North.

Portion marked B on plan.—On the North and East, Beny Madhub Nandan Brothers' 1st Lane; on the South, portion of No. 52, Beny Madhub Nandan Brothers' 1st Lane ; and on the West, partly portion of No. 52, Beny Madhub Nandan Brothers' 1st Lane, and partly a public drain.

Portion marked C on plan.—On the North and West, Beny Madhub Nandan Brothers' 1st Lane; on the South, portions of Nos. 50 and 51, Beny Madhub Nandan Brothers' 1st Lane; and on the East, a public drain.

Portion marked D on plan.—On the North and West, Beny Madhub Nandan Brothers' 1st Lane; and on the South and East, portion of No. 49, Beny Madhub Nandan Brothers' 1st Lane.

Portion marked E on plan.—On the North and East, portion of No. 4, Beny Madhub Nandan Brothers' 1st Lane; and on the South and West, Beny Madhub Nandan Brothers' 1st Lane

Portion marked F on plan.—On the North and East, Beny Madhub Nandan Brothers' 1st Lane ; and on the South and West, partly portion of No. 39, Beny Madhub Nandan Brothers' 1st Lane, and partly portion of No. 40, Beny Madhub Nandan Brothers' 1st Lane.

Plan and specifications of the land are filed in the Office of the Commissioners for public inspection.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 15th February 1890.—The following gentlemen are appointed, under section 112 of Act IX (B.C.) of 1880, to be members of the Lohardugga District Road Committee :—

Mr. T. F. Peppe. | Kumar Jogat Mohun Nath Sahi Deo.
Lal Iswar Nath Sahi Deo.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 19, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given that the undermentioned plots of the Nizamut lakhiraj State lands situated in the district of Nuddea will be put up to sale at the Collectorate of Nuddea on the 13th March 1890, corresponding with 1st Chyte 1296 B.S.

The purchasers of the plots will be subject to the following conditions :—

I.—The plots will be sold revenue free to the highest bidders above the upset price.

II.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the estates to be again put up for sale at the risk of the defaulting purchasers after issue of advertisement as in the case of original sale.

V.—The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mouzah.	Pergunnah.	Approximate area in bighas.	Annual assessment.	Upset price.	Boundaries.	Remarks.
				B. K. CH.	Rs. A. P.	Rs. A. P.		
	Aujongachi in Bartoil.	Bahaliapara in Bartoil.	Mohamedshahye.	31 7 14	13 0 0	313 8 0	North, east, and south of jote lands of Hagooram Boil and others of Bartoil; west of the confines of mouzah Belgharia.	Mourashi jote of Banesh Chandra Sarkar of Belgachi and dwelling-house of Gopal Chandra Ghose of Bartoil.
	Aujongachi ...	Aujongachi ...	Tarsgooniah	394 1 10	93 0 0	3,936 11 0	West of the dwelling-houses of Chuni Sheikh and Nubin Mandal Ghose and others, ryots of the zemindars of Chitna; north of the nij-jote lands of the aforesaid zemindars; east of the confines of Khairpur; south of the nij-jote lands of the aforesaid zemindars.	Mourashi jote of Banesh Chandra Sarkar of Belgachi.
	Dak Adda ...	Kulberia ...	Plassey ...	1 4 8	2 1 6	40 0 0	East and north of a public road; south and west of jote lands of Brojo Lal Rai.	Plot No. I, khas Nizamut.
							South of jote lands of Gurudoyal Sinha and Bhikoo Mandal; east and north of jote lands of Punchanan Rai; west of jote lands of Bani Mandal.	Plot No. II, khas Nizamut.

Nuddea Collectorate, the 14th January 1890.

N. K. Bose, for Collector.

NOTICE is hereby given that the undermentioned plot of the Nizamut lakhraj State lands, situate in the district of 24-Pergunnahs, will be put up to sale at the Collectorate of the 24-Pergunnahs on Friday, the 28th March 1890—

The purchaser of the plot will be subject to the following conditions :—

I.—The plot will be sold revenue-free to the highest bidder above the upset price.

II.—The sale to be subject to existing leases, and to the rights conferred by the settlement proceedings and by the laws in force, and purchaser to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the plot to be again put up for sale at the risk of the defaulting purchaser after issue of advertisement as in the case of original sale.

V.—The purchaser shall be put in possession on receipt of the orders of the Collector approving of the sale, but such possession shall be liable to be disturbed in case the final confirmatoñ of the Board of Revenue should not be accorded to the proceedings.

Name of estate.	Mouzah.	Pergunnah.	Approximate	Annual assessment.	Upset price.	Boundaries.	Remarks.
			B. K. CH.	Rs. A. P.	Rs. A. P.		
Dak Dhobi,	Adda Chitpore	Amirabad...	0 3 6	16 14 0	506 4 0	South of the dwelling house of Jitu Mohun Jemadar, and west of a public road and the sepoy post.	Dwelling-house of Kudroo Dhobi of Chitpore.

K. N. ROY, Deputy Collector, for Collector on tour.

NOTICE is hereby given, under section 6, Act XI of 1859, section 11, Act VII (B C.) of 1868, and Act II (B.C.) of 1871, that the undermentioned dependent tenures in the Town Khas Mehal, in the district of Chittagong, will be put up to public and unreserved sale at the Collector's Office of that district on the 3rd day of March 1890, for arrears of rent and cesses remaining unpaid after the latest day of payment, the 26th day of December 1889.

Khas Tehsil Office, Town Circle.

Serial No.	No. of tenures in register No. I.	Names of tenures and their situation.	Annual rental.		The amount of arrears for which the tenures to be sold.			Remarks.
			Rent.	Cess.	Rent.	Cess.	Total.	
		Thana town mouzah Bakalya, mehal Noabad.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	387	20134/559 Taluq Manindra Chandra Ghose and others.	3,373 6 0	226 9 0	843 0 0	56 11 8	899 11 0	
		Mouzah ditto, thana ditto.						
2	395A	20134/559(3) Taluq Khetra Moni Dasi and others.	1,135 11 9	44 6 0	284 0 0	11 1 0	295 1 0	The entire taluqs will be sold.
		Thana Futikchir, mouzah Jouskhala, mehal Noabad.						
3	4818	23878/558 Taluq Obedar Rahaman Khan	2,344 0	102 9 0	693 0 0	5 5 9	698 5 9	

Chittagong, the 14th January 1890. C. H. ALLEN, for Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Khulna will be put up for sale at the Collector's Office of that district on the 20th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

1	2	3	4	5	6	7	8	9
No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
114-1	Kismut pergunnah Hajitpur.	2,124 4 7	.....	Share No. 1, 3*as.* 3*g.* 2*a.* 16*l.*	Shital Nath Bhanga and others.	420 2 8	.....	23 8 0
127-1	Kismut pergunnah Bhaluka	14,943 15 8	.....	Share No. 1, 4*g.* 13-5-8-1	Grijanath Ray Chowdhury and others.	224 13 5	.....	31 10 5
159-4	Kismut Raundansa, pergunnah Sarparajpur.	549 13 8	.....	Share No. 4, 2*as.* ...	Haran Chandra Majumdar and others.	68 11 8	.....	13 3 2
170-2	Kismut pergunnah Sillimabad.	5,784 0 0	.....	Share No. 2, 2*as.* 9*g.*	Syamacharan Bosu and others.	885 11 9½	.....	210 15 6

Khulna Collectorate, the 8th February 1890. B. DE, Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Dacca will be put up for sale at the Collector's Office of that district on the 23th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realised in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
115	Pergunnah Patpashar, Banamch Mahadev Mukhopadhya.	10,708 0 1½	.....	Residue share ... Hisya 2a. 13g. 1kr. 1kt.	Hara Sundari Chaudhurani and others. Monindra Nath Mukhopadhya and others.	8,913 5 4½ 1,791 10 9	.....	3,624 7 4½ 725 9 7
193	Pergunnah Rajnagar, tuppeh Hosanabad Jawar Hydernbad Khachak Pitrash market.	688 5 4½	Entire estate.	.....	Sukhmoy Chandra Das himself and manager for Gour Hari Das and others.	.....	69 12 2½	.....
194	Pergunnah Rajnagar, hisya Raj Krishna Sen. Chakla Nurpur Huzanneesa.	708 9 11½	.....	Residue share ...	Hueni Khanam and others.	201 13 6½	.....	78 11 9
197	Pergunnah Rajnagar, Chakla Nurpur, Debi Prosad Sen.	632 10 5½	.....	Hisya 2g. 3kr. 3kt.	Durga Sunker Sen ...	5 7 9	.....	2 8 1
272	Pergunnah Shahebabah May Poshkosh Dewani, Banamch Mirza Hyderali.	533 5 4	.....	Residue share ... Hisya 1a. 11½g. ...	Rajendra Narain Bandapadhya. Ditto ditto ...	133 5 1 53 1 4	....	83 7 1 32 9 9
325	Tuppeh Moheswardi, Banamch Saha Newaj Khan, Elahi Newaj Khan.	14,133 5 4½	.....	Hisya 15g. 1kr. 1kt. 6t. Ananda Mohon, Hari Mohon and Krishna Mohon Das.	Ananda Mohon Das and others.	677 2 6	.....	102 3 9
393	Pergunnah Bikrampur, taluq Brindavan Chandra Radha Kishore Sen, hisya 8a. Radha Madhav.	1,412 9 1	.....	Residue share ...	Nanda Kumar Guha...	425 6 1½	.....	159 11 6
393	Pergunnah Bikrampur, taluq Brindavan Chandra Radha Kishore Sen, hisya 8a. Raj Kishore Sen.	1,452 9 1	.....	Ditto ...	Rup Lal Raghu Nath Das and others.	554 10 2½	.....	145 8 7
534	Pergunnah Bhawal Jawar Nalunkol, taluq Sridhar Hari Rati, Krishna Ram Chakraverty.	844 0 0	.....	Ditto ... Hisya 1a. Banga Chandra, Har Chandra Chakraverty. Hisya 9g. 2kr. 1kt. Bramya Mayi Debya.	Joy Chandra Chaudhury and others. Banga Chandra Chakraverty and others. Brahmya Mayi Debya	74 15 9½ 34 0 0 16 4 8	....	43 12 2½ 14 5 0½ 14 1 1
538	Pergunnah Mobarak Ujian, taluq Jagir Abdulla.	961 1 0½	.....	Residue share ...	Showdamini Gupta and others.	384 6 9½	.....	74 13 2
563	Shahar Chandina May Poshkosh Chandina, Maulvi Abdul Ali.	1,898 10 8	.....	Ditto ...	Protap Chandra Das and others.	661 8 2	.....	170 4 6
569	Pergunnah Bikrampur, taluq Ram Ganga Hosn.	684 8 0	.....	Ditto ...	Sitamani and others ...	256 9 0	.....	95 0 0
6329	Pergunnah Patpashar, taluq Golam Hosen Chaudhuri.	930 8 11½	.....	Ditto ... Hisya 1¼a. Najbannessa and others. Hisya 3a. 2g. 1kr. 1½kg. Hamidannessa and others.	Amirannessa Khatoon, Manager for Maulvi Abdul Hye and others. Najbannessa and others. Hamidannessa Khatoon and others.	359 1 9 87 3 5 181 12 2	....	86 15 11 8 2 10 55 11 11
6349	Pergunnah Hasbara Raja Ram Chandduri.	823 10 1	Entire estate.	.....	Gojendra Nath Shome and others.	.....	1 12 0	.....
6551	Pergunnah Rajnagar, taluq Debi Prosad Ghosh.	642 2 1½	.....	Residue share ...	Kala Chand Shaha and others.	535 1 8½	.....	40 1 5
8434	Char Baktabali .	584 0 0	Entire estate.	.....	Pran Nath Pare and others.	.....	153 0 0	.....
8660	Tuppeh Amirabad, Estate No. 234.	760 4 1½	Ditto ...	.....	Abhaya Charan Das and Brojendra Kumar Rai Chaudhuri.	.....	72 14 3	.....
9069	Char Fukurhati within Char Krishnapura.	510 0 0	Ditto ...	.....	Kripa Mayi Debya and others.	.....	7 2 0	.....
9083	Mouzah Golara Baluchari within Char Jalua Kunta.	752 0 0	Ditto ...	.....	A. M. Bhoogy Shaheb, Receiver.	.....	140 0 0	.....
9101	Char Tilli within Char Mirzapur.	1,187 0 0	Ditto ...	.....	Kailash Bashini and Bindhu Bashini Chaudhurani and others.	.....	209 0 0	.....
9762	Pergunnah Burdakhat Char Delwarpur.	4,196 0 0	Ditto ...	.....	Joharuddin Hyder and others.	.....	1,052 0 0	.....

Dacca Collectorate, the 8th February 1890.

L. HABE, Offg. Collector.

NOTICE is hereby given that the proprietary right of Government, as specified in the conditions of sale below to the undermentioned estate, situate in the district of Maldah, will be put up to sale at the Maldah Collectorate on 26th March 1890, corresponding with 14th Chaitra 1296 B.S.

The purchasers will be subject to the following conditions of sale :—

Conditions of Sale.

1*st*.—The estate to be sold to the highest bidder above the upset price, which will be fixed by the Collector at the time of sale. The purchaser of this estate will be considered as the proprietor of the estate, and the entire proprietary right of Government in such estate will be transferred to him, subject to the revenue fixed in perpetuity.

2*nd*.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force; and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3*rd*—If the amount of purchase-money do not exceed Rs. 100, the whole amount to be paid at once.

4*th*—If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the estate to be again put to sale at the risk of the defaulting purchaser, after issue of advertisement, as in the case of original sale.

Number on the district roll.	Name of estate and pergunnah.	Approximate area in acres.	Government revenue assessed.
		A. R P.	Rs.
98	Kismut Jot Kusturi, pergunnah Kotuali	62 0 12	50

Collector's Office, district Maldah, the 6th February 1890. POORNO CHANDRA CHATTERJEE, Dy. Collr in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Beerbhoom will be put up for sale at the Collector's Office of that district on 26th March 1890, for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
53	Shahapur, pergunnah Joynugal.	3,490 7 0	.....	2*a*. 13*g*. 1*k*. 1 *kranti*.	Choudhuri Mahomed Ichcha and others.	581 11 8	.....	4 7 0
78	Turigram, pergunnah Shahajapur.	1,508 0 0	The whole	.....	Sheikh Tafikulla ...	.....	6 2 0	.....
94	Gokulata, pergunnah Chakala Gokulata.	3,250 14 0	.....	8*a*.	Dharmadas Gati Mustafi and others.	1,625 7 0	.....	13 1 6
109	Dankra, pergunnan Ichchapukhuria.	1,803 1 0	.....	13*a*. 17*g*. 2*k*. ...	Giris Chandra Choudhuri, guardian of Kumaris Chandra Roy, minor, and others.	1,563 9 2	.....	3 10 1
122	Bajitpur, pergunnah Akbarshahi.	2,996 1 0	.....	9*a*. 8*g*. 1*kag*. 8 *til*.	Nil Madhab Roy and, others.	1,760 13 11	.....	14 4 6
936	Palitpur Basantapur, pergunnah Dadshahi.	751 10 0	The whole	.....	Ratan Kumari Bibi and others.	.....	218 8 0	.....

Beerbhoom Collectorate, the 10th February 1890. N. K. SARKAR, Dy. Collector in charge.

NOTICE is hereby given, under section 6, Act XI of 1859, that the undermentioned estates in the district of Durbhunga will be put up to public and unreserved sale at the Collector's Office of that district on the 15th March 1890, corresponding with 9th Chait 1297 F., on Saturday, at 12 o'clock, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue due on the 13th January 1890.

Serial No.	Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share.	Names of proprietors of properties to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
			Rs. A. P.				Rs. A. P.		Rs. A. P.
1	457	Erasi Ganj Barar Hurdaspore, pergunnah Bala Gutch.	547 2 10	.....	Patti ijmali 9 annas 12 gundas.	Mossamat Jasoda Koer, mother and guardian of Adya Parshad Singh, Baboo Sital Parshad Singh, Shew Gulam Singh, Singheswa Parshad Singh, Nar Singh Parshad, Chitar Narain Singh, Kunj Narain Singh and others.	368 8 8	.....	306 8 4

Durbhunga Collectorate, the 12th February 1890. A. AHMAD, Deputy Collector, for Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Backergunge will be put up for sale at the Collector's Office of that district on the 26th March 1890, corresponding with 14th Choitra 1296 (B.S), for the kist ending 12th January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Tuppeh Azimpur, hissa 8*a.* 19*g.*	2,431 4 4½	.....	Joint share, 6*a.* 10*g.* 3*k.* 1½ 10.	Asmat Ali Khan Choudhury and others.	917 7 0½	.....	6 10 10
1416	Taluq Bancha Ram Bosu, hissa 8*a.*, pergunnah Bozergomedpur.	1,550 5 3	.....	3*a.* under separate account.	Dinabandhu Sen ...	290 5 10½	.....	45 6 4½
1487	Jiban Krishna Sen, Hari Krishna Sen, Komal Krishna Sen, Govindadeb Roy, Pran Manikya Chandra Roy, Darpa Narayan Roy, and Mritanjaya Mukherjee taluq, pergunnah Bozergomedpur.	2,295 9 5½	.....	6*a.* 15½*g.* 1½*kt.* Ijmali share.	Uma Charan Bhattacharjee and others.	978 13 0½	.....	24 13 1
1548	Taluq Mohammad Hamza, pergunnah Bozergomedpur.	1,159 3 8	.....	8*a.* Ijmali share ..	Grish Chandra Mukhapadhyaya and others.	579 9 10	... ..	28 4 11
1578	Panioty Alexander taluq, pergunnah Bozergomedpur.	4,833 12 0½	.....	2*a.* Ijmali share ...	Jagadiswari Debya ...	604 3 2½	.....	113 2 11½
1185	Radha Krishna, Harananda Roy, and Kasidas Siddhanta taluq, pergunnah Bozergomedpur.	24,036 10 10	.....	5*a.* 15½*g.* 1½*k.* Ijmali share.	Brindabun Chandra Chakervarti and others.	874 11 7	.....	43 15 1½
1628	Ramna Bamna Joar Mohammud Safi taluq, pergunnah Bozergomedpur.	19,487 10 8	.....	8*a.* 15½*g.* 19-15-0½-1. Ijmali share.	Golam Asad Choudhuri and others.	10,676 12 1	.....	2,119 11 7
1633	Ram Raja Deo taluq, pergunnah Bozergomedpur.	2,062 2 11½	.....	2*a.* Ijmali share ..	Jagadiswari Debya ...	257 12 2½	... ..	51 13 5½
1643	Ditto ditto ...	2,062 2 11½	.....	3*a.* under separate account.	Taramani Debya ...	386 10 7	.....	78 6 2
1751	Radha Kanta Sen taluq, pergunnah Chandradwip.	906 10 8	.....	18*a.* Ijmali share ..	Kali Mohan Mohinta and others.	453 5 4	.....	2 13 9½
1764	Pergunnah Dakhin Shahabazpur, 3*a.* 1½*g.* 1*kt.* share.	8,543 6 8	Whole estate.	.....	Mr. Alexander Toms, executor of estate J. P. Wise and others.	... ..	5,332 10 8½	.....
1916	Haveli Solimabad tappeh, hissa 10*g.*	1,045 7 9½	.....	5*a.* 10*g.* Ijmali share	Bama Sundari Gupta and others.	359 5 5½	.....	72 1 11½
1916	" Ditto ditto ..	1,045 7 9½	.....	6*a.* 15*g.* share under soparate account.	Kailash Chandra Sen Mujumdar and others.	441 1 8½	.....	59 13 0½
3255	Pergunnah Ratandi Kalikapur, hissa 2*a.*	3,154 11 5	.....	7*a.* 6½*g.* 2*kts.* Ijmali share.	Umesh Chandra Roy Choudhuri and others.	1,445 14 5	.... .	403 9 7
3257	Pergunnah Ratandi Kalikapur, hissa 4*a.*	6,309 6 10	.....	10*g.* Ijmali share ...	Jagadiswari Debya ...	197 2 6	.....	67 5 5
3258	Ditto ditto ...	6,309 6 10	.....	6½*g.* 2*kts.* Ijmali share	Ditto	131 7 4	... ..	43 15 11
4546	Padma *alias* Ramjanpur, pergunnah Kashimpur Silapatti.	5,383 0 0	Whole estate.	.....	Abinash Chandra Ghosa and others.	.....	421 8 0	.....
4550	Kukna Khag Dom, Domingo Manual, DeSilva, Braja Mohan Sen, Durga Mohan Das, Musammat Krishna Mohini Osat taluq, pergunnah Bozergomedpur.	9,796 0 0	Ditto ...	.. ...	Jagadeswari Debya and others.	.....	For 1888-89 8,269 4 4, 1889, kist September 153 0 0, 1890, kist January 1,224 0 0	.....
							9,646 4 4	
4757	Madanpura Chur, pergunnah Ratandi Kalikapur.	1,139 0 0	Ditto ...	.....	Brindaban Chandra Chakervarti Roy Choudhuri and others.	.....	371 10 6	.....
4897	Tiakhali, pergunnah Chandradwip.	533 14 3	.....	10*a.* 5*g.* Ijmali share	Nistarini and others	342 0 4	.....	32 0 6
4897	Ditto ditto ...	533 14 3	... ..	1*a.* 15*g.* share under separate account.	Tarini Charan Somoddar.	58 6 4	.....	5 7 6
5008	Chak Barguna, Haola No. 16.	668 0 0	Haoladari right of the whole Haola.	.....	Ramjan Haoladar and others.	.....	107 0 0	.....
5193	Ramdeb Datta taluq, mouzah Barahipur, pergunnah Gopalpur Mrijanagar.	699 0 0	Whole estate.	.. ...	Jearuddin Haoladar and others.	.....	0 10 0	.....
5211	Kumaria Chur, hissa 13*a.* 18½*g.* 1*kt.*, pergunnah Uttar Shahabazpur.	1,160 0 0	.....	3*a.* 8*g.* 2*kt.* 11½*til.* Ijmali share.	Durga Prosonna Roy and others.	259 5 0	.....	178 0 1
5228	Chhota Lumchi Dhali Chur.	1,253 0 0	.....	3*a.* 8½*g.* 1*kt.* 20*dhur.* Ijmali share.	Mr. A. Toms, executor of estate of J. P. Wise and others.	202 11 7	.....	107 7 0
6449	Tappeh Sultanabad, hissa 7½*g.*, Asimannessa Khatun and others.	542 1 4	Whole estate.	.....	Moulvie Abdul Wazed and others.	.....	5 10 4	..

Backergunge Collectorate, the 15th February 1890. POORNO CHUNDER GUPTA, Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Furreedpore will be put up for sale at the Collector's Office of that district on the 25th March 1890, corresponding to 13th Choitra 1296 (B. S.), for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
249	Panchashasari, pergunnah Chandprotap.	744 0 0	Whole ...	.....	Iswar Chandra Saha and others.	.....	186 0 0	.....
284	Panchashasari, pergunnah Sahajapur.	1,521 0 0	Do. ...	.....	Jadub Chandra Bagchi and others.	.....	300 11 0	.....
3555	Taluq Ratneswar Pal Choudhury, pergunnah Nasarat Shahi.	2,559 13 8	.....	Hissa 4 annas ...	Uma Prosonno Pal Choudhury and others.	639 15 0	.....	61 11 6
3870	Taluq Ram Prosad Rai, pergunnah Kharagpur.	524 12 9½	Whole ...	.....	Abhoy Coomer Rai and others.	.....	27 15 5½	.....
4004	Taluq Kali Sanker Sen, pergunnah Rajnagore.	1,140 4 3¾	Do. ...	.....	Kumadini Kant Barujya Choudhuri and others.	.....	128 5 11	.....
4028	Zemindari Basudev Rai, pergunnah Rajnagore.	4,119 4 9½	.....	Hissa 10 annas excepting the specific share bearing a revenue of Rs. 63-1.	Soshi Mohan Pal Choudhuri and others.	2,574 9 9½	.....	816 5 10
4028	Ditto ditto ...	4,119 4 9½	.....	Hissa 6 annas, ditto.	Gopi Mohan Rai Choudhuri and others.	1,481 10 0	.....	185 13 6
6220	Hissa Nilmoni Sen, pergunnah Rajnagore.	597 12 3	Whole ...	.....	Raj Coomer Pal and others.	.....	82 8 7½	.....
6220	Ditto ditto ...	597 12 3	.....	Hissa 7½ annas ..	Raj Coomer Pal and Mohima Chandra Pal.	280 3 1½	.....	74 0 2½
6220	Ditto ditto ...	597 12 3	Whole ...	.....	Haro Lal Pal and others.	.....	5 7 4½	.....
6220	Ditto ditto ...	597 12 3	.....	Hissa 1 anna ...	Haro Lal Pal ...	18 11 0	.....	4 14 11½
6305	Gazlai char, appertaining to char Madan Sankar.	670 12 0	Whole ...	.....	Kripa Moyee Debya, Poorna Chandra Bandopadhya and others.	.....	11 7 3	.....

Furreedpore Collectorate, the 15th February 1890. PURNO CHANDRA RAI, Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Mozufferpore will be put up for sale at the Collector's Office of that district on 27th March 1890, corresponding 21st Chait 1297 Fasli, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue due on the 13th January 1890.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
261	Ibraheempoor, pergunnah Brail.	535 0 9	.....	12a. 5g. 1kr, 1k. ...	Baisakhi Lall and others.	410 2 9	.....	51 4 0
907	Akhta, pergunnah Babra Champarun.	1,173 5 9	.....	3a. 12g. 2c. 2k. 12r. ...	Babu Salookat Deo Narayan.	206 8 1	.....	141 8 0½
921	Bazidpoor Dowlat, pergunnah ditto.	4,450 12 3	.....	8a. 1g. 1k. 1d.	Rajcoomar Babu, Deo Nunden Singh and others.	2,240 13 2	.....	113 8 6½
296	Chiknowtah, pergunnah ditto.	3,311 4 10	.....	6a, 1c. 1d. ...	Babu Shimbhoo Pershad, Chundika Pershad and others.	1,042 14 5	.....	449 8 11½
1060	Makwoodpoor Karrah, pergunnah ditto.	1,067 11 9	.....	7a. 5g.	Rajcoomar Babu, Deo Nunden Singh and others.	483 13 1	.....	25 1 9½
3194	Bidupoor, pergunnah Hajipoor.	1,707 3 3	The whole estate.	.....	Ramkishun Panday ...	1,707 3 3	156 12 0	.....
3528	Joorawanpoor, pergunnah ditto.	719 10 7	.....	16g. 2c. 2k. 5r.	Harbuns Singh ...	37 7 8	.....	6 0 9
3528	Ditto	719 10 7	.....	8g. 3c. 3r.	Deo Narayan Singh ...	19 11 0	.....	3 7 5
3528	Ditto	719 10 7	.....	19g. 3c. 2k. 2d. 15r. ...	Patul Kuer	45 0 0	.....	4 11 11
3528	Ditto	717 10 7	.....	2a. 14g. 1k. 5r.	Upnet Narayan ...	121 10 3	.....	17 8 6
3539	Maniarpoor, pergunnah ditto.	1,303 5 11	The whole estate.	.....	Bhagwat Narayan ...	1,303 5 11	205 1 4	.....
5402	Sharifpoor, pergunnah Nanpoor.	506 9 1	.....	5a. 6g. 2c. 2k.	Sher Bahadur Singh and others.	337 12 8	.....	20 14 5
9462	Erazee Nowberrar-Bungra, pergunnah Gudah Sand.	865 5 0	.....	1a. 6g. 2c. 2k.	Mangul Pershad ...	73 2 2	.....	9 0 4
9462	Ditto	865 5 0	.....	2a. 13g. 1c. 1k. 1d. ...	Debi Dutt Singh ...	144 5 4	.....	8 0 4
9462	Ditto	865 5 0	.....	5a. 6g. 2c 1k. 2d. ...	Rachh Pal Singh ...	288 7 0	.....	0 1 4
9462	Ditto	865 5 0	.....	6a. 13g. 1c. 1k.	Braham Deo Narayan Singh.	360 6 6	.....	30 0 6
9894	Raja Pakurchakla, Gurjowl, pergunnah Bisarah.	958 2 8	The whole estate.	.....	Nawnidh Lall and others.	908 2 8	62 6 0	.....

Mozufferpore Collectorate, the 15th February 189 . E. B. HARRIS, Deputy Collector in charge.

NOTICE is hereby given, under section 6, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Hooghly will be put up to public and unreserved sale at the Collector's office of that district on the 24th day of March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
2	Mukoondopore, pergunnah Chowmahs.	14,550 2 9	The whole estate.	.....	Rajindra Narain Nundy and others.	...	450 9 11	...
10	Radhakantobati, pergunnah Pandooa.	624 11 11	...	The entire estate except the share of which separate account has been opened.	Sreehurry Nundy and others.	596 13 11	...	59 6 0
11	Chhalalpore, pergunnah Pandooa.	707 6 2	...	Ditto ditto	Aisa Khatun *alias* Abadonnessa Bibee and others.	235 13 2	..	25 11 7
26	Mahkapore, pergunnah Baligari.	10,595 3 8	...	Ditto ditto	Nil Komul Mitter and others.	4,507 14 8	...	1,682 7 4
49	Hatisala, pergunnah Chowmahs.	11,569 5 0	...	Ditto ditto	Raja Peary Mohun Mookerjee and others.	7,712 14 0	...	1,009 10 0
54	Tenlpara pergunnah Pandooa.	1,006 1 0	...	7*a.* 19*g.* 1*k.* 8*il.* 64 *kan.* share of seventeen mouzahs, "Thaipara and others" of which separate account has been opened and marked A.	Woomadotonnessa Bibee.	476 0 0	...	8 0 0
56	Champahati, pergunnah Pandooa.	606 7 2	...	The entire estate except the share of which separate account has been opened.	Bidhoomoni Dassee and others.	598 8 0	...	170 0 0
65	Nundingram, pergunnah Pandooa.	1,975 9 0	...	8 Annas share of the estate of which separate account has been opened and marked A.	Keshb Chandra Chatterjee.	987 13 0	...	30 0 0
117	Rajhat, pergunnah Khosalpore.	726 0 3	..	The entire estate except the share of which separate account has been opened.	Jeshunkristo Gossain and others.	265 11 3	..	35 11
159	Chatra Baday, pergunnah Boro.	740 9 5	...	Ditto ditto	Bhola Nath Mitter and others.	43 15 1	...	0 1 10
159	Ditto ditto	740 9 5	...	2*a.* 13*g.* share of the estate of which separate account has been opened and marked A.	Chandra Kanto Mookerjee and others.	145 9 4	...	4 10 0
191	Haripore, pergunnah Chowmahs.	851 3 2	...	The entire estate except the share of which separate account has been opened.	Suthdoyal Banerjee and others.	728 2 2	...	87 4 10
2074	Jeerut Chur, pergunnah Hatkanda.	532 5 6	The whole estate.	.....	Joy Kristo Mookerjee	...	266 0 0	...
3521	Digra, pergunnah Boro.	530 3 5	The whole estate.	.....	Ramdoyal Banerjee ...	...	198 0 0	..
3541	Khar Sarai, pergunnah Boro.	1,311 10 0	...	The entire estate except the share of which separate account has been opened.	Ramdoyal Banerjee ..	655 13 6	...	162 8 0
3994	Ramkristopore, pergunnah Boro.	563 14 9	...	8 Annas share of the estate of which separate account has been opened and marked A.	Rance Surnomoyee Dassee.	281 15 0	...	103 0 0
4085	Shoikpore, pergunnah Bairs.	10,443 11 0	...	The entire estate except the share of which separate account has been opened.	Girish Chundra Roy and others.	1,740 3 0	..	649 7

Hooghly Collectorate, the 14th February 1890. MAHOMED ISRAIL, for Collector of Hooghly.

NOTICE is hereby given, under section 6, Act XI of 1859, section 11, Act VII (B.C.) of 1868, and Act II (B.C.) of 1871, that the undermentioned dependent tenures in the Satkanea Khas Mehal in the district of Chittagong will be put up to public and unreserved sale at the Collector's office of that district on the 26th day of March 1890 for arrears of rent and cesses remaining unpaid after the latest day of payment, the 26th day of December 1889.

Mehal Noabad.

Serial No.	Nos. of tenures on Register No. 1.	Names of tenures and their situations.	ANNUAL RENTAL		THE AMOUNT OF ARREARS FOR WHICH THE TENURES TO BE SOLD.			REMARKS.
			Rent.	Cesses.	Rent.	Cesses.	Total.	
		Thanna Satkanea, mouzah Napora.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	6/1823	Taluk Raj Kumar Roy and Brojeshwari, baboit taluk Bisheshwari Naba Kumar, No. 541—468.	1,017 2 0	44 8 6	310 0 0	13 7 0	323 7 0	The entire taluks will be sold.
		Thanna Satkanea, mouzah Chambal.						
2	20/430	Taluk Tajannissa Chowdhuranee ...	1,193 4 10	176 13 6	745 4 10	110 6 6	855 11 4	

C. P CASPERSZ, Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Nuddea will be put up for sale at the Collector's office of that district on the 28th March 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
425	Paverpore, pergunnah Futtehjungpore.	3,414 9 6	.....	5a. 10g. 2k. 17½til share bearing No. 425-0.	Kala Chand Biswas and others.	1,175 6 11	.....	1 5 3
				2nd Class Mehals.				
814	Char Bhabanandadyar, pergunnah Bhabanandadyar.	1,160 5 0	Whole est te.	.....	Messrs. Robert Watson and Co. and others.	.....	7,881 6 0	.....
815	Ditto ditto ..	1,160 5 0	Ditto ...	.....	Sreekrishna Bhowmik and others.	.....	3,077 14 2	.....

Nuddea Collectorate, the 15th February 1890. N. K. BOSE, Covtd. Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, and under Act VII (B.C.) of 1868, that the undermentioned estates or shares of estates in the district of Mymensingh will be put up for sale at the Collector's Office of that district on the 25th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
9	Zemindari pergunnah Attiah, hissa 2½ annas.	6,729 2 0	.....	Ejmali share exclusive of the separate accounts opened under sections 10 and 11 of Act 11 of 1859.	Nasamon Nessa Khanum Chowdhurain and others.	2,418 6 0	.....	36 6 6
70	Zemindari pergunnah Jumshaye.	10,525 14 0	.....	Separate share 2 annas 5 gds. 2 cr. 6 dips.	L. M. Pogose, L. G. Mary Pogose and others.	1,503 12 0	.....	372 15 5
90	Zemindari hissa 4½ annas with bojabeta taluq, pergunnah Nasirujial.	7,197 10 0	.....	Separate share 11 gds. 2cr. 2 kg 10 til. of Kismut Singdha.	Sheik Hasan and others.	1 10 0	.....	1 4 0
96	Ditto ditto ...	7,197 10 0	.....	10as. of taluq Dip Chandra Rai.	Mohim Chandra Roy Chowdhuri.	204 5 0	.....	70 0 0
96	Ditto ditto ...	7,197 10 0	.....	12½gds. share of the estate.	Mahamed Mafidar Kohoman.	230 12 0	.....	79 13 0
121	Thane-war Badia, pergunnah Nasirujial.	729 10 0	.....	14ans. 19gds. 2cr, 2kg. ejmali share.	Apisullah Bhuya and others.	711 2 0	.....	275 4 0
124	Payandabeg, hissa 13 as. 6 gds. 2 cr. 2 kranta tuppeh Hasradi.	1,796 2 0	.....	7½as. share of Kismat Patua Bhanga, 6½as. share of Nagor Hasradi, 2as. of Sir Masna, 8 gds. of chakley Maha atpur and 16as. of other mouzas.	Upendra Kishore Roy Chowdury and others.	358 15 0	.....	24 9 0
137	Zemindari pergunnah Susung.	1,988 4 0	.....	15gds. 1cr. 2kranta and 10til share of the estate.	Joy Nath Roy ...	96 1 0	.....	33 5 0
	Ditto ditto ...	1,988 4 0	.....	8gds. 1cr. 2kranta 1 til share of the estate.	Biswesvari Debia and others.	52 5 0	.....	29 1 0
144	Zemindari pergunnah Sherepur, hissa 1a. 15g.	2,643 8 0	.....	Joint share exclusive of separate account opened under Act XI of 1859.	Dharani Kanta Chowdhuri and others.	1,614 1 0	.....	3 14 6
144	Ditto ditto ...	2,643 8 0	.....	2a. 14g. 3cr. 3 dips separate share of the estate.	Har Kumar Chowdhuri.	453 3 0	.....	148 9 0
5000	Char Ghugra Kandi, pergunnah Sherepur.	765 15 0	Whole ..	.....	Radha Ballav Chowdhuri and others.	.....	2 0 0	.....
6179	Juar Jagat Char, pergunnah Bardakhat, tuppeh Kurikhayi.	754 8 0	.....	1 anna separate share of the estate.	Ram Keshab Shaha and others.	47 3 0	.....	23 5 0
7503	Taluq Nuruncssa Khanum with ejmali mouzah Taratia Digar, tuppeh Ranbhawal.	1,208 0 0	Whole ..	.....	Administrator General of Bengal and others.	.....	140 9 8	.....
				Second class.				
5013	Chak Shakchura, Tuppeh Ranbhawal.	511 0 0	.....	15ans. 17k. share of the estate.	Goloke Chandra Bhattachariya.	506 4 0	.....	136 6 9
5398	Char Jungidi and others, pergunnah Sherepur.	1,220 0 0	Whole ...	.....	Kishori Mohan Chowdhuri and others.	.....	104 12 9	.....

Mymensingh Collectorate, the 14th February 1890. JUGGOBONDHU KHAN, Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13 of Act XI of 1859, that the undermentioned estates or shares of estates in the district of Tipperah will be put up for sale at the Collector's office of that district on the 26th March 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

1	2	3	4	5	6	7	8	9	10
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.	REMARKS.
30	Kismat *Ia.* 6*g.* 2*c.* 1*k.* 4*dt.*, pergunnah Bardakhat.	Rs. A. P. 13,319 4 9	.....	3*a.* $1\frac{5}{8}$*kara* share.	Srimati Barni Khanam and and others.	Rs. A. P. K. 2,508 0 8 $2\frac{1}{2}$	Rs. A. P.	Rs. A. P. K. 1,157 1 7 5 due up to Agrahayan 1296 B.S.	Accounts are separated under section 10 of Act XI of 1859.
36	Ditto ...	13,319 4 9	.....	14*g.* 1*kara* 2 $\frac{2}{2,223,554,560}$ *kt.* share.	Nabin Chandra Das Roy and others.	599 9 2 $14\frac{1}{2}$	.....	64 9 5 2 ditto.	Remaining portion that has not been separated.
30	Kismat 3*a.*, pergunnah Choudhargop.	1,360 0 6	.....	4*a.* share ...	Ambika Charan Lashkar and others.	340 0 0 $17\frac{1}{2}$	.....	46 2 0 $12\frac{1}{2}$ ditto.	Ditto ditto.
230	Taluk Ramdhan Majumder, pergunnah Mohabutpur.	1,189 13 10	.....	10*a.* 13*g.* 1*kara* 1*kt.* share.	Alam Rajah *alias* Idhan-uzzi Chowdry and others.	793 3 11 0	.....	92 0 11 0 ditto.	Ditto ditto.
255	Taluk Shahazadi Khanam, pergunnah Narayanpur.	746 10 8	.....	3*a.* 11*g.* 1*kara* 2*dt.* share.	Srimati Shafaranessa Bibi and others.	105 14 9 $9\frac{1}{2}$	.....	0 5 0 0 ditto.	Ditto ditto.
372	Mouzah Ahamudpur, pergunnah Bardakhat.	1,228 6 0	.....	5*a.* 6*g.* 2*kara* 2*kt.*	Ishan Chandra Roy.	409 7 4 0	.....	139 5 1 0 for kist November 1889.	Ditto ditto.
401	Jowar Bisharah, pergunnah Bardakhat.	3,141 3 0	.....	5*a.* 6*g.* 2*kara* 2*kt.*	Ditto ...	1,047 1 0 0	.....	356 5 8 0 ditto.	Ditto ditto.
455	Jowar Kalai Gobindapur, pergunnah Bardakhat.	3,360 0 0	Whole...	.....	Golam Moula ...	.....	110 0 0 for kist November 1889.	.....	.....
1925	Chur Nagarerkandi, No. 211, pergunnah Utter Shahapur, resumed under Regulation 2 of 1819.	1,296 10 9	Do. ...	.....	Dr. George Manock and others.	.....	296 3 11 ditto.	.....	Property of individuals settled for 11 years from 1294 to 1304 B.S.
193	Mouzah Gangercoat, pergunnah Bardakhat.	895 0 0	Do. ...	.....	Braja Nath Roychowdry and others.	.....	76 14 5 ditto.	.....	Meadi taluk settled for 17 years from 1288 to 1304 B.S.
1933	Jowar Tinchitta, pergunnah Bardakhat.	663 12 3	Do. ...	.....	Durga Charan Das Majumder and others.	.....	210 5 3 ditto.	..	Meadi taluk settled for 18 years from 1287 to 1304 B.S.
1933	Mouzah Ddiarah Chairpara, pergunnah Bardakhat.	1,451 1 3	Do. ...	.....	Kali Das Bhadra and others.	.....	277 12 0 ditto.	.....	Meadi taluk settled for 14 years from 1291 to 1304 B.S.
1933	Jowar Rasullabad, pergunnah Bardakhat.	3,969 14 11	Do. ...	.....	Kamalakanta Padder and others.	.....	1,364 10 6 ditto.	.....	Meadi taluk settled for 13 years from 1292 to 1304 B.S.
1933	Jowar Daulatpur, tappeh Kurikhai, pergunnah Bardakhat.	1,436 12 0	Do. ...	.....	Former owner—Ram Gopal Chakraborty and others. Auction purchaser—Mohesh Chandra Chakravarti. Sale not yet confirmed.	.....	493 14 0 ditto.	.....	Meadi taluk settled for 50 years from 1261 to 1310 B.S.

Tipperah Collectorate, the 15th February 1890.

R. T. GREER, Offg. Collector.

NOTICE is hereby given, under sections 6 and 13 of Act XI of 1859, that the undermentioned estates in the district of Moorshedabad will be put up for sale at the Collector's office of that district on 21st March 1890, corresponding with 9th Choitro, Friday, 1296 (B.S.), for arrears of revenue due up to 13th January 1890.

1	2	3	4	5	6	7	8	9	10
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.	REMARKS.
9	Kismut pergunnah Kasipore, pergunnah Kasipore.	Rs. A. P. 8,074 3 0	.....	1*a.* 8*g.* 9*kgs.* ...	Srinath Roy Chowdhury, &c.	Rs. A. P. 720 7 0	Rs. A. P.	Rs. A. P. 53 0 4	Of the entire estate, 1*a.* 8*g.* 9*kgs.* share belonging to Srinath Roy Chowdhury, &c., the sudder jumma of which is Rs. 720-7, will be sold.
368	Kismut Huda Barnagar, pergunnah Muraripore.	4,062 13 1 Police 72 2 4	.....	8*a.* 19*g.* 2*karas*	Moharanee Brojo Sundari Debya.	3,277 10 11 Police 40 8 0	.....	963 8 10 Police 10 14 0	Of the entire estate, joint property (zimah) of 8*a.* 19*g.* 2*karas* belonging to Broje Sundari Debya, the sudder jumma of which is Rs. 2,318-2-11 will be sold.
		4,134 15 5				3,318 2 11		974 6 10	
407	Kismut mouzah Syud Kulutia, pergunnah Fatehsingh.	570 11 1	Entire mehal.	.....	Syud Fasiel Karim, &c.	.....	15 16 5	.....	
367	Kismut Gunj Jangipore, pergunnah Gonkur.	714 8 11	Ditto .	.....	Bepin Behari Nath	.....	179 14 10	.....	
1464	North of kismut Jangipore, char Enayenagar, Balichata and Khiderpore.	538 2 0	Ditto ...	.....	Proprietress and settlement-maker, Rukshmini Barmanya.	.....	Current 396 0 0 Arrear 1,436 9 6	.....	The proprietary and settlement right of the estate from 1st April 1877 up to 31st March 1894 will be sold.
							1,832 9 6		

Moorshedabad Collectorate, dated Berhampore, the 13th February 1890.

J. G. RITCHIE, Offg. Collector.

Statement of the Affairs of the Bank of Bengal for the week ending 11th February 1890.

LIABILITIES.

	Rs.	A.	P.
Capital paid up	2,00,00,000	0	0
Reserve Fund	58,00,000	0	0
Public Deposits at Head Office Rs. 84,21,101 3 2			
Ditto ditto at Branches ,, 1,02,98,573 2 11	1,87,19,674	6	1
Other Deposits at Head Office and Branches	3,02,10,413	3	10
Bank Post Bills, &c.	4,86,545	6	1
Sundries	9,63 519	3	11
Rupees	7,61,80,182	3	11

ASSETS.

	Rs.	A.	P.
Government Securities	20,48,940	0	0
Other authorized Investments	70,00,296	0	0
Loans on Government and other authorized Securities	1,56,52,754	9	3
Accounts of credit on ditto ditto	1 06,63,753	4	1
Bills discounted and purchased	1,99,39,279	8	11
Balances with other Banks	6,86,706	0	5
Bullion	1,73,814	10	6
Dead Stock	12,26,410	2	1
Stamps	13,186	11	0
Sundries	3,14,519	15	7
	5,77,19,660	13	10
Cash and Currency Notes at Head Office ... Rs. 63,09,868 12 3			
Cash and Currency Notes at Branches ,, 1,21,50,652 9 10	1,84,60,521	6	1
Rupees	7,61,80,182	3	11

BANK OF BENGAL,
Calcutta, 13th February 1890.

F. T. LEWIS, Offg. Chief Acctt.
Rate for Demand Loans 10 per cent.
Percentage 36·6.

By order of the Directors,
W. D. CRUICKSHANK,
Secy. and Treasurer.
(3549 1)

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sál beams and scantlings supplied from this depôt will be as follows:—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 ,, ,, 2-12 ,,
23 ,, ,, 2-14 ,,
24 ,, ,, 3 ,,

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 ,, 2-4 ,,
Under 7 feet ,, 2 ,,

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates:—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates:—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-4; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

Jheel Press Company, "Limited," in Liquidation.

A GENERAL Meeting will be held at the Registered Office of the Company on Monday, 17th March 1890, at noon, to receive the final accounts of the liquidation.

J. D. MAXWELL, Liquidator.
Calcutta, the 15th February 1890. (3553-1)

Soom Tea Company, "Limited."

NOTICE is hereby given that the Ordinary General Meeting of Shareholders of the above Company will be held at the Registered Office, No. 4, Mangoe Lane, Calcutta, on Saturday, the 22nd February next, at 10-30 o'clock A M, for the purpose of receiving the Directors' Report, passing the accounts for the year ending 31st December 1889, declaring a dividend and transacting such other business as may be brought before the Meeting.

By order of the Board.
WILLIAMSON, MAGOR & Co., Secretaries.
CALCUTTA, the 21st January 1890. (3462—2)

Bishnauth Tea Company, Limited.

NOTICE is hereby given that an Extraordinary General Meeting of Shareholders of the above Company will be held at the Registered Office, No. 4, Mangoe Lane, Calcutta, on Wednesday, the 19th February 1890, at 12 o'clock noon, for the purpose of declaring an *ad interim* dividend on account of season 1889, and transacting such other business as may be brought before the meeting.

By order of the Board.
WILLIAMSON, MAGOR & Co., Secretaries.
Calcutta, 24th January 1890. (3477—2)

Great Eastern Hotel Wine and General Purveying Company, "Limited."

NOTICE is hereby given that an *ad interim* dividend of 2½ per cent., equivalent to Rs. 2-8 per share, will be payable, free of income-tax, on and after Monday, the 3rd March next, to Shareholders whose names are on the Company's Register on the 23rd instant.

In accordance with the Articles of Association, the Transfer Register will be closed from the 24th February to 2nd March, both days inclusive.

By order of the Board,
E. F. LONGLEY, Secretary.
Calcutta, 15th February 1890. (3551—1)

Lost.

THE lower halves of the Government Promissory Notes Nos. 236782 and 236783 of the 4 per cent. loan of 1865 for Rs. 500 each, originally standing in the name of the Bank of Bengal, and last endorsed to General Dumber Shum Shere Jung Bahadur Rana, the proprietor, by whom it was never endorsed to any other person, having been lost, notice is hereby given that payment of the above notes and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, Calcutta, and that application is about to be made for the issue of a duplicate in favour of the proprietor. The public are cautioned against purchasing or otherwise dealing with the abovementioned securities.

RAKHAL CHUNDRA CHATTERJEE, Secretary to the Representative of the Government of Nepal.
78, Dhurumtola Street, the 6th February 1890.
(3520—3)

Statement of Government Promissory Notes enfaced for payment of Interest in London, under deduction of amount re-transferred to India, and outstanding in the Books of the Bank of Bengal on the 15th February 1890.

PARTICULARS.	3½ per cent. transfer loan of 1853-54.	4 PER CENT. LOANS							4½ PER CENT. LOANS				Transfer loan of 1879, seven shillings per cent. portion.	5 per cent. loan of 1856-57.	GRAND TOTAL.
		Of 1832-33.	Of 1835-36.	Of 1842-43.	Of 1854-55.	Transfer of 1865.	Reduced 4 per cent. loan of 1879.	Total.	Of 1870.	Of 1878.	Transfer loan of 1879 4½ per cent. portion.	Total			
Balance of 31st January 1890 ..	54,700	11,29,387	25,25,900	2,48,46,000	1,06,71,800	3,94,72,500	1,98,76,700	9,85,22,287	39,500	71,48,000	11,08,59,600	11,80,47,100	1,33,800	32,200	21,67,90,087
ADD—															
Amount enfaced at Madras between 1st and 15th February 1890	.....	.....	.....	4,500	.....	5,000	..	9,500	.....	.....	2,600	2,600	.....	.....	12,100
Amount enfaced at Bombay between 1st and 15th February 1890	.....	.....	.....	2,500	1,000	500	.....	4,000	.....	...	.....	.....	.....	.....	4,000
Amount enfaced at Calcutta between 1st and 15th February 1890	.....	.....	.....	14,000	23,700	2,000	.....	39,700	.....	.	41,100	41,100	.....	.....	80,800
	54,700	11,29,387	25,25,900	2,48,67,000	1,06,96,500	3,94,80,000	1,98,76,700	9,85,75,487	39,500	71,48,000	11,09,03,300	11,80,90,800	1,33,800	32,200	21,68,86,987
DEDUCT—															
Amount written off in the London registers	... ..	.....	.....	1,90,000	65,200	1,66,500	4,000	4,25,700	.. ..	.....	63,500	63,500	.....	.....	4,89,200
Balance on 15th February 1890 ...	54.700	11,29,337	25,25,900	2,46,77,000	1,05,31,300	3,93,13,500	1,98,72,700	9,81,49,787	39 500	71,48.000	11,08,39,800	11,80,27,300	1,33,800	32,200	21,63,97,787

NOTE.—From 9th June 1867 to 15th Dec. 1889—Enfaced from India 6,175 lakhs; re-transferred from London 5,347 lakhs.
" 16th Dec. 1889 " 31st " " " " 9 " " " " 11 "
" 1st Jan. 1890 " 15th Jan. 1890 " " " 5 " " " " 21 "
" 16th " " " 31st " " " " " 3 " " " " 3 "
" 1st Feb. " " 15th Feb " " " " 1 " " " " 5 "

6,193 5.387
5,387

Balance against India ... 806 lakhs.

DEBT OFFICE, BANK OF BENGAL,
...utta, the 17th February 1890.

(3559—1)

W. D. CRUICKSHANK
Secretary and Treasurer.

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.		Number, mark and description.	Consignees.	Ships.
1890.				
Feb.	1	4 Packages, 426 in a diamond, A B & Co. outside ...	Order	S. S. "Rosetta."
,,	1	2 Cases, 104 in a diamond, A B & Co. outside ...	Ditto	Ditto.
,,	1	1 Case, 155 in a diamond, A B & Co. outside ...	Ditto	Ditto.
,,	6	1 Case, A H C	Ditto	Ditto.
,,	6	4 Cases, B & Co. in a diamond, L S & Co. outside ...	Ditto	Ditto.
,,	6	1 Case, 25 in a diamond, B B below	Ditto	Ditto.
	6	3 Cases, 25 in a diamond, B K below	Ditto	Ditto.
	6	3 Bottles quicksilver, B	Ditto	Ditto.
	6	3 Cases, John Bless, Esq.	Addressed	Ditto.
	6	4 Crates, 1st Battn. E. L. Regtt.	Ditto	Ditto.
	6	1 Case, B C in a diamond, C & Co. top	Order	Ditto.
	6	5 Cases, 10131 in a diamond, B R & B outside ...	Ditto	Ditto.
	6	1 Case, B & Co. in a diamond	Ditto	Ditto.
	6	10 Cases, C B & Co. by S in a diamond	Ditto	Ditto.
	6	1 Case, 321 in a diamond, C below	Ditto	Ditto.
	6	1 Case, 8505 in a diamond, D U E F outside ...	Ditto	Ditto.
	6	1 Truss, 770 in a diamond	Ditto	Ditto.
	6	1 Case, 955 in a diamond, G S below	Ditto	Ditto.
	6	1 Case, 980 in a diamond, G S below	Ditto	Ditto.
	6	100 Cases, H C in a block, P P C below	Ditto	Ditto.
	6	127 Packages, no mark	Ditto	Ditto.
	6	5 Cases, J N B	Ditto	Ditto.
	6	1 Case, K in a diamond, T N S S outside ..	Ditto	Ditto.
	6	1 Package, Messrs. Lyell & Co.	Addressed	Ditto.
	6	4 Cases, L O C K E	Order	Ditto.
	6	3 Bales, 872 in a diamond, L B top	Ditto	Ditto.
	6	19 Packages, M & Co. by D in a diamond ...	Ditto	Ditto.
	6	18 Packages, M & Co. in a diamond, T G top .	Ditto	Ditto.
	6	1 Case, M & Co. in a diamond	Ditto	Ditto.
	6	2 Cases, N C J in a diamond, G A & Co. outside ...	Ditto	Ditto.
	6	1 Case, N & S in a diamond	Ditto	Ditto.
	6	1 Keg, Revd. R. Nagel	Addressed	Ditto.
	6	1 Case, N M I in a diamond	Order	Ditto.
	6	2 Cases, 1954 in a diamond, O S top	Ditto	Ditto.
	6	25 Bottles quicksilver, O	Ditto	Ditto.
	6	1 Case, O S & Co. by B	Ditto	Ditto.
	6	4 Packages, P S by 232 in a diamond, J below ...	Ditto	Ditto.
	6	2 Chairs, C F Park, Esq.	Addressed	Ditto.
	6	26 Bottles quicksilver, R	Order	Ditto.
	6	2 Cases, Mr. Risley	Addressed	Ditto.
	6	1 Case, 499 in a diamond, R C M B outside ...	Order	Ditto.
	6	2 Cases, R W	Ditto	Ditto.
	6	3 Cases, 309 in a triangle, S S top	Ditto	Ditto.
	6	3 Cases, 150 by 769 in a diamond, T B & Co. outside	Ditto	Ditto.
	6	1 Case, T N in a diamond, J G & S outside ...	Ditto	Ditto.
	6	11 Bottles quicksilver, V	Ditto	Ditto.
	6	1 Case, 926 in a diamond, W N & Co. outside ...	Ditto	Ditto.
	6	1 Case, 679 in a diamond, W N & Co.	Ditto	Ditto.
	6	9 Packages, 273 in a diamond, W T H B below ...	Ditto	Ditto.
	6	1 Case, 580 in a diamond, W below	Ditto	Ditto.
	6	1 Case, A W N Wyatt, Esq.	Addressed	Ditto.
	6	1 Parcel, K F	Order	Ditto.
	6	1 Parcel, P E Jenkins	Addressed	Ditto.
	6	1 Parcel, A Pakenham, Esq.	Ditto	Ditto.
	6	1 Case, F & P	Order	Ditto.
	5	1 Case, diamond, A G G outside	Ditto	S.S. "Rauenthaller."
	5	197 Cases, 760 in a block within a triangle	Ditto	Ditto.
	5	2 Cases, 568 in a triangle, C H L & Co. top ...	Ditto	Ditto.
	5	6 Crates, J C in a diamond, S & S C below ...	Ditto	Ditto.
	5	1 Crate, no mark, or S T & S	Ditto	Ditto.
	5	1 Case, 63 in a block within a triangle, W H N below.	Ditto	Ditto.
	5	2 Cases, B M	Ditto	Ditto.
	6	51 Packages, no mark	Ditto	Ditto.
	6	1 Bundle nail rod iron, S H or no mark ...	Ditto	Ditto.
	6	5 Bars angle iron, N G S or no mark	Ditto	Ditto.
	6	1 Iron plate, E C or no mark	Ditto	Ditto.
	6	2 Iron plates, G or no mark	Ditto	Ditto.
	6	2 Iron plates, H in a diamond, or no mark ...	Ditto	Ditto.

Date of removal to Import Warehouse.		Number, mark and description.	Consignees.	Ships.
1890.				
Feb.	6	1 Iron joist, S J C	Order ...	S S. "Rauenthaller
	6	1 Keg, N S C by M C in a diamond	Ditto ...	Ditto.
	6	1 Keg, P P C in a diamond, C & Co. top, T L Madras below.	Ditto ...	Ditto.
	6	1 Case, U H & Co.	Ditto ...	Ditto.
	3	2 Cases, A W P	Ditto ...	S.S. " City of Agra.
	3	1 Bag, C O S S	Ditto ...	Ditto.
	3	1 Bale, 494 in a triangle, C H L & Co. top	Ditto ...	Ditto.
	3	1 Case, 44 by 3936 in a diamond ...	Ditto ...	Ditto.
	3	1 Case, 45 by 3937 in a diamond ...	Ditto ...	Ditto.
	3	3 Cases, F E R in a diamond, N C top	Ditto ...	Ditto.
	3	2 Bales, H S M Y by 589 in a block ...	Ditto ...	Ditto.
	3	5 Cases, H I in a diamond, M top ...	Ditto ...	Ditto.
	3	38 Sleepers, I S R or no mark ...	Ditto ...	Ditto.
	3	1 Case, B C by S M	Ditto ...	Ditto.
	3	28 Packages, no mark	Ditto ...	Ditto.
	3	1 Casting, H H in a diamond, J M top...	Ditto ...	Ditto.
	3	1 Joist, Kalite	Ditto ...	Ditto.
	3	5 Cases, K V in a diamond, Cawnpore below	Ditto ...	Ditto.
	3	6 Cases, L O C K E	Ditto ...	Ditto.
	3	1 Case, M in a diamond	Ditto ...	Ditto.
	3	2 Cases, Messrs. T N. Sing & Son, 4, Clive Ghât Street.	Addressed ...	Ditto.
	3	1 Keg, T M & Co.	Order ...	Ditto.
	3	2 Bales, 343 in a diamond, W T H B below ...	Ditto ...	Ditto.
		1 Case, W L	Ditto ...	Ditto.
		6 Cases, 28 in a block within a triangle, W H N below.	Ditto ..	Ditto.
		1 Piece T-iron, Kalite, or no mark	Ditto ..	Ditto.
		1 Bundle, iron Runga	Ditto ...	Ditto.
		10 Bales, W in a double triangle, D below ...	Ditto ...	Ditto.

Port Commrs.' Office, Calcutta, the 15th February 1890. (3555—1) G. H. SIMMONS, Vice-Chairman.

Notice.

PURSUANT to the orders of Government, dated the 29th June 1831, particulars of the undernoted items of articles held by the Port Commissioners as Receivers of Wrecks, each article being of value above Rs. 100, are published for general information in accordance with the provisions of section 76, Act VII of 1880.

Date.	Recovery number.	Description of articles.	Weight.	Approximate value.	Where recovered.	Where lying.
		Port Approaches.	Cwt. qr. lbs.	Rs.		
16th August 1889 ...	10 P. A.	One country anchor	45 0 0	225	Poojally Creek	Port Commissioners Wreck and Anchor yard.
22nd " " ...	11 "	One Rodgers' patent anchor	15 0 0	260	Ditto ...	Ditto.
		One chain $1\frac{3}{16}$" of 30 fathoms	37 2 3			
27th " " ...	12 "	One Rodgers' patent anchor	50 0 0	150	Shisbaria ...	Ditto.
4th September " ...	13 "	One English anchor	27 0 0	215	Budge-Budge	Ditto.
		One chain $1\frac{7}{16}$" of 15 fathoms	16 1 10			
11th " " ...	14 "	One anchor	60 0 0	300	Binelipatam ...	Ditto.
27th November " ...	17 "	One English anchor	40 0 0	330	Kulpee ...	Ditto.
		One chain $1\frac{1}{8}$" of 15 fathoms	26 3 26			
3rd December " ...	19 "	One country anchor	23 0 0	240	Do. ...	Ditto.
		One chain $1\frac{7}{8}$" of 33 fathoms	35 3 22			
27th " " ...	21 "	One Rodgers' patent anchor	30 0 0	300	Saugor ...	Ditto.
		One chain $1\frac{1}{16}$" of 32 fathoms	48 3 0			
27th " " ...	22 "	One country anchor	50 0 0	1,060	Ditto ...	Ditto.
		One wooden stock...	.....			
		One chain $1\frac{1}{8}$" of 90 fathoms	162 3 12			
27th " " ...	23 "	One country anchor	38 0 4	960	Ditto ...	Ditto.
		One chain $1\frac{3}{4}$" of 86 fathoms	154 2 25			
8th January 1890 ...	26 "	One country anchor	15 0 0	245	Ditto ...	Ditto.
		One chain $1\frac{1}{16}$" of 55 fathoms	34 1 24			
10th " " ...	27 "	One Rodgers' patent anchor	36 3 8	1,585	Ditto ...	Ditto.
		One stock	.....			
		One chain $1\frac{7}{16}$" of 135 fathoms	274 3 8			
13th " " ...	28 "	One English anchor	43 1 23	1,530	Ditto ...	Ditto.
		One stock	8 2 0			
		One chain $2\frac{1}{16}$" of 135 fathoms	255 3 26			
0th February " ...	31 "	One country anchor	12 0 0	305	Ditto ...	Ditto.
		One chain $1\frac{3}{16}$" of 62 fathoms	40 0 26			
10th " " ...	32 "	One country anchor	13 0 0	110	Ditto ...	Ditto.
		One chain $1\frac{3}{16}$" of 12 fathoms	9 2 3			
10th " " ...	33 "	One English anchor	42 0 0	290	Ditto ...	Ditto.
		One chain $1\frac{1}{16}$" of 10 fathoms	17 3 27			

E. J. BEAUMONT, Asst. Conservator.

Port Commissioners' Office, Calcutta, the 11th February 1890. (3545 & 3546—3)

INSOLVENT ESTATES.

QUARTERLY STATEMENT MADE UP TO 30TH SEPTEMBER 1889.

ESTATES.	Whole amount of receipts.	WHOLE DISBURSEMENTS.		Balance.	Portion of balance applicable to dividends now payable.	Net balance.	Probable outturn of the dependencies.
		Dividends paid.	Other payments.				
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Alexander and Co. ...	2,91,087 1 9	2,32,414 0 9	48,899 13 8	9,773 3 4	8,968 8 2	804 11 2	Nothing further recoverable.
Adam, Scott and Co. ...	1,31,609 5 4	1,06,547 4 0	23,086 5 1	1,975 12 3	1,109 15 0	865 13 3	Ditto ditto.
Anderson and Co., William ...	2,678 8 1	.....	1,845 4 3	833 3 10	625 11 6	207 8 4	Ditto ditto.
Allen, Deffell and Co. ...	1,57,553 10 4	1,26,063 13 5	30,521 2 3	968 10 8	946 1 5	22 9 3	Ditto ditto.
Asiatic Marine Insurance Office ...	8,40,361 11 1	6,92,443 5 11	1,38,990 12 9	8,927 8 5	8,621 4 0	306 4 5	Ditto ditto.
Alexander, Wallace & Co. ...	24,142 11 7	16,356 2 7	6,404 3 1	1,382 5 11	1,268 10 4	113 11 7	Ditto ditto.
Anstruther and Co. ...	17,005 3 3	7,346 9 10	3,747 4 1	5,911 5 4	5,516 5 7	394 15 9	Ditto ditto.
Anderson, George ...	1,806 12 6	.....	953 9 3	853 3 3	733 0 2	120 3 1	Ditto ditto.
Atkinson, W. L. ...	17,234 12 9	5,330 14 8	8,863 2 11	3,040 11 2	2,357 11 2	683 0 0	Ditto ditto.
Arrakiel, J. G. ...	1,024 5 6	52 6 1	394 15 9	576 15 8	129 2 7	447 13 1	Ditto ditto.
Audhor Chunder Shaw ...	18,849 9 11	8,184 4 9	8,242 15 4	2,472 5 10	1,207 3 3	1,265 2 7	Ditto ditto.
Aycab Hadjee Abdool Rohomon ...	11,461 10 3	7,788 13 0	2,088 9 11	1,584 3 4	1,469 13 4	114 6 0	Ditto ditto.
Anundo Mohun Dutt and another ...	3,739 2 3	367 1 1	2,501 14 2	870 3 0	557 11 5	312 7 7	Ditto ditto.
Arrathoon, C. M. (M. J. Galstaun and Co.)	11,291 11 0	8,312 14 3	1,837 0 10	1,141 11 11	1,121 15 10	19 12 1	Ditto ditto.
Amerto Krisna Bose ...	1,401 11 0	.....	.....	1,401 11 0	.....	1,401 11 0	Outstanding: in course of recovery.
Andrews, J. ...	1,939 8 5	950 10 0	348 5 8	640 8 9	45 3 3	595 5 6	Ditto ditto.
Balfour and Co. ...	5,61,316 3 6	3,04,469 3 4	2,55,181 14 1	1,665 2 1	713 10 2	951 7 11	Nothing further recoverable.
Boyd and Co. ...	30,673 14 3	10,773 10 4	13,425 1 11	6,475 2 0	6,364 3 4	110 14 8	Ditto ditto.
Bruce, Shand and Co. ...	8,36,536 3 5	4,96,777 1 0	3,32,316 3 0	7,442 15 5	6,618 1 2	824 14 3	Ditto ditto.
Bischoff, Beer and Co. ...	2,640 5 8	18 11 6	2,107 13 5	513 12 9	449 13 5	63 15 4	Ditto ditto.
Bodry, John (1st) ...	1,705 7 1	79 1 11	547 6 0	1,078 15 2	582 1 8	496 13 6	Ditto ditto.
Bluett, James ...	873 0 0	40 0 11	164 14 1	668 1 0	610 0 11	58 0 1	Ditto ditto.
Bhoobun Mohun Mitter ...	4,000 0 0	.....	2,163 7 9	1,836 8 3	1,794 12 6	41 11 9	Ditto ditto.
Baboo Lall Shaw and others ...	1,35,530 2 7	87,983 0 10	30,736 10 9	16,810 7 0	16,562 15 0	247 8 0	Ditto ditto.
Buldeo Doss (Buldeo Doss Chuttoorbhooj)	3,802 3 1	1,424 5 4	985 1 6	1,392 12 3	1,386 12 11	5 15 4	Ditto ditto.
Bhore Mull Gondaka ...	16,319 3 6	11,188 14 2	3,226 1 6	1,904 3 10	1,774 6 11	129 12 11	Ditto ditto.
Brunet, Salix, and Latapie ...	15,235 0 0	8,047 9 5	5,625 0 5	1,562 6 2	1,445 10 8	116 11 6	Ditto ditto.

Brinda	r Setl	...	4,306	0	3	....			1,379	0	2	2,927	0	1			2,927	0	1	Schedule not filed as yet.
Bagot,		...	4,149	4	9	39	3	7	3,498	4	2	611	13	0		4	5	209	8	7	Nothing further recoverable.
Bodry,		...	4,425	4	6	1,112	3	5	2,384	6	10	928	10	3	642	13	0	285	13	3	Ditto ditto.
Bellet		...	1,680	0	0	1,024	3	10	116	13	10	538	4	4	370	9	10	167	10	6	Ditto ditto.
Bunga	hettry and others (Nan-		1,04,279	10	2	71,344	8	8	16,555	1	2	6,380	0	4	5,898	8	8	481	7	8	Ditto ditto.
noo	ry).																			
Bhoob	Bannerjea and another		1,58,927	12	8	36,465	9	4	16,176	2	5	6,286	0	11	4,938	12	0	1,347	4	11	Ditto ditto.
Beer (	loo and another	...	2,201	8	3	591	5	6	946	8	9	663	10	0	641	9	3	22	0	9	Ditto ditto.
Bhola		...	3,100	0	0	29	1	2	2,449	11	7	620	9	3	524	5	11	96	3	4	Ditto ditto.
Bona	ook Small	...				..	.		. .			...			.. ..			.. .			
Brews	nd W. Nicholl (Wilson,		794	0	10	..	.		.....			794	0	10	.....			794	0	10	Schedule not filed as yet.
Ma	Co.)																			
Baker	arate Estate	...	2,337	15	3	1.010	14	10	123	9	0	1,203	7	5	1,157	14	6	45	8	11	Nothing further recoverable.
Bheek	atty	...	1,452	6	4	834	0	8	74	6	5	543	15	3	310	4	5	233	10	10	Ditto ditto.
Colvir		...	1,84,427	8	8	1,36,470	0	10	31,296	10	8	6,660	3	2	6,586	15	0	73	4	2	Nothing further recoverable.
Crutt	illop and Co.	...	99,959	11	1	72,895	6	5	20,263	11	4	6,800	9	4	5,743	13	4	1,056	12	0	Ditto ditto.
Cocke		...	17,19,733	5	0	3,86,102	2	10	3,26,584	4	11	7,046	3	3	6,701	5	10	344	13	5	Ditto ditto.
Canny	nd another	...	21,208	5	11	17,472	0	1	2,990	11	5	745	0	5	632	14	3	112	2	2	Ditto ditto.
Cromp		...	5,413	5	4	2,747	4	3	2,124	12	6	540	10	7	487	13	3	52	13	4	Ditto ditto.
Canny	seloll	...	9,623	9	3	5,676	2	8	2,212	5	4	1,735	1	3	1,523	9	7	211	7	8	Ditto ditto.
Charl	nd Co.	...	5,15,143	12	9	3,99,296	9	9	98,146	12	8	7,700	6	4	6,002	4	5	1,698	1	11	Ditto ditto.
Castel		...	3,201	7	9	2,227	5	6	264	10	2	709	8	1	372	14	3	336	9	10	Ditto ditto.
Carr,		...	11,349	3	8	9,779	11	7	952	5	9	617	2	4	603	6	5	13	11	11	Ditto ditto.
Child,		...	22,090	10	0	16,599	6	0	4,704	11	10	786	8	2	691	4	8	95	3	6	Ditto ditto.
Canto	t	...	907	10	6	196	5	8	137	7	1	573	3	9	542	11	1	30	8	8	Ditto ditto.
Christ		...	5,587	12	2	4,009	9	3	697	9	10	880	9	1	787	10	5	92	14	8	Ditto ditto.
Cole,	ry and Co.)	...	3,018	10	4	1,212	5	3	904	7	7	901	13	6	642	5	1	259	8	5	Ditto ditto.
Clark,	. Fergusson and Co.)...		23,174	8	2	12,877	0	8	7,606	1	11	2,691	5	7	1,518	12	6	1,172	9	1	Ditto ditto.
Cowie	another (Colvin, Cowie		1,62,966	8	11	91,356	4	6	63,245	15	4	8,363	11	1	6,994	7	1	1,369	4	0	Ditto ditto.
and																				
Colvill	and Co.	...	9,743	1	1	2,535	0	0	3,511	6	3	3,696	10	10	.....			3,696	10	10	Ditto ditto.
Chutt	saud	...	31,248	11	0	....	.		18,013	9	6	3,235	1	6	.....			3,235	1	6	Outstanding : in course of recovery.
Conti,		...	3,567	10	8	849	7	7	1,092	4	4	1,625	14	9	383	3	11	1,242	10	10	Nothing further recoverable.
Cohen	E. E. Cohen	...	1,806	3	0	280	1	10	1,012	9	4	513	7	10	317	12	5	195	11	5	Ditto ditto.
Chund	aw	...	43,972	1	6	6,220	1	6	36,801	13	0	950	3	0	920	9	6	29	9	6	Ditto ditto.
Colem		...	1,716	8	0	986	7	5	111	9	9	618	6	10	610	13	5	7	9	5	Ditto ditto.
Coverj		..	945	14	9	143	4	2	59	6	8	742	9	11	703	15	11	38	10	0	Ditto ditto.
Collin		...	2,581	6	8	....	.		.....			2,581	6	8	.....			2,581	6	8	Ditto ditto.
Carbe	another	...	2,436	1	0	...	.		296	7	10	2,139	9	2	.....			2,139	9	2	Outstanding : in course of recovery.
Dicks		...	1,843	0	2	1,039	2	3	241	14	0	56	15	11	506	13	8	55	2	3	Nothing further recoverable.
Dove,		...	12,991	0	0	10,202	7	6	2,214	0	8	5	7	10	317	0	6	257	7	4	Ditto ditto.

Estates.	Whole amount of receipts.	Whole Disbursements.		Balance	Portion of ba applicable dividends n payable.	Ne a	ible turn o dep encies	
		Dividends paid.	Other payments.					
	Rs. A. P.	Rs. A. P.	Rs. A. P	Rs. A. P	Rs A. P	Rs. A. P		
tt Brothers	2,164 9 6	34 7 7	1,405 2 10	724 15 1	660 0 5	64 14 8	Nothing furt er recoverable.	
Silva, John Emanuel	13,643 11 3	11,131 11 5	851 8 9	1.660 7 1	1,346 7 2	313 15 11	Ditto	ditto.
DeSouza, John	1,334 0 3	.....	805 9 0	528 7 3	... ..	528 7 3	Ditto	ditto.
Dumat, Alfred	6,224 5 6	1,051 12 9	2,024 3 5	3,148 5 4	2,815 3 0	333 2 4	Ditto	ditto.
Durrant, Edward	2,223 1 6	816 5 4	890 8 5	516 3 9	479 10 8	36 9 1	Ditto	ditto.
Dennison, G. R.	29,828 14 7	26,967 6 10	1,607 6 4	1,254 1 5	787 0 0	467 1 5	Ditto	ditto.
Duff, David	2,137 12 9	1,041 8 5	489 15 9	606 4 7	483 9 4	122 11 3	Ditto	ditto.
Denonauth Dey	12,182 12 4	7,804 8 7	2,315 6 4	2,062 13 5	1,631 1 4	431 12 1	Ditto	ditto.
Durka Nath Mitter	5,938 12 0	731 10 10	4,641 13 5	565 3 9	447 8 9	117 11 0	Ditto	ditto.
Dencnauth Paul	834 4 3	.....	119 12 9	714 7 6	.....	714 7 6	Ditto	ditto.
Damoodur Doss	4,018 15 9	1,715 1 4	999 14 6	1,303 15 11	1,160 13 4	143 2 7	Ditto	ditto.
Debrunner, Julius	65,912 4 7	58,106 7 4	7,188 1 7	617 11 8	491 5 3	126 6 5	Ditto	ditto.
Doyal Chand Pyne and others	54,590 3 0	174 8 0	52,107 10 5	2,308 0 7	.....	2,308 0 7	Ditto	ditto.
Dawood Khan Esabhai	1,797 8 9	31 11 4	1,238 4 7	527 8 10	190 5 0	337 3 10	Ditto	ditto.
Debnarain Bysack and another	5,427 14 1	3,167 3 1	1,447 4 7	813 6 5	1,077 6 10	Dr. balance . 264 0 5	Outstanding	in course of recove
DeCruz, W. J.	560 0 0	.. ...	.....	560 0 0	.....	560 0 0	Ditto	ditto.
Ewing, Aird and Anderson	3,11,323 1 8	59,611 6 10	42,032 15 9	9,678 11 1	9,516 3 7	162 7 6	Nothing fu er recove	
Ellias, M. B.	7,233 13 6	3,428 10 7	1,263 15 10	2,541 3 1	2,218 0 3	323 2 0	Ditto	ditto.
Espino, Manuel Del	3,800 1 3	1,005 7 2	1,265 7 9	1,529 2 4	950 15 7	578 2 9	Ditto	ditto.
Eagleton, F. A.	3,653 3 6	72 11 2	2,841 4 4	739 4 0	446 0 1	293 3 11	Ditto	ditto.
Emmett and Chambers	23,491 8 3	7,305 15 2	12,954 13 11	3,230 11 2	581 13 8	2,648 13 6	Ditto	ditto.
Esmile Hadjee Abdool Kurreem & ano	2,757 13 3	279 10 7	1,012 4 7	1,465 14 1	1,069 12 0	396 2 1	Ditto	ditto.
Edmands, T. S. (Edmands Brothers)	21,720 9 3	19,005 7 0	2,135 8 8	579 9 7	231 14 0	347 11 7	Ditto	ditto.
Fergusson and Co.	1,96,005 7 4	48,635 4 9	33,097 7 10	14,272 10 9	1,846 5 4	2,426 5 5	Ditto	ditto.
Fergusson Brothers and Co.	1,47,924 5 4	68,637 12 4	75,113 15 2	4,172 9 10	3,761 0 8	411 9 2	Ditto	ditto.
Foster, Rogers and Co.	6,376 9 10	857 3 7	2,294 7 11	3,224 14 4	2,542 11 8	682 2 8	Ditto	ditto.
Fabian, E. D.	776 10 0	263 3 3	.....	513 6 9	.....	513 6 9	Ditto	ditto.
Ferris, G. R.	2,650 0 0	67 7 6	813 2 3	1,769 6 3	1,292 1 6	477 4 9	Ditto	ditto.
Fanshaw, R. F.	876 0 10	176 8 6	96 15 1	602 9 3	425 4 7	177 4 8	Ditto	ditto.
Fornaro, C. (Fornaro and Huni)	27,288 4 3	17,381 1 4	9,001 15 7	905 3 4	453 12 4	451 7 0	Ditto	ditto.
Ferrier, W. A.	4,900 14 0	3,422 10 10	1,056 4 8	421 14 6	208 13 4	213 1 2	Ditto	ditto.

| | | |

Estates.	Whole amount of receipts.	Whole Disbursements.		Balance.	Portion of balance applicable to dividends now payable.	Net balance.	Probable outturn of the dependencies.
		Dividends paid.	Other payments.				
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Hutchison, J. H. (L. W. Toulmin & Co.)	4,043 11 4	2,034 11 10	507 9 0	1,501 6 6	1,444 11 9	56 10 9	Nothing further recoverable.
Hurro Nauth Mozoomdar and others ...	7,700 0 0	3,015 8 2	2,298 14 11	2,385 8 11	2,378 0 5	7 8 6	Ditto ditto.
Heeralall (Munnoolall Heeralall) ...	19,704 0 3	8,519 10 5	7,117 2 10	4,067 3 0	4,061 10 7	5 8 5	Ditto ditto.
Hubbard, C. E. ...	4,154 2 8	1,855 0 3	690 0 4	1,609 2 1	1,601 2 3	7 15 10	Ditto ditto.
Heralall Dodooriah ...	2,965 14 3	1,498 4 4	357 4 10	1,110 5 1	395 1 10	715 3 3	Ditto ditto.
Hay, William (Stuart & Co.) ...	1,999 10 3	.....	1,002 3 9	997 6 6	.....	997 6 6	Ditto ditto.
Heeranundo (Buddermull Heeranund) ...	1,212 15 3	447 15 1	88 2 1	676 14 1	602 3 11	74 10 2	Ditto ditto.
Hadjee Heedatoolah and others ...	1,17,397 3 0	87,094 0 0	16,684 2 10	13,619 0 2	3,875 9 8	9,743 6 6	Outstanding: in course of recovery.
Hurruck Chand and Johoory Mull (Kunyalall Hurruck Chand).	12,596 6 0	5,996 13 7	624 8 4	5,975 0 1	3,266 7 8	2,708 8 5	Ditto ditto.
Hunutram Balakee Dass ...	2,051 13 0	.....	183 14 5	1,867 14 7	.....	1,867 14 7	Ditto ditto.
Hadjee Noormahamed Jakariah ..	3,941 1 3	.....	962 15 9	2,978 1 6	.....	2,978 1 6	Ditto ditto.
Issur Chunder Mill ...	8,546 1 6	490 3 11	6,149 15 6	1,905 14 1	1,880 12 0	25 2 1	Nothing further recoverable.
Issen Chunder Sein ...	12,002 4 9	5,835 13 1	5,586 14 6	579 9 2	568 7 8	11 1 6	Ditto ditto.
Issur Chunder Sein and another ...	631 14 9	.....	59 12 8	572 2 1	530 14 7	41 3 6	Ditto ditto.
Jansen & Co., J. ...	20,002 10 9	139 11 5	15,872 5 0	3,990 10 4	3,766 5 1	224 5 3	Ditto ditto.
Juggeshur Laha ...	34,388 4 1	16,701 4 2	15,519 2 4	2,167 13 7	1,851 6 1	316 7 6	Ditto ditto.
Jadub Chunder Seal ...	2,094 6 7	374 1 10	907 2 9	813 2 0	580 12 8	232 5 4	Ditto ditto.
Jordon, J. S. ...	5,376 8 0	3,582 9 6	984 15 5	808 15 1	545 0 7	263 14 6	Ditto ditto.
Juggenprosaud ...	960 8 9	.....	223 9 0	736 15 9	.....	736 15 9	Ditto ditto.
Jacob, Charles ...	933 8 0	.....	415 13 4	517 10 8	454 6 7	63 4 1	Ditto ditto.
Judah, J. E. ...	2,186 15 0	.....	1,450 4 7	736 10 5	643 2 11	93 7 6	Ditto ditto.
Joburlall Mokeem ...	1,656 0 0	648 15 0	262 4 7	744 12 5	373 13 9	370 14 8	Ditto ditto.
Joakim, M. C. ...	7,754 15 3	4,223 8 11	2,422 12 5	1,108 9 11	838 9 7	270 0 4	Ditto ditto.
Jogendro Nauth Cowar ...	5,943 0 0	1,391 15 3	3,571 12 3	979 4 6	806 0 9	173 3 9	Ditto ditto.
Joitroop Chooney Lall ...	8,229 11 4	4,349 11 2	1,951 7 6	1,928 8 8	1,861 3 1	67 5 7	Ditto ditto.
Joogole Kissore Sewlall Futteah Chund ...	9,544 8 6	4,144 8 6	2,262 11 9	3,137 0 11	2,856 14 5	280 2 6	Ditto ditto.
Kemp, H. C. (T. Hyde Gardiner and Co.)	33,765 12 9	27,374 0 2	5,817 5 1	574 7 6	135 0 4	439 7 2	Ditto ditto.
Khan Mahomed Dhurrumsee ...	55,247 9 1	33,008 1 8	11,149 7 7	11,089 15 10	1,312 7 6	9,777 8 4	Ditto ditto.
Kissoory Mohen Chunder ...	3,300 0 0	2,025 2 4	269 4 2	1,005 9 6	590 11 9	414 13 9	Ditto ditto.
Kissoory Mohen Ruckhitt ...	9,405 15 3	5,247 4 1	3,599 8 3	559 2 11	481 9 2	77 9 9	Ditto ditto.
Kally Dose Doss and others ...	73,719 13 5	20,461 12 8	46,590 9 6	6,667 7 3	3,967 4 0	2,700 3 3	Ditto ditto.
Kullianjee Soonderjee (Soonderjee, Walljee and Co.)	12,444 6 0	2,351 3 3	6,936 8 0	3,156 10 9	3,093 13 10	62 12 11	Ditto ditto.

Chatterjea	..	1,971	8	9	.....			801	0	5	1,170	8	4	... ..			1,170	8	4	Ditto	ditto.
. C.	..	6,800	9	3	3,840	8	1	2,136	11	5	823	5	9	744	15	2	78	6	7	Ditto	ditto.
Chand Goleecha (Okhoyram Chand).	..	2,469	15	10	168	12	6	436	2	5	1,865	0	11	1,600	0	0	265	0	11	Ditto	ditto.
	..	2,43,257	9	11	1,29,999	2	6	94,123	2	4	19,135	5	1	4,050	2	1	5,085	3	0	Outstanding: in course of recovery.	
arn Roy	..	510	0	0	.....			4	0	0	506	0	0	.....			506	0	0	Nothing further recoverable.	
Moben Dass	..	1,133	8	5	.....			456	2	0	677	6	5	.....			677	6	5	Ditto	ditto.
sono Vuttacharjee	..	2,327	11	0	.....			796	7	10	1,531	3	2	.....			1,531	3	2	Ditto	ditto.
and and Ameechand	..	1,371	2	3	.....			110	1	0	1,261	1	3	.....			1,261	1	3	Outstanding: in course of recovery.	
iff Bham	..	796	9	3	... ..			257	8	0	539	1	3	... ..			539	1	3	Ditto	ditto.
ahabzadah Mahomed	..	3,248	1	0	2,256	0	0	295	10	0	696	7	0	667	14	4	28	8	8	Ditto	ditto.
oyal Tunsook Roy	..	1,406	15	6	.....			298	6	0	1,108	9	6	.....			1,108	9	6	Ditto	ditto.
thewson and Co.	..	8,68,485	13	8	2,81,882	4	9	84,883	12	0	1,719	12	11	1,285	11	0	434	1	11	Nothing further recoverable.	
Saunders and Co.	..	80,893	0	4	42,900	8	0	22,836	4	7	15,156	3	9	12,631	12	0	2,524	7	9	Ditto	ditto.
F. D. A.	..	1,170	8	0	.....			.....			1,170	8	0	.....			1,170	8	0	Ditto	ditto.
and Co.	..	33,718	2	8	1,620	6	4	23,592	8	7	8,505	3	9	8,170	3	9	335	0	0	Ditto	ditto.
mill and Co.	..	6,527	12	4	595	0	8	2,343	0	4	3,589	11	4	3,244	15	2	344	12	2	Ditto	ditto.
aux, Labadie and Co.	..	7,483	10	3	1,098	13	8	5,463	14	7	920	14	0	538	7	3	382	6	9	Ditto	ditto.
E. D. (2nd)	..	3,982	6	2	12	0	2	3,079	2	10	891	3	2	795	10	5	95	8	9	Ditto	ditto.
n, J. V.	..	1,008	10	5	234	3	6	243	15	10	530	7	1	480	12	4	49	10	9	Ditto	ditto.
. H. (2nd)	..	1,654	8	7	180	6	6	658	12	11	815	5	2	52	8	2	762	13	0	Ditto	ditto.
D. B.	..	1,430	3	0				557	4	0	872	15	0	.....			872	15	0	Ditto	ditto.
narain Khettry	..	1,726	9	9	429	2	0	617	3	6	680	4	3	411	14	8	268	5	7	Ditto	ditto.
J. P.	..	1,448	12	0	.....			532	0	0	916	12	0	.....			916	12	0	Ditto	ditto.
h Shaw	..	8,323	8	6	5,069	1	8	2,424	9	5	829	13	5	759	9	4	70	4	1	Ditto	ditto.
E. D. and Co.	..	2,444	10	6	286	6	6	487	6	0	1,670	14	0	1,557	12	4	113	1	8	Ditto	ditto
S. (2nd)	..	885	8	11	143	0	0	69	0	4	673	8	7	200	0	0	473	8	7	Ditto	ditto.
y Dhunjeebhoy	..	4,781	8	5	2,644	8	6	975	5	4	1,161	10	7	1,144	6	3	17	4	4	Ditto	ditto.
A., and another (Lyall, Renni .)		3,60,219	2	3	06,025	11	3	50,755	7	1	3,437	15	11	2,761	12	1	676	3	10	Ditto	ditto.
L. K. (Kerr, Leitch & Co.)	..	1,853	3	0	588	2	9	520	14	6	744	1	9	51	13	3	692	4	6	Ditto	ditto.
C. F. (separate estate)	..	2,822	12	2	.....			25	6	6	2,797	5	8	.....			2,797	5	8	Ditto	ditto.
Thomas	..	1,010	1	6	.....			171	8	0	838	9	6	.....			838	9	6	Ditto	ditto.
C. F., and another (C. Lazs .)		6,744	9	5	.....			5,735	4	3	1,009	5	2	.....			1,009	5	2	Ditto	ditto.
F. W. (Marquardt, Lehzen & Co		16,172	15	7	12,483	10	5	1,968	14	0	1,720	7	2	312	10	3	1,407	12	11	Ditto	ditto.
sh and Co.		2,28,494	11	9	24,788	3	2	77,432	6	3	26,274	2	4	24,413	1	2	1,861	1	2	Ditto	ditto.
Fagan and Co.		17,631	7	7	6,841	8	1	10,248	13	1	541	2	5	8	6	7	532	11	10	Ditto	ditto.
r, Hunter and Co.		10,719	11	10	.....			9,875	11	3	844	0	7	.....			844	0	7	Ditto	ditto.
nd Co., D. C.		1,17,362	7	8	58,372	14	3	41,916	2	8	17,073	6	9	17,064	9	3	8	13	6	Ditto	ditto.
Co., William		9,560	5	4	3,938	0	5	2,759	2	7	2,863	2	4	2,863	2	4	.....			Ditto	ditto.
L. A.		885	4	9	18	8	8	342	2	8	524	9	5	430	15	10	93	9	7	Ditto	ditto.
William		1,868	8	8	.....			359	4	6	1,509	4	2	1,339	13	7	169	6	7	Ditto	ditto.
Pillans and Co.		96,154	3	7	19,123	12	4	71,924	2	4	5,106	4	11	5,078	15	2	27	5	9	Ditto	ditto.
ames (Senior).		662	6	9	.....			146	0	0	516	6	9				516	6	9	Ditto	ditto.
, John		821	0	3	20	12	0	189	4	0	611	0	3				611	0	3	Ditto	ditto.

Estates.	Whole amount of receipts.	Whole Disbursements.		Balance.	Portion of balance applicable to dividends now payable.	Net balance.	Probable outturn of the dependencies.
		Dividends paid.	Other payments.				
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Murdock, Mackenzie and Co. ...	5,598 2 8	17 10 1	5,037 6 4	543 2 3	458 0 8	85 1 7	Nothing further recoverable.
Meyers, F. ...	1,263 13 6	.....	139 0 0	1,124 13 6	.....	1,124 13 6	Ditto ditto.
Macdonald, Daniel ...	1,691 14 2	247 8 0	589 13 2	854 9 0	609 11 3	244 13 9	Ditto ditto.
Martin, William ...	2,106 11 8	75 0 0	552 6 2	1,479 5 6	1,425 0 0	54 5 6	Ditto ditto.
Michael, J. C. (2nd) ...	7,760 12 8	5,358 3 5	1,869 3 4	533 5 11	... ..	533 5 11	Ditto ditto.
Meddlecoat, J. H. P. ...	1,011 14 6	111 7 11	98 14 5	801 8 2	579 6 5	222 1 9	Ditto ditto.
Meyers, A. J. ...	8,876 3 6	4,248 9 10	2,804 7 10	1,823 1 10	1,580 10 0	242 7 10	Ditto ditto.
Meer Dawood Alley ...	3,044 0 2	1,459 3 0	229 14 5	1,354 14 9	1,191 12 2	163 2 7	Ditto ditto.
Munnoololl ...	1,410 4 10	.....	647 10 7	762 10 3	.....	762 10 3	Schedule not filed as yet.
Muddonjee Dhurrumsee ...	880 0 2	.....	68 9 6	811 6 8	472 10 8	338 12 0	Nothing further recoverable.
Morgan, C. ...	1,978 6 3	685 1 2	200 1 11	1,093 3 2	813 3 5	279 15 9	Ditto ditto.
Michael, J. C. (3rd) ...	10,086 11 8	6,872 12 2	1,573 8 10	1,640 6 8	1,633 5 5	7 1 3	Ditto ditto.
Murray, James (Black and Murray) ...	14,154 7 2	8,895 4 11	2,544 14 4	2,714 3 11	2,454 4 2	259 15 9	Ditto ditto.
Mugneeram ...	4,227 6 6	1,405 6 1	2,040 11 0	781 5 5	695 14 0	85 7 5	Ditto ditto.
Muddoosoodun Dutt ...	8,150 7 5	5,995 15 11	1,224 7 5	930 0 1	927 9 3	2 6 10	Ditto ditto.
Muddoosoodun Pyne ...	1,762 10 1	.....	203 11 0	1,558 15 1	.....	1,558 15 1	Schedule not filed as yet.
Marshall Brothers ...	12,811 4 11	6,740 0 10	4,650 2 0	1,421 2 1	1,304 0 3	117 1 10	Nothing further recoverable.
Mangos, C. D. ...	13,668 1 10	4,611 8 9	8,055 1 1	1,001 8 0	889 14 11	111 9 1	Ditto ditto.
Martin, J. C. ...	2,327 4 4	834 12 5	159 13 4	1,332 10 7	1,244 11 1	87 15 6	Ditto ditto.
Mahamed Baker Aga ...	2,098 2 9	1,032 11 3	432 2 10	633 4 8	534 8 1	98 12 7	Ditto ditto.
Megraj Boorah (Megraj Chogmull) ...	11,441 10 7	7,124 8 10	2,586 0 0	1,981 1 9	1,894 5 7	86 12 2	Ditto ditto.
McArthur, James ...	1,119 15 6	.....	62 14 8	1,057 0 10	965 14 3	91 2 7	Ditto ditto.
McKay, W. R. ...	864 6 6	122 7 4	23 14 6	718 0 8	146 1 6	571 15 2	Ditto ditto.
Mohabharut Roy ...	10,914 8 0	.....	3,870 10 0	7,043 14 0	.....	7,043 14 0	Schedule not filed as yet.
Moorally Dhur Bunshee Lall ...	6,918 7 5	323 8 0	925 0 5	5,669 15 0	182 1 0	5,487 14 0	Outstanding: in course of recovery.
Muddon Mohun Dey and another ...	40,990 4 2	33,834 13 5	5,687 12 8	1,467 10 1	1,384 0 10	83 9 3	Nothing further recoverable.
Madhub Lall Shaw Chowdoory ...	21,752 0 6	.....	255 1 5	21,496 15 1	.....	21,496 15 1	Outstanding: in course of recovery.
Nursing Chunder Bose ...	1,030 0 0	.....	202 11 0	827 5 0	.....	827 5 0	Nothing further recoverable.
Nyss, John ...	750 2 11	.....	171 4 0	578 14 11	.....	578 14 11	Ditto ditto.
Nemy Churn Bysack ...	1,210 13 0	.....	428 5 4	782 7 8	696 8 1	85 15 7	Ditto ditto.
Norman Brothers ...	19,569 14 7	9,267 15 3	5,906 1 4	4,395 14 0	4,395 14 0	.....	Ditto ditto.
Nobin Kisto Ghose ...	2,450 0 0	617 3 1	536 10 3	1,296 2 8	1,063 3 1	232 15 7	Ditto ditto.
Nundolall Shaw and Anuntolall Shaw ...	1,950 0 0	.....	249 6 6	1,700 9 6	.....	1,700 9 6	Ditto ditto.
Narain Sing and Co. ...	32,007 6 11	18,805 8 7	9,718 1 2	3,483 13 2	3,424 11 7	59 1 7	Ditto ditto.
Nicol, J. Dyce ...	23,409 1 11	9,410 3 10	5,556 0 4	8,442 13 9	1,666 11 8	6,776 2 1	Ditto ditto.

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Estates.	Whole amount of receipts.	Whole Disbursements.		Balance.	Portion of balance applicable to dividends now payable.	Net balance.	Probable outturn of the dependencies.
		Dividends paid.	Other payments.				
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Ramdhone Mitter ...	838 5 4	52 4 5	217 8 2	568 8 9	453 1 6	115 7 3	Nothing further recoverable.
Rustomjee, Cowasjee and Co ...	11,032 15 0	3,373 5 8	6,015 1 6	1,644 7 10	1,285 10 3	358 13 7	Ditto ditto.
Ramsabuck Misser and others ...	1,23,206 9 4	75,777 8 5	29,912 4 9	17,516 12 2	17,143 12 5	372 15 9	Ditto ditto.
Robinson, S. H. ...	1,129 10 9	.....	132 0 0	997 10 9	... ..	997 10 9	Ditto ditto.
Ram Narian Sreemaney ..	9,319 8 0	4,158 0 11	2,041 7 1	3,120 0 0	3,066 10 8	53 5 4	Ditto ditto.
Robinson, J. J. (Wallace and Co.) ...	3,052 8 8	270 0 0	2,027 4 6	755 4 2	321 14 9	433 5 5	Ditto ditto.
Ram Nath Janookeypersaud ...	5,296 4 9	.....	2,792 3 0	2,504 1 9	.....	2,504 1 9	Schedule not filed as yet.
Rughoo Nath Roy (Toongumram Gouri Dutt).	6,189 7 0	3,760 12 5	1,470 7 0	958 3 7	719 5 4	238 14 3	Nothing further recoverable.
Russicklall Paul ...	702 5 3	.....	23 11 6	678 9 9	.....	678 9 9	Ditto ditto.
Ritz, Alfred ...	1,139 0 0	.....	208 7 6	930 8 6	690 13 5	239 11 1	Ditto ditto.
Ram Gopaul Paul ...	8,141 12 6	4,314 7 11	2,408 6 8	1,418 13 11	1,220 9 5	198 4 6	Ditto ditto.
Ram Dass Paul ...	1,545 8 3	457 8 0	475 10 9	612 5 6	469 13 6	142 8 0	Ditto ditto.
Rakhal Chunder Bannerjea, junior ...	5,534 7 3	138 2 6	2,866 9 9	2,529 11 0	62 13 6	2,466 13 6	Ditto ditto.
Rushton, H. P., and others (Rushton Brothers).	81,120 2 3	47,489 3 8	26,799 11 0	6,831 3 7	5,460 13 3	1,370 6 4	Ditto ditto
Rustomjee Cowasjee ...	3,796 13 7	1,637 9 1	425 11 10	1,733 8 8	1,537 12 2	195 12 6	Ditto ditto.
Rushton, Edward ...	2,784 3 9	1,418 6 4	690 3 10	675 9 7	657 11 6	17 14 1	Ditto ditto.
Ramsarun Lall ...	57,280 1 1	29,172 2 3	21,011 11 2	7,096 3 8	6,939 2 11	157 0 9	Ditto ditto.
Ram Kissen Kotary ...	7,527 14 3	4,452 14 4	1,840 0 6	1,234 15 5	1,232 9 6	2 5 11	Ditto ditto.
Ramsamull Pannalall ...	1,933 2 9	.....	656 11 9	1,276 7 0	... ..	1,276 7 0	Ditto ditto.
Robertson, C. A. (1st) ...	1,500 0 0	477 2 10	81 12 9	941 0 5	726 4 9	214 11 8	Ditto ditto.
Ramdhone Mullick ...	46,922 13 6	455 4 3	45,446 12 2	1,020 13 1	.....	1,020 13 1	Ditto ditto.
Rutledge, W. ...	4,122 12 0	2,736 3 9	806 12 7	579 11 8	206 0 8	373 11 0	Ditto ditto.
Rajendro Coondoo and another ...	860 0 0	.....	182 1 0	677 15 0	... ..	677 15 0	Schedule not filed as yet.
Reinhold, H. (Reinhold & Co.) ...	13,753 7 9	9,298 6 9	2,663 9 1	1,791 7 11	1,651 4 1	140 3 10	Nothing further recoverable.
Reinhold, H. C., and another (Reinhold Brothers).	5,903 0 1	135 7 9	1,717 6 5	4,050 1 11	233 14 0	3,816 3 11	Ditto ditto.
Reinhold, H. C., separate account ...	790 0 0	.....	53 1 8	736 14 4	725 14 5	10 15 11	Ditto ditto.
Retz Reinhold and Feilman ...	13,333 5 0	10,502 0 10	895 2 3	1,936 1 11	216 13 6	1,719 4 5	Ditto ditto.
Rashbehary Roy and Jullodhur Roy ...	22,374 1 7	.....	7,089 0 4	15,285 1 3	.. ...	15,285 1 3	Outstanding: in course of recovery.
Radha Kissen Doss *alias* Lal Behary ...	2,842 5 3	.....	958 5 9	1,883 15 6	.. ...	1,883 15 6	Ditto ditto.
Ramkissen ...	5,12,169 4 5	.....	1,11,208 15 2	4,00,960 5 3	... ..	4,00,960 5 3	Ditto ditto.
Rambox Rattee (Chooneelall Janokey Dass)	5,329 3 8	.. ...	596 10 4	4,732 9 4	.....	4,732 9 4	Ditto ditto.
Saunders, May, Fordyce and Co. ...	4,03,262 11 3	3,21,713 7 1	68,906 4 4	12,642 15 10	11,992 9 4	650 6 6	Nothing further recoverable.
Stewart and Co, W. C. ...	5,793 6 0	1,967 12 3	770 3 11	3,055 5 10	1,724 14 7	1,330 7 3	Ditto ditto.

Senaes, W. D. M.	..		11	7	.....			912	2	6	1,602	9	1	1,533	5	10	69	3	3	Ditto		ditto.
Smith, W. S.	..		13	5	2,635	15	6	471	0	8	513	13	3	471	11	1	42	2	2	Ditto		ditto.
Stocquelor, J. H.	...		0	0	210	6	5	5,537	0	7	1,390	9	0	1,122	12	7	267	12	5	Ditto		ditto.
Schlatter, Michael	...		14	10	16,357	13	1	2,433	0	9	1,504	1	0	1,006	8	1	497	8	11	Ditto		ditto.
Smoult, W. H.	..		10	3	97	13	5	328	9	3	1,550	3	7	1,190	7	6	359	12	1	Ditto		ditto.
Sheppard, G. A.	...		2	10	4,179	1	11	662	0	7	757	0	4	652	6	0	104	10	4	Ditto		ditto.
Sarkies and Co., P. J.	...		10	9	6,473	9	2	45,380	2	2	756	15	5	602	12	10	154	2	7	Ditto		ditto.
Scott, C. C. J.	..		13	9	4,659	10	11	2,002	0	10	1,062	2	0	631	9	11	430	8	1	Ditto		ditto.
Smith, Huffnagle and Co.	...		14	5	13,828	7	4	10,798	4	10	2,006	2	3	.....			2,006	2	3	Ditto		ditto.
Stubbs, W. V. G.	...		6	5	81	3	10	1,649	12	7	1,760	6	0	262	2	3	1,498	3	9	Ditto		ditto.
Snook, J. V.	...		10	0	.....			158	0	0	617	10	0	.....			617	10	0	Ditto		ditto.
Sreegopaul Misser	...		0	0	55	14	4	678	6	8	1,216	11	0	1,093	0	11	123	10	1	Ditto		ditto.
Solomon, Maladona	...	6	6	10	43,579	4	11	17,498	10	0	2,963	7	11	2,682	12	0	280	11	11	Ditto		ditto.
Stewart, W. M.	...	2	4	9	12,513	15	1	6,325	15	7	6,149	6	1	5,610	9	8	538	12	5	Ditto		ditto.
Sarkies, P. J.	...	1	7	7	6,168	3	7	3,097	5	4	961	14	8	789	10	3	172	4	5	Ditto		ditto.
Sreenauth Mullick	...	1	7	7	13,851	5	6	3,389	12	10	541	5	3	431	12	6	109	8	9	Ditto		ditto.
Sewnundun Paray	...	3	9	9	18,836	10	11	7,473	4	4	5,973	10	6	5,242	11	7	730	14	11	Ditto		ditto.
Smith, A. M.	...		10	7	244	1	6	801	15	7	1,754	9	6	1,371	10	8	382	14	10	Ditto		ditto.
Shib Chunder Seal	...	1	3	9	3,152	9	3	9,450	8	8	952	1	10	730	13	6	221	4	4	Ditto		ditto.
Solomon and Co., D. H.	...	1	12	9	9,499	1	8	4,711	4	9	1,843	6	4	1,655	2	10	188	3	6	Ditto		ditto.
Schiller, F., and others (Borradaile, Schiller and Co.)		,5	1	8	83,155	7	3	31,168	12	4	38,352	14	1	31,115	12	9	7,237	1	4	Ditto		ditto.
Straw, F. T.	...	3	15	11	19,162	13	4	15,635	4	5	1,472	14	2	961	15	1	510	15	1	Ditto		ditto.
Samul Doss Soonder Doss	...		6	9	929	1	3	683	4	6	525	1	0	400	11	1	124	5	11	Ditto		ditto.
Smith and Co., Thomas	..	6	0	10	8,918	11	0	56,288	9	2	1,732	12	8	1,078	12	0	654	0	8	Ditto		ditto.
Shamachurn Bhur	...		2	0	.....			187	0	7	816	1	5	.....			816	1	5	Ditto		ditto.
Schiller, F.	...	5	10	7	1,200	1	0	1,489	4	1	2,793	5	6	2,576	13	2	216	8	4	Ditto		ditto.
Shamlall Khettry (Dewkey Nundon Lalljee Mull).		1	12	6	12,193	11	10	3,245	3	10	1,513	12	10	1,456	0	10	57	12	0	Ditto		ditto.
Sherajoodeen Shaik	...		12	0	.....			233	3	5	1,227	8	7	.. ..			1,227	8	7	Schedule not filed as yet.		
Seetaram Rohutgee	...		8	3	.. ...			158	6	6	787	1	9	...			787	1	9	Nothing further recoverable		
Seetaram Tejpal (Khetsee Dass Golaub Chand).			6	6	88	12	0	1,274	4	7	3,256	5	11	2,987	6	0	268	15	11	Ditto		ditto.
Smallwood, A. (Lloyd and Co.)	...	6,280	11	3	1,402	0	9	2,787	9	2	2,091	1	4	.....			2,091	1	4	Ditto		ditto.
Soorjeemull Mugneeram and Hunnomontoram (Soorjeemull Mugneeram).		3,728	8	6	805	0	0	1,486	0	0	1,437	8	6	945	0	4	492	8	2	Ditto		ditto.
Soutendro Mohun Tagore	...	810	5	9	39	6	0	52	8	1	718	7	8		4	5	10	3	3	Ditto		ditto.
Sander, C. W. P.	...	1,062	8	0	.....			6	7	0	1,056	1	0				1,056	1	0	Outstanding: in course of r		
Stephen, A. J.	...	1,201	8	0	.....			42	1	2	1,159	6	10		5	8	620	7	2	Ditto		ditto.
Shebdass Moohoory (Ramdhone Moohoory and Shebdass Moohoory).		37,536	2	3	.....			23,901	12	5	13,634	5	10				3,634	5	10	Ditto		ditto.
Shama Churn Khaw	..	2,191	8	0	.....			1,417	2	9	774	5	3				774	5	3	Ditto		ditto.
Tullon and Co. (1st).	...	,21,128	2	10	68,615	10	0	50,626	7	9	1,886	1	1		0	6	746	6	7	Nothing further recoverable.		
Tullon and Co. (2nd)		19,223	10	2	8,961	4	4	9,684	15	7	577	6	3			3	166	5	0	Ditto		ditto.
Thom[illegible] and Co.		,55,276	15	3	3,98,103	6	2	50,239	15	2	6,933	9	11			0	5,619	8	11	Ditto		ditto.

Estates.	Whole amount of receipts.	Whole Disbursements.		Balance.	Portion of balance applicable to dividends now payable.	Net balance.	Probable outturn of the dependencies.
		Dividends paid.	Other payments.				
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Trower, Charles ...	2,177 2 0	240 0 0	72 0 0	1,865 9 0	811 7 5	1,054 1 7	Nothing further recoverable.
Twentyman and Co. ...	683 6 7	.....	152 2 1	531 4 6	.....	531 4 6	Ditto ditto.
Thomas, John ...	740 0 0	.....	.....	740 0 0	.....	740 0 0	Ditto ditto.
Tarachand Kuramull Dowlutchand ...	22,970 1 11	6,210 6 9	14,187 12 0	2,571 15 2	2,199 13 3	372 1 11	Ditto ditto.
Teitkins, A. H. ...	5,671 12 10	3,819 12 0	1,248 0 5	604 0 5	.....	604 0 5	Ditto ditto.
Turton, Sir T. E. M. ...	2,49,996 3 10	1,48,439 14 7	1,00,447 2 8	1,109 2 7	661 12 9	447 5 10	Ditto ditto.
Troylucknauth Roy and another ...	26,576 11 0	18,507 10 9	7,142 7 5	926 8 10	835 4 8	91 4 2	Ditto ditto.
Thorndike, A., and another (Atkinson, Tilton and Co.)	48,433 7 2	17,760 4 5	25,132 6 6	5,540 12 3	3,468 1 6	2,072 10 9	Ditto ditto.
Tunsook Roy Premsook Roy ...	27,590 9 11	9,766 11 1	10,889 8 2	6,934 6 8	5,910 3 2	1,024 3 6	Ditto ditto.
Turnbull, R. A. ...	18,050 0 9	2,771 3 3	14,034 4 5	1,244 9 1	107 3 8	1,137 5 5	Ditto ditto.
Tacooranee Bibee and Chineebas *alias* Sreeneebas (Bunseedhur Lutchmenarian).	4,136 5 0	.....	421 4 0	3,715 1 0	.....	3,715 1 0	Outstanding: in course of recovery.
Templeton, A. N. ...	650 0 0	.....	.....	650 0 0	.....	650 0 0	Ditto ditto.
Vandenberg, J. B. (2nd) ...	5,740 4 3	4,036 0 7	440 2 5	1,264 1 3	1,235 11 11	28 5 4	Nothing further recoverable.
Willis, F. F. ...	7,102 7 11	892 13 4	2,906 1 7	3,303 9 0	2,932 2 8	371 6 4	Ditto ditto.
Willis, Joseph ...	1,20,346 2 7	88,227 7 6	29,952 12 8	2,165 14 5	1,839 2 11	326 11 6	Ditto ditto.
Wood, Olliffe and Co. ...	3,276 6 10	.....	1,427 4 6	1,849 2 4	.....	1,849 2 4	Ditto ditto.
Waring, E. S. S. ...	3,066 8 8	1,780 7 11	529 5 2	756 11 7	650 13 11	105 13 8	Ditto ditto.
Williams, Stephen ...	20,504 1 5	17,451 12 3	2,207 14 7	844 6 7	476 11 4	367 11 3	Ditto ditto.
Watson and Co., Gibbon and Co. ...	1,06,519 3 0	87,390 15 9	15,992 0 3	3,136 3 0	2,703 9 8	432 9 4	Ditto ditto.
Wood, H. W. J. ...	2,539 13 0	712 3 7	885 5 3	942 4 2	785 11 9	156 8 5	Ditto ditto.
Webb, John ...	4,457 8 3	2,391 0 8	1,103 4 5	963 3 2	890 14 9	72 4 5	Ditto ditto.
Wood, David ...	1,414 3 0	56 7 3	753 11 11	603 15 10	548 11 6	55 4 4	Ditto ditto.
Wilcox, H. C. ...	710 0 0	62 3 9	55 1 0	592 11 3	535 3 8	57 7 7	Ditto ditto.
Wallis, C. B. ...	8,520 11 5	6,592 2 1	1,403 4 3	525 5 1	120 11 5	404 9 8	Ditto ditto.
Woodin, W. (G. F. Hodgkinson and Co.)	25,413 4 5	1,022 8 2	22,444 3 9	1,946 8 6	1,549 5 6	397 3 0	Ditto ditto.
Woomes Chunder Banerjea (G. DeLeman and Co.)	23,991 14 1	19,455 11 5	3,065 4 3	1,470 14 5	1,451 9 9	19 4 8	Ditto ditto.
Wyldie, J. J. ...	1,200 0 0	100 0 0	21 7 1	1,078 8 11	26 6 4	1,052 2 7	Ditto ditto.
Wiseham, William ..	967 3 6	.....	32 0 0	935 3 6	.....	935 3 6	Schedule not filed as yet.
Zeanine, A. ...	4,860 2 9	261 11 10	2,907 12 6	1,690 10 5	.....	1,690 10 5	Nothing further recoverable.

In addition to the above, there are 1,464 estates with balances under Rs. 500 each, aggregating Rs. 1,70,199-13-3, the particulars of which may be learnt at this Office. The Official Assignee has received for remuneration for the quarter ending 30th September 1889 Rs. 4,798-3-6.

Notification.

TO be peremptorily sold pursuant to a decree and order of the Calcutta High Court, Original Jurisdiction, made in suit No. 257 of 1888 (wherein Punno Bibee is plaintiff and Denonauth Ghose is defendant), and dated, respectively, the 23rd of August 1888 and the 12th of September 1889, by the Registrar of the said Court, in his sale-room in the Court-house on Saturday, the 29th of March next, at the hour of 12 o'clock at noon, an undivided one equal third part or share of the defendant in the following properties, viz.—

Lot. No. 1.—Nos. 32 and 33, formerly Nos. 74 and 75, College Street in Calcutta, being an upper-roomed brick-built house and the land appertaining thereto, the area of which is about two cottahs, and which property is bounded on the north by Arpooly Lane; on the south by the dwelling-house of Kanoy Loll Seal and brothers; on the east by the tenanted house of Kally Churn Ghose; and on the west by College Street.

Lot. No. 2.—No. 17-1, Jhamapooker in Calcutta, being an upper-roomed brick-built dwelling-house, and the land appertaining thereunto, on part whereof the same is erected, the area of which is about 3½ cottahs, and which property is bounded on the north by the dwelling-house of Madhub Chunder Ghose and his brothers; on the south by a Government drain; on the east partly by the dwelling-house of Khetter Mohun Bose and partly by a Government drain; and on the west partly by a Government drain and partly by the dwelling-house of late Issur Chunder Bonnerjee and partly by the house of Madhub Chunder Ghose and his brothers.

The abstract of title and conditions of sale may be seen at the Registrar's Office in the Court-house, or at the office of Baboo Gonesh Chunder Chunder, the plaintiff's Attorney, at No. 5, Hastings Street in Calcutta, and will be produced at the sale.

R. BELCHAMBERS, Registrar.

Gonesh Chunder Chunder, Plaintiff's Attorney.

High Court, Calcutta, Original Side, the 11th February 1890.

(3513—1)

Notification.

TO be peremptorily sold by the Registrar of the Calcutta High Court, Original Civil Jurisdiction, in his sale-room on the middle floor of the Court-house on Saturday, the 22nd of February next, at the hour of 12 o'clock at noon, pursuant to a decree and orders of the said Court, made in suit No. 113 of 1885 (wherein Maltee Bibee, widow and administratrix of the late Bhogoban Dass, Augurwallah, is the plaintiff, and Russick Laul Chunder and others are the defendants), and dated, respectively, the 10th January 1887 and the 27th of July 1889, the undivided three annas and four gundas share of the defendants in the following property:—

Lot No. 1.—No. 50, Moirahatta Street, in Calcutta, being a brick-built house and premise in block No. 18, holding No. 187, North Division, and a piece of land thereunto belonging, and on part whereof the same is built, the area of which is by estimation 11 chittacks and 1 square foot, be the same, a little more or less, paying the annual jumma of 13 annas eight gundas and three cowries, and butted and bounded as follows:—On the north by the tenanted house of Aukhoy Churn Mullick; on the south by the tenanted house of the late Rajkristo Khan and others; on the east by the public road called Moirahatta Street; and on the west by the tenanted house of Sreemutty Rani Dassee.

The conditions of sale and abstract of title may be seen at the Office of Messrs. Sowton and Sen, Attorneys for the plaintiff, at No. 2, Church Lane, in Calcutta, on any day before the sale, and will be produced at the sale.

R. BELCHAMBERS, Registrar.

Sowton and Sen, Plaintiff's Attorneys.

Calcutta, High Court, Original Jurisdiction, the 12th February 1890.

(3547—1)

In the Court of the Second Sub-Judge, 24-Pergunnahs.

EXECUTION CASE No. 190 OF 1889.

Jagat Chander Roy Chaudhury and others, decree-holders, *versus* Nilratan Mukerjee of Ula, debtor.

TO be peremptorily sold by the Nazir of the District Judge, 24-Pergunnahs, at 12 o'clock, on Monday, the 10th March 1890, the following mortgaged properties of the debtor above named for the realization of Rs. 6,562-9 due to the decree-holders.:—

Lot No. 1.—The one-fourth undivided share of the debtor Nilratan Mukerjee, in taraf Birnagur *alias* Ula taluq Rupmanjari Dasy, forming towji No. 279 in the Collectorate of Nuddea, comprised in pergunnah Mamjoany, thana and sub-registration Ranaghat.

Lot No. 2.—In the said district and the said registration, and within the said pergunnah Mamjoany, the sixteen annas share in taluq Tripura Sundary Dasy, taraf Ula *alias* Birnagar, forming taluq No. 3087 in the Collectorate of Nuddea.

Lot No. 3.—The sixteen annas share of the debtor in 9 bighas of land, and the buildings, walls, gardens, &c., on it, in Ula *alias* Birnagar, in pergunnah Mamjoany, thana and sub-registration Ranaghat, district Nuddea, boundaries west and north of road, east of lakhiraj land belonging to Dasarathi Rudra and others, south of the land purchased by debtors in taluq No. 3063

N.B.—These three lots form the property No. 2 of the decree.

Lot No. 4.—(The property No. 3 of the decree.)

The 17 gundas 3 kans 1 kag undivided share of the debtor in 27 mouzahs, taraf Bhabanipur, Siddhi and others, formerly comprising taluq No. 49 in the Collectorate of Nuddea, at present No. 5073 in the Collectorate of Jessore, thana and sub-registration being Bongong.

RADHA KRISHNA SEN, Sub-Judge.

(3556—1)

In the Court of the Subordinate Judge of Beerbhoom.

EXECUTION CASE No. 1 OF 1890.

Gopal Chandra Chakrabarti and another, decree-holders *versus* Sheikh Iashin, minor, represented by his next friend, maternal uncle Sheikh Abdool Goffar, and another, judgment-debtors.

THE undermentioned property of the above judgment-debtors will be sold by public auction on the 1st day of April 1890 at 12 o'clock noon by the Nazir of the District Judge's Court, Beerbhoom, in the sale-room of the Court-house:—

Schedule of property to be sold.

1. The right, title, and interest of the judgment-debtors in nine gundas three cowris share of lot Baotara within the police-station and sub-registry of Doobrajpur, pergunnah Haripur, bearing towji No. 229 of the Beerbhoom Collectorate; the Government revenue payable is Rs. 1,056-12 in the sixteen annas share.

2. One anna one gunda three cowris share of the above mehal, including the khas khamar lands, tanks, and jungle.

3. Eight gundas three cowris share of the above mehal, including khas khamar lands, tanks, and jungle.

(3552—1) KEDAR NATH CHATTERJI, Sub-Judge.

High Court Notice.

ESTATE RAJAH RAJ KISSEN.

Maharajah Sibkristo Bahadoor, *vs.* Kristo Chunder Ghose.

NOTICE is hereby given that on Wednesday, the 12th March next, at the hour of 1 o'clock in the afternoon, the Receiver of the High Court will put up for auction, at his office on the third floor of the Court-house, a lease for six years from the 1st Bysack 1297, corresponding with the 13th April 1890, of the undermentioned property, on the terms and conditions of a draft lease which may be inspected at the said office.

In Zillah Tipperah, Pergunnah Gungamundle, recorded in the Register of the Collector as Towji No. 545, including the Churs appertaining thereto, viz., Nobbo Chur No. 1290, Chur Bahur *alias* Teotoor Chur No. 1508, Chur Surjo and Chur Sunjoora No. 1964, Chur Assad and Doobur Chur No. 21.

In Zillah Dacca, Chur Goagachia No. 10503, Chur Jamalpur No. 10505.

For conditions of auction and further particulars apply to the Receiver of the High Court.

J. C. MACGREGOR, Receiver High Court.

High Court Receiver's office, the 18th February 1890.

(3562—4)

Lost.

THE Government Promissory Note No. 238858 of 4 per cent. of 1895, for Rs. 500, originally standing in the name of Debnath Sreemany and last endorsed to Russick Lall Dutt the proprietor, by whom it was never endorsed to any other person; and also the Government Promissory Note No. 188252 of 4 per cent. of 1865, for Rs. 500, originally standing in the name of Kheeromoney Dassee, the proprietress, by whom it was never endorsed to any other person. Payment of the above notes and the interests thereupon have been stopped at the Public Debt Office, Bank of Bengal, and applications are about to be made for the issue of duplicates in favour of the proprietor and the proprietress.

RUSSICK LAUL DUTT, Bally, District Howrah.
(3550—3)

Stolen.

THE Government Promissory Note No. 220972 of the 4 per cent of 1865 for Rs. 500, originally standing in the name of Modhu Sudhir Kowar, and last endorsed to Kedar Nath Majumdar, the proprietor, by whom it was never endorsed to any other person. Payment of the above note and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, and application is to be made for accrued interest and for issue of duplicates in favour of the proprietor after two years from date of last advertisement.

KEDAR NATH MAJUMDAR, Cooch Behar.
(3497—3)

Notice.

WANTED three Peshkars or Inspectors, on salaries of Rs. 30 per mensem, for settlement work in the Sonthal Pergunnahs. None need apply who have not a knowledge of plane-table, of compass-surveying and experience in settlement work. Applications with copies of certificates to be sent to the undersigned at once.

J. A. CRAVEN, Settlement Officer.
Damp Camp Deoghur, the 10th February 1890.

Notice.

WANTED a Record-keeper for the Maldah Collectorate on a salary of Rs. 40 rising to Rs. 60 by biennial increments of Rs. 2.

No one need apply who has not had previous experience in a similar post. The selected candidate is to furnish security to the extent of Rs. 500, either in Government Promissory Notes or in cash.

Applications will be received up to 25th February next.

POORNO CHUNDRA CHATTERJEE,
Deputy Collector in charge.

Wanted

A CASHIER for the Patna Municipality on salary of Rs. 50 per month. Applicants must possess a good knowledge of English and Hindee, and should be well versed in municipal rules and forms. A security of Rs. 3,000 in cash, or landed property, is also required. Applications with testimonials will be received by the undersigned up to 28th February 1890.

SYUD FUZL IMAM, Vice-Chairman.
Patna Municipality, the 14th February 1890.
(3557—2)

Notice.

IN continuation of notice, dated the 9th October 1889 published at page 1656, Part II of the *Calcutta Gazette* of 30th October 1889, regarding the Barque *Grosvener*, it is further notified that the said vessel, with all her masts, sails, gear, and appurtenances which may be on board her on the 19th day of April 1890, will be sold by auction to the highest bidder on Saturday, the 19th of April 1890.

The sale will be held at the Port Office, Chittagong, and will commence at 3 P.M.

Terms—25 per cent. on fall of the hammer if desired by Receiver of Wrecks: the balance within a week of sale and before taking delivery. If the purchaser fails to pay the balance within seven days from date of sale, the vessel will be re-sold at his risk and expense. The vessel can be inspected at Chittagong by applictaion to the Receiver of Wrecks.

E. GOOD, Receiver of Wrecks.
(3498—4)

In the Court of Baboo Shamboo Chandra Nag, Subordinate Judge of Hooghly, Third Court.

RENT EXECUTION CASE No. 58 of 1889.

Nabo Kristo Mookerjee, decree-holder, *versus* Dyal Nath Bhattacharjee and others, judgment-debtors.

THE advertised property of the above judgment-debtors will be put up to sale in the highest bid on the 10th day of March 1890, at 12 o'clock noon, by the Nazir of the District Judge's Court, Hooghly, in the sale-room of the Court-house.

Schedule of Property to be sold.

Two annas thirteen gundas one cowree one krantee share of lot Bundeipore, bearing towji No. 77 of the Collectorate of Hooghly, situated in pergunnah Bundeipore, zillah Hooghly, sudder jumma of the whole 16 annas being Rs. 14,782-4-2, the upset value given by the decree-holder is Rs. (5,000), five thousand.

SHAMBOO CHANDRA NAG, Subordinate Judge.
Hooghly, the 7th February 1890. (3529—3)

Notification.

THE Zemindari Dâk Tax in the district of Sarun, for the year 1890-91, is fixed at the rate of 12 annas per cent per annum on the sudder jamma of estates paying a revenue amounting to Rs. 50 and over.

The amount due for each estate is payable in two instalments—the first being due on the 28th March 1890, and the second on the 28th September 1890.

B. G. GEIDT, For Magistrate.

Road Cess Notification.

IT is hereby notified for general information that, under section 46 of the Bengal Local Self-Government Act, No. III (B.C.) of 1885, the District Board of Purneah, by a resolution of their meeting of the 3rd February 1890, have determined to levy road cess for the year 1890-91 at the full rate, *i.e.*, 2 pice per rupee on the annual value of land, &c.

SURENDRA NATH MOZUMDAR, Vice-Chairman,
District Board.
Purneah District Board's Office, the 5th February 1890.

TARA PRASANNA GUHA, B.L., intends to apply for enrolment as a Vakeel of the High Court.
(3196—4)

The Bengal Coal Company, "Limited."

IN terms of clause 53 of the Articles of Association of the Company, the Adjourned Half-yearly Ordinary General Meeting of the Shareholders will be held at the Registered Office of the Company, No. 2, Garstins' Place, Calcutta, on Friday, the 28th February 1890, at 11-30 A. M., for confirmation by Shareholders of the Directors' report for the half-year ended 31st October 1889.

By order of the Board.
C. W. GRAY, Superintendent.
Calcutta, 19th February 1890. (3559—1)

Notice.

In the 1st Court of the Subordinate Judge of Midnapur.

EXECUTION CASE No. 9 OF 1890.

Bhubaneshwar Mitra, decree-holder, *vs.* Nimai Chand Dey and others, judgment-debtors.

THE undermentioned property of the judgment-debtors will be sold by public auction at the Court-house of the District Judge of Midnapur on Saturday, the 15th March 1890, at twelve o'clock, in execution of the decree passed by the Subordinate Judge of Midnapur for the realization of Rs. 3,232-8-0 obtained by a mortgage decree due from the debtors to the decree-holder:—

Schedule of property to be sold.

Lot I.—Mahal Anandapur with its eight annas share of mouza Kolagachhia, Government revenue payable is Rs. 159-15-0, and eight annas share of Shamsunderpur, Government revenue payable is Rs 518-2-0, total Government revenue payable is Rs. 678-1-0, within the police station of Shobong and sub-registry office of Raj Ballabh, pergunnah Moyna Chour, bearing towji No. 73 and A, Register No. 116.

DWARKANATH BHUTTACHARJEA, Subordinate Judge,
(3548—1) First Court

Excise.

NOTIFICATION.

1. The right of retail sale of the Liquors and Drugs specified below will be put up to auction at the Opium Sale-room, Board of Revenue, 2, Bankshall Street, on Tuesday, the 4th March 1890, and subsequent days, in the following order :—

Name of article.	Date of sale.
Ganja, Siddhi, Charas, Majum ...	Tuesday, the 4th March 1890.
Opium, Madak, Chandu	Wednesday, the 5th ditto.
Tari	Saturday, the 8th ditto.
Country Spirit, Rum and Imported Liquor by glass.	Monday, Tuesday, and Wednesday, the 10th, 11th and 12th March 1890.

2. A complete list of all the shops for which licenses will be offered and a copy of each form of license are open to general inspection at the Office of the Superintendent of Excise Revenue, 4, Bankshall Street, and the number of these shops is not under any circumstances to be increased during the term of three years ending the 31st March 1893, except under the Board's sanction in each case. The Superintendent of Excise Revenue, however, reserves to himself the right, in case of combination, or for other cause, to transfer (subject to there being no objection on police grounds), either before or after its settlement, any shop from the site specified in the list to some other site, provided that the new site, if it is more than 100 yards from the advertised one, does not bring the shop within a quarter of a mile of any other similar shop whose term of license is unexpired.

3 It is not at present intended to open any other shop during the term of the license; but the Superintendent of Excise Revenue does not absolutely bind himself in this respect. On special cause shown, and with the sanction of the Board of Revenue in each case, the number of shops may be increased: provided, however, that, whenever a new shop is opened, it will be optional to the holder of a similar license for the sale of Liquor or Drugs, if his shop is within a quarter of a mile of the new shop, to surrender his license without forfeiting his advance, when the Superintendent of Excise Revenue is to re-settle the shop by auction or otherwise.

4. The right of retail sale of the Liquors and Drugs is to be put up to auction at the sanctioned upset prices.

5. The right of retail sale of the Liquors and Drugs is to be put up to auction in separate lots of one or more shops, either in the order specified in the list, or in such other order as the officer conducting the sale may deem fit. When one lot has been sold, the next lot is not to be put up until the sum payable in advance on account of the lot already sold has been actually paid: provided, however, that, where the sum payable exceeds Rs. 25, a promissory note may be taken from any respectable and well-known purchaser in lieu of cash payment.

6. The purchasers of the right of retail sale of Country Spirit, Rum, and Imported Liquors are entitled to sell Imported Liquors by the glass only, the liquor to be drunk *on* the premises.

7. The auction is to be held subject to the following conditions :—

(*a*)—That the Superintendent of Excise Revenue does not bind himself to accept the highest or any bid.

(*b*)—That the settlement with each accepted purchaser will, in Calcutta and the Suburbs, be contingent on the production by him of the usual Police certificate or license, as the case may be, viz.—

For Excise licenses for— Doasta ... Rum ... Imported Liquors by glass Tari ... Ganja ... Siddhi ... Charas Majum	If to be held in Calcutta, a Police certificate in the form prescribed by section 36, Act IV (B C.) of 1866, must be produced; and if to be held in the Suburbs, a Police certificate in the form prescribed by section 19, Act II (B.C.) of 1866, must be produced.
For Excise licenses for— Opium ... ... Madak ... ... Chandu	If to be held in Calcutta, a Police license in the from prescribed by section 39, Act IV (B C.) of 1866, must be produced; and if to be held in the Suburbs, a Police license in the form prescribed by section 22 of Act II (B.C.) of 1866, must be produced.

(*c*)—That the person accepted as the purchaser is to state in writing, within seven days from the date of settlement, in what building he purposes to open his shop, and is at the same time to submit a plan showing clearly and distinctly what building or portion thereof he desires to be covered by the license, it being understood that the removal of shops to other premises than those named in the list attached to this notification will be contingent on the approval of both the Excise and Police authorities, and that any sum which has been paid as an advance of the license fee under the provisions of clause (*d*) of these conditions will be returned to any person to whom a license may be subsequently refused for Police reasons.

(*d*)—That the term of the license is to be for three years ending the 31st March 1893, and that, except in the case of Tari, the license fee for that period is to be paid in advance in the following instalments :—namely, the sum equivalent to the fee for two months, at the time of sale, and one month's fee on the date on which the currency of the license commences, and one month's fee on the 1st day of every succeeding month, until the whole of the fee due on the license shall have been paid. In the case of Tari only one month's fee

is to be paid in advance at the time of sale, and fifteen days' fee on the date on which the currency of the license commences, and the rest of the fee in half-monthly instalments, viz., on the 1st and 16th day of every month, until the whole of the fee due on the license shall have been paid. This condition is to be strictly enforced in future, and failure to comply with it is to be met by immediate cancelment of the license.

(*e*)—That the purchaser is not to be entitled to receive back any portion of his advance in the event of his shop being closed before the expiration of the term of the license on violation of any of the conditions of the license, or his being convicted of a non-bailable criminal offence, or of any offence against the Excise laws or rules; and in the case of the surrender of a license under Act VII (B.C.) of 1878, the licensee is to give fifteen days' previous notice in writing to the Superintendent of Excise Revenue, and pay a sum equal to the license fee for fifteen days, over and above the amounts already paid in advance; and in the case of the surrender of a license under Act I of 1878, the licensee is to give one month's previous notice in writing to the Superintendent of Excise Revenue, and pay such fine not exceeding six months' license fees as the Superintendent of Excise Revenue may adjudge, over and above the amounts already paid in advance.

(*f*)—That the currency of the license is to commence on the 1st April 1890, on which date the purchaser is to open his shop, in all respects prepared for the accommodation of customers, to be certified by an Excise Officer—failure to comply with this condition is to be met by the immediate cancelment of the license, the forfeiture of the deposit, and the levy of the fees for the month except in the case of delay caused by the non-issue of the Police certificate or Police license, for which a reasonable extension of time may be allowed upon application and cause shown to the Superintendent of Excise Revenue.

(*g*)—That where the amount of the sum payable in advance is required to be paid at once in cash, and the bidder fails to make such payment, the officer conducting the sale is either immediately to put up the lot again for sale, or after the other lots in the list have been disposed of, or he may postpone the sale to such future date as he shall then and there notify; and the defaulting purchaser is to be debarred from bidding for such lot, or for any other lot, and he is not to be allowed to remain in the auction-room; and that the defaulting purchaser will be liable for any loss that may accrue to Government in case it becomes necessary to re-sell a lot at a lower rate, either in consequence of his failure to deposit the sum payable at the time of sale, or to redeem his promissory note on or before 4 P.M. on the day following that on which the note was signed.

(*h*)—That the purchasers are to adhere to all the provisions of the Opium, Excise and Police laws, and of the rules which have been or may from time to time be prescribed by the Board of Revenue.

8. All sales subsequent to the date of the triennial sale in March are to be held subject to the conditions contained in this notification, so far as they may be applicable.

9. Any further information regarding the auction may be had on application at the Office of the Superintendent of Excise Revenue.

D. G. BONNERJEE,
Superintendent of Excise Revenue,
Calcutta, the Suburbs, Howrah, and Bally.

OFFICE OF THE SUPDT. OF EXCISE REVENUE; 4, BANKSHALL STREET, CALCUTTA, *the 14th February* 1890.

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

In the matter of BUNSIDHUR SINGHANIA, lately carrying on business as piece-goods dealer and commission agent at No. 68, Cotton Street, in the town of Calcutta, under the name, style and firm of KRIPARAM SOOKDYAL, an insolvent.

On Wednesday, the 15th day of January last, it was, on the petition of Jumna Dhur, Joogulkissore, creditors of the said insolvent, adjudged that the said Bunsidhur Singhania hath committed an act of insolvency, under the provisions of the Act XI Vic., Chapter XXI, and by another order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

E. J. Fink, Attorney. (3538—2)

In the matter of SUJUN COOMAR AND BUNGSEEDHUR of No. 90, Cross Street, in the Town of Calcutta, lately trading in co-partnership as merchants and agents, under the style and firm of Himutram Sujun Coomar, insolvents.

On Monday, the 27th day of January last, it was, on the petition of Luchme Chand, a creditor of the said insolvents, adjudged that the said Sujun Coomar and Bungseedhur have committed an act of insolvency under the provisions of the Act XI Vic., Chapter XXI, and by another order of the same date the estate and effects of the said insolvents were vested in the Official Assignee.

C. F. Pittar, Attorney. (3539—2)

Chief Clerk's Office, the 11th day of February 1890.

POSTAL NOTICES.

Mails for	Date of closing at Calcutta.	Route by which despatched.
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	25th Feb. ...	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets)	24th „	Ditto.
Mauritius, Mahe (Seychelles), Majotte, Nossi Be and Réunion.	25th „	Ditto.
Zanzibar, Mozambique, Delagoa Bay, Natal and Cape Colonies	25th „	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	24th „	Ditto.
Australia, New Zealand, and Tasmania.	24th „	Ditto.
Madras, Pondicherry, Ceylon, Batavia, Singapore and China.	20th „	Per French steamer *Niemen*.
Madras and Colombo ...	19th „	Per P. & O. steamer *Peshawur*.
Straits, China and Japan ...	27th „	Per str. *Moray*.
Rangoon and Moulmein ...	19th „	Ditto *Khandalla*.
Ditto ditto ..	21st „	Ditto *Putiala*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	19th „	Ditto *Cocanada*.
Port Blair ...	27th „	Ditto *Pehwa*.
Natal and Mauritius ...	28th „	Ditto *Warora*.

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

On the day of despatch of the Mail for Europe, the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 8-30 P.M., and late letters and papers will be received up to 9 P.M. On other days the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 7 P.M., and foreign letters and papers fully prepaid, bearing an extra stamp of four annas, will be received up to 7-30 P.M. for despatch by any Foreign Mails despatched the same night.

E. HUTTON, Presidency Postmaster.

General Post Office, the 18th February 1890.

Unclaimed Letters held in the Calcutta General Post Office on 18th February 1890.

Ashmore, W. C.
Barook & Co.
Forstner & Grosse.
Glasier, H.
Harris, John.
Presgrave, Richard Duncan.
Simpson, G. T.

Letters marked Care of "Post Office."

Ardesher, C,
Babonau, E. Hugh,
Baggs, Mrs.
Bain, Donald M.
Baldwin, W. H.
Baragorey, L.
Barker, F. W.
Barnafcom, F.
Baxter, Mrs.
Belitski, R.
Berkeley, C. M.
Brown, W.
Bery, Adolph.
Broomsgrove, F.
Bruce, R. G.
Carbery, Lady.
Chatterton, J.
Cooper, W.
Courage, R.
Crump, Mrs. E.
Davis, Mrs. G.
DePalma, Urbans.
Dickson, Mrs. E.
Douglas, G. P. H.
Drakeford, A.
Duclere, G. P.
Dymond, G. F.
Elliott, K.
Fillcul Revd., S. E. V.
Fisk, F. M.
Francis, E. S. L.
Flack, F. F.
Flaherty, O. H.
Fletcher, Neil.
Forshaw, H.
Fraiser, H. C.
Fraiser, Miss F.
Francis, A. M.
Galbraith, Mr.
Gallwey, C. H.
Gantzman, Charles.
Gellett, Cecil S.
Glover, W. E.
Godwin, George.
Grahame, Henry.
Green, W. W.
Griffiths, A. G.
Hamilton, C. J.
Hamilton, J. R.
Handcock, J. G.
Hardman, G. D.
Harrington, J. C.
Humphries, Mrs. H.
Hunter, H. C.
Hardy, Mrs. M.
Hawksworth, Mrs.
Hewett, F. J.
Hilton, R. W.
Horus, Miss M. L.
Jackson, T.
Johnstone, C. C.
Keane, J. J.
Kennard, F.
Lach, R.
Lamb, E. G.
Langer, J. O.
Lindeman, L. K.
Linton, C. E.
Livesey, Thomas.
Livewright, R.
Lloyd, Willis.
Long, W.
MacMaster, Donald.
Mackenzie, J.
Major, A.
Manual, A. M.
Matthews, J. R.
Mathewson, F.
Maxwell, Sir, J. S.
May, J. J.
McAdoo, Mr.
McKenzie, Mrs D.
McNair, Miss.
McSmith, D.
Menexis, Mrs. C.
Menzies, C.
Mifsud George.
Mole, P. C.
Morshead, L.
Murphy, John.
Newby, C. R. A.
O'Mealy, Capt. D'Oyly.
Penn, Mrs.
Platts, Mrs. S. K.
Powell, F.
Pronter, Miss.
Rennrick, F. B. M.
Rennard, J. R.
Rodnor, W. H.
Rosenstern, Otto.
Roskell, Richard.
Rubie, Phil C.
Sano, T.
Searle, F. W.
Sevestre, J.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sisam, Rev. W. B.
Smith, M. O.
Soler, M.
Taylor, C.
Thomas, G. T.
Thomson, Captain W. A.
Thompson, D.
Thompson, G.
Ursite, Johan.
Waddell, Alex.
Walter, F.
Walter, Amherst.
Webster, Mrs.
Wilson, H. W.

Registered Letters.

Angri, Sig Natale.
Broomsgrove, F.
Edwards, C.
Guiseppe, Celestini.
MacLeod, D. J.
Marsland, W.
Smith, M. Oswald.

Unclaimed Letters held in the Barrackpore Post Office on the 17th February 1890.

Baker, E.
Barns, A.
Bart, G. K.
Blackwell, Sergt. W.
Chadburn, Mrs. J. E.
Ferguson, H. F.
Harding, H. R.
Harvey, Sergt.
Haswell, G.
Johastun, J.
Kindersley, C. E.
Lindsay, W. C.
McMinn, J.
Mertan, C. W.
Palore, L.
Stevens, Mrs. C.
Thompson, Jas.

E. HUTTON,
Presidency Postmaster, Calcutta.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 14th February 1890.

Name of river.	Reach of river.	Least depth of water soundings.	Remarks.
		Ft. In.	
Bhagirati.	Entrance from Ganges ...	0 6	At mouth entrance practically closed.
	Thence to Nurpur	0 6	Molnapore.
	From Nurpur to Jungipur ...	1 0	Bangabari.
	,, Jungipur to Berhampur	1 0	Palanpara.
	,, Berhampur to Cutwa ...	1 6	Harinathpore.
	,, Cutwa to Nuddea ...	2 3	Nuloy.
Bhyrub-Jelinghi.	Entrance from Ganges ...	5 6	
	Thence to Akrigani	5 0	
	Akrigani to junction of the Bhyrub and Jelinghi ...	4 0	Chukjama.
	Thence to Patkabari	4 6	Modhupore.
	Patkabari to Nuddea	3 9	Punditpore.
Matabanga.	Entrance from Ganges ...	1 6	
	Thence to Chuypara ...	0 6	Sircarpara.
	From Chuypara to Shikarpur	0 6	Pragpore.
	,, Shikarpur to Boalia ...	0 6	Shampore.
	,, Boalia to Chuadanga ...	2 6	Sialmari.
	,, Chuadanga to Kissenganj and Hanskhali..	2 3	Bastupore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A. M.	Feet.	Feet.	
Ganges.	Sahebganj ...	15-2-90	6	1·58	66·42	Below zero.
	Rampore Boalia	15-2-90	12	0·68	42·08	
	Entrance of Bhagirati ...	15-2-90	7	1·85	47·16	
	Entrance of Bhyrub-Jelinghi ...	15-2-90	...	6·50	44·86	
	Entrance of Matabanga ...	15-2-90	...	2·35	.. ..	
Bhagirati...	Berhampur ...	16-2-90	12	2·16	35·95	
Jelinghi ...	Kishnaghur ...	14-2-90	...	3·25	12·14	
	Saroopgunge ...	15-2-90	6	2·46	0·76	
Matabanga	Hanskhali ...	14-2-90	...	2·70	13·55	

C. E. LIVESAY, C.E.,
Exe. Engr., Nuddea Rivers Division.

Berhampore, the 17th February 1890.

Annual Statement of the Seaborne Trade

and Navigation of the Bengal Presidency and of its Chief Port (Calcutta) and each of its Subordinate Ports (Chittagong, Balasore, Cuttack, Pooree, and Naraingunge). Volumes I and II. Price Rs. 20 for 1888-89 Published at the Calcutta Custom House. Previous years volumes can also be obtained at the same price.

A Manual of Tibetan, being a Guide to the Colloquial Speech of Tibet, in a series of progressive Exercises, by Major T. H. Lewin, F.R.G.S., of the Bengal Staff Corps, late Deputy Commissioner of Darjeeling. *Price, Rs. 6; postage, 3 annas.*

Copies are to be had at the Office of the Director of Public Instruction.

AT the Meteorological Office, No. 5, Russell Street, the following official publications:—

Meteorological Report of		1867	...	Rs. 0 12	per copy.
Ditto	ditto	1868	...	„ 1 8	„
Ditto	ditto	1869	...	„ 2 4	„
Ditto	ditto	1870	...	„ 2 6	„
Ditto	ditto	1871	...	„ 2 8	„
Ditto	ditto	1872	...	„ 3 0	„
Ditto	ditto	1873	...	„ 3 0	„
Ditto	ditto	1874	...	„ 3 0	„
Administration Report of		1870-71	...	„ 0 4	„
Ditto	ditto	1871-72	...	„ 0 4	„
Ditto	ditto	1872-73	...	„ 0 4	„
Ditto	ditto	1873-74	...	„ 0 4	„
Ditto	ditto	1874-75	...	„ 0 4	„
A table of the average monthly and annual rainfall at 98 Stations in Northern India			...	„ 0 4	„
Report of the Midnapore and Burdwan cyclone of the 15th and 16th October 1874			...	„ 2 8	„

The above are also to be obtained at the same prices at Messrs. Thacker, Spink & Co., No. 5, Government Place.

JOHN ELIOT, M.A., *Meteorological Reporter to the Govt. of Bengal.*

CALCUTTA, the 26th August 1875.

THE following Reports of the Bengal Meteorological Department, issued by orders by the Government of Bengal, can be supplied to the public at the prices annexed:—

1st.—Bay of Bengal Daily Report giving observation taken at 20 stations on or near the coast of the Bay, with a chart and summary. This is published in connection with the Calcutta Storm Signal Service. The report giving 10 A.M. observations of the day is distributed by peon in Calcutta after 4 P.M. Price to subscribers in Calcutta, Rs. 2 per mensem.

2nd.—Bengal Daily Report containing observations taken at 37 meteorological stations, and transmitted to Calcutta by weather telegrams, with a brief summary of the weather in Bengal during the preceding 24 hours. The report giving the 10 A.M. observations of each day is printed in time for the evening mail. This report for the present will only be published during the south-west monsoon, *i.e*, from May 15th to November 15th. Price Rs. 2-8 per mensem, including postage.

3rd.—A Weekly and Monthly Statement of Meteorological Observations taken at 44 observing stations, and of rainfall recorded at 245 sub-divisional stations together with summaries of the more important features of the meteorology of the past week or month of the province, and of the distribution of the rainfall and its variation from the normal. Price of the Weekly Report including postage, Rs. 6 per annum, payable in advance and of the Monthly Summary Report, Rs. 2 per annum, payable in advance.

Subscriptions payable to the Meteorological Reporter to the Government of Bengal for the Bay of Bengal, Daily Report, and to the Accountant and Treasurer Bengal Secretariat, for the other reports.

ALEX. PEDLER,

Offg. Meteorological Reporter to the Govt. of Bengal.

Meteorological Office, Bengal, the 17th March 1886.

The Indian Law Reports.

Published under Authority.

THE Indian Law Reports, published under the authority of the Governor-General in Council, appear in monthly parts, published as soon as possible after the first of each month at Calcutta, Madras, Bombay, and Allahabad, and comprise four series—one for the Calcutta High Court, a second for the Madras High Court, a third for the Bombay High Court, and a fourth for the Allahabad High Court. The cases heard by the Privy Council on appeal from each High Court are reported in the Series for that High Court. Cases heard by the Privy Council on appeal from Provinces in India not subject to any High Court are reported in the Calcutta Series.

The Calcutta Series is distributed by the Bengal Secretariat, and the Madras, Bombay, and Allahabad Series are distributed direct from Madras, Bombay, and Allahabad respectively.

In supersession of the previous advertisements, on and from the 1st January 1889 the terms of subscription and sale will be as follows for current issues as well as for back numbers of the Reports from 1876:—

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„ each of the Madras, Bombay and Allahabad Series. For the year ...	4 4 6	4 11 3

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Superintendent, Government Press, Madras
The Government Central Book Dépôt, Bombay.
„ Curator of Government Books, North-Western Provinces and Oudh.
„ Superintendent of Government Printing Bengal.

Orders and subscriptions for 1889 *should be at once registered and remitted by money-order payable to the Accountant and Treasurer, Bengal Secretariat Calcutta.*

INDIAN LAW REPORTS.

Advertisements will be received for publication on the wrappers of the Indian Law Reports, Calcutta Series by the Calcutta Central Press Company, "Limited," 5-1, Council House Street, at the following rates, payable in advance—

	One page.	Half page.	Quarter page.
For one issue ...	Rs. 20	Rs. 14	Rs. 9
„ three issues ...	„ 55	„ 36	„ 24
„ six „ ...	„ 100	„ 68	„ 45
„ nine „ ...	„ 145	„ 98	„ 64
„ twelve „ ...	„ 180	„ 120	„ 80

NOTICE.

IT is hereby notified, for general information, that subscriptions to the complete series of the Indian Law Reports should be registered during the first three months of each calendar year. Subscribers are therefore requested to send in their subscriptions for the complete series before the 31st March in each year. Those who register their names after that date will understand that copies will be supplied only if available.

H. A. D. PHILLIPS,
Under-Secy. to the Govt. of Bengal.
The 24th November 1886.

BOOKS AND PUBLICATIONS

FOR SALE BY THE

Superintendent of Govt. Printing, India.

8, HASTINGS STREET, CALCUTTA.

All books published by the Superintendent of Government Printing, India, can be purchased either directly or through the following or any other booksellers:—

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BOMBAY	... Thacker & Co., Ld.; Cooper, Maddon & Co.
POONA	... Cooper, Maddon & Co.

NOTICE.—Books required for private use only can be purchased. Applications should be accompanied by a remittance, unless it is wished that the books should be sent by value payable post, in which case, besides the ordinary postage, an additional charge will be made for registration and commission.

Books required for the public service should be obtained through Local Governments.

☞ *The amounts within parenthesis are for packing and postage.*

LEGISLATIVE DEPARTMENT.

[These books (except the General Acts for 1882-84, Part II, and the Oudh Code, of which no copies remain in stock) may be obtained from the Office of the Superintendent of Government Printing, No. 8, Hastings Street, Calcutta.]

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REVISED EDITION.

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The General Acts from 1877 to 1881, edition 1884. Rs. 8 (8*a.*)

The General Acts for 1882, edition 1885, Part I (containing Acts II to XII, both inclusive). Rs. 8 (8*a.*)

The General Acts from 1882 to 1884, edition 1885, Part II (containing Act XIV and following Acts of 1882 and the Acts of 1883 and 1884). Rs. 8 (7*a.*)

The General Acts from 1885 to 1888, edition 1889, with full Chronological Tables showing all Acts of the Governor-General in Council with their repealing and amending enactments. Rs. 8 (6*a.*)

The Code of Civil Procedure, 1882, as modified up to the 1st July 1888. Rs 3 (6*a.*)

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The North-Western Provinces Code, 1886, revised edition. Rs. 8 (12*a.*)

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The Bengal Code, 1889-90, revised edition, Vol. II; containing the unrepealed Acts of the Lieutenant-Governor of Bengal in Council, with a Chronological Table and an appendix showing places in Bengal in which certain of the Acts have been brought into force. Rs. 8 (Re. 1).

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The Burma Code, 1889, revised edition. Rs. 6 (8*a.*)

The Ajmere Code, 1879. Rs. 3 (6*a.*)

The Bombay Code, 1880. Rs. 8 (12*a.*)

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The Central Provinces Code, 1881. Rs. 4-8 (6*a.*)

C—Statutes.

The Statutes relating to India, Vol. I, 1881, from 1285 to 1855. Rs. 8 (12*a.*)

The Statutes relating to India, Vol. II, 1881, from 1856 to 1881. Rs. 8 (12*a.*)

Supplement to the Statutes relating to India, 1881. Rs. 3 (6*a.*)

In the Press.

The Assam Supplement to the Bengal Code, 1889-90.

Miscellaneous Works.

Lists of British Enactments in force in Native States, Southern India (Madras and Mysore). Corrected to 30th November 1888. Compiled by J. M. MACPHERSON, of the Inner Temple, Barrister-at-Law, Deputy Secretary to the Government of India, Legislative Department. Full cloth, super royal 8vo. Rs. 2-8 (4*a.*)

Lists of British Enactments in force in Native States, Southern India (Hyderabad). Corrected to 31st December 1888. Compiled by J. M. MACPHERSON, of the Inner Temple, Barrister-at-Law, Deputy Secretary to the Government of India, Legislative Department. Full cloth, super royal 8vo. Rs. 4-8 (6*a.*)

A Digest of Indian Law Cases; containing High Court Reports, 1862-1886, and Privy Council Reports of Appeals from India, 1836-1886, with an Index of Cases. Compiled under the orders of the Government of India by JOSEPH VERE WOODMAN, of the Middle Temple, Barrister-at-Law, and Advocate of the High Court, Calcutta. In five volumes. Super royal 8vo. Rs. 50 per set; quarter-bound copies, Rs. 55 (Rs. 3-2); payable in advance.

Index to the Enactments relating to India, with Chronological Tables of Statutes relating to India and the Acts and Regulations of the Indian Legislatures. Second edition, 1883. By WILLIAM FISCHER AGNEW, Barrister-at-Law. Rs. 10 (12*a.*)

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R. H. WILSON,
Offg. Secy. to the Govt. of Bengal.

The 24th February 1886.

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PART V.

Acts of the Governor General's Council assented to by the Governor General.

GOVERNMENT OF INDIA.

LEGISLATIVE DEPARTMENT.

The following Act of the Governor General of India in Council received the assent of His Excellency the Governor General on the 14th February, 1890, and is hereby promulgated for general information:—

ACT NO. I OF 1890.

An Act to make better provision for recovering certain public demands.

WHEREAS it is expedient to make better provision for recovering certain public demands; It is hereby enacted as follows:—

Title, extent and commencement.

1. (*1*) This Act may be called the Revenue Recovery Act, 1890.

(*2*) It extends to the whole of British India, inclusive of Upper Burma and British Baluchistan; and

(*3*) It shall come into force at once.

Definitions.

2. In this Act, unless there is something repugnant in the subject or context,—

(*1*) "district" includes a presidency-town:

(*2*) "Collector" means the chief officer in charge of the land-revenue administration of a district: and

(*3*) "defaulter" means a person from whom an arrear of land-revenue, or a sum recoverable as an arrear of land-revenue, is due, and includes a person who is responsible as surety for the payment of any such arrear or sum.

Recovery of public demands by enforcement of process in other districts than those in which they become payable.

3. (*1*) Where an arrear of land-revenue, or a sum recoverable as an arrear of land-revenue, is payable to a Collector by a defaulter being or having property in a district other than that in which the arrear accrued or the sum is payable, the Collector may send to the Collector of that other district a certificate in the form as nearly as may be of the schedule, stating—

(*a*) the name of the defaulter and such other particulars as may be necessary for his identification, and

(*b*) the amount payable by him and the account on which it is due.

(*2*) The certificate shall be signed by the Collector making it, and, save as otherwise provided by this Act, shall be conclusive proof of the matters therein stated.

(*3*) The Collector of the other district shall, on receiving the certificate, proceed to recover the amount stated therein as if it were an arrear of land-revenue which had accrued in his own district.

Remedy available to person denying liability to pay amount recovered under last foregoing section.

4. (*1*) When proceedings are taken against a person under the last foregoing section for the recovery of an amount stated in a certificate, that person may, if he denies his liability to pay the amount or any part thereof and pays the same under protest made in writing at the time of payment and signed by him or his agent, institute a suit for the re-payment of the amount or the part thereof so paid.

(*2*) A suit under sub-section (*1*) must be instituted in a Civil Court having jurisdicti in the local area in which the office of the Collector who made the certificate is situate, and the suit shall be determined in accordance with the law in force at the place where the arrear accrued or the liability for the payment of the sum arose.

(*3*) In the suit the plaintiff may, notwithstanding anything in the last foregoing section, but subject to the law in force at the place aforesaid, give evidence with respect to any matter stated in the certificate.

Recovery by Collectors of sums recoverable as arrears of revenue by other public officers or by local authorities.

5. Where any sum is recoverable as an arrear of land-revenue by any public officer other than a Collector or by any local authority, the Collector of the district in which the office of that officer or authority is situate shall, on the request of the officer or authority, proceed to recover the sum as if it were an arrear of land-revenue which had accrued in his own district, and may send a certificate of the amount to be recovered to the Collector of another district under the foregoing provisions of this Act as if the sum were payable to himself.

Property liable to sale under this Act.

6. (*1*) When the Collector of a district receives a certificate under this Act, he may issue a proclamation prohibiting the transfer or charging of any immoveable property belonging to the defaulter in the district.

(*2*) The Collector may at any time, by order in writing, withdraw the proclamation, and it shall be deemed to be withdrawn when either the amount stated in the certificate has been recovered or the property has been sold for the recovery of that amount.

(*3*) Any private alienation of the property or of any interest of the defaulter therein, whether by sale, gift, mortgage or otherwise, made after the issue of the proclamation and before the withdrawal thereof shall be void as against the Government and any person who may purchase the property at a sale held for the recovery of the amount stated in the certificate.

(*4*) Subject to the foregoing provisions of this section, when proceedings are taken against any immoveable property under this Act for the recovery of an amount stated in a certificate, the interests of the defaulter alone therein shall be so proceeded against, and no incumbrances created, grants made or contracts entered into by him in good faith shall be rendered invalid by reason only of proceedings being taken against those interests.

(*5*) A proclamation under this section shall be made by beat of drum or other customary method and by the posting of a copy thereof on a conspicuous place in or near the property to which it relates.

Saving of local laws relating to revenue.

7. Nothing in the foregoing sections shall be construed—

(*a*) to impair any security provided by, or affect the provisions of, any other enactment for the time being in force for the recovery of land-revenue or of sums recoverable as arrears of land-revenue, or

(*b*) to authorise the arrest of any person for the recovery of any tax payable to the corporation, commissioner, committee, board, council or person having authority over a municipality, under any enactment for the time being in force.

Recovery in British India of certain public demands arising beyond British India.

8. When this Act has been applied to any local area which is under the administration of the Governor General in Council but which is not part of British India, an arrear of land-revenue accruing in that local area, or a sum recoverable as an arrear of land-revenue and payable to a Collector or other public officer or to a local authority in that local area, may be recovered under this Act in British India.

THE SCHEDULE.

CERTIFICATE.

(*See section 3, sub-section (1).*)

From

The Collector of

To

The Collector of .

Dated the of 18 .

The sum of Rs. is payable on account of by , son of , resident of , who is believed (to be at) (to have property consisting of at) in your district.

Subject to the provisions of the Revenue Recovery Act, 1890, the said sum is recoverable by you as if it were an arrear of land-revenue which had accrued in your own district, and you are hereby desired so to recover it and to remit it to my office at .

A. B.,
Collector of .

S. HARVEY JAMES,
Secretary to the Government of India.

GOVERNMENT OF INDIA.

LEGISLATIVE DEPARTMENT.

The following Act of the Governor General of India in Council received the assent of His Excellency the Governor General on the 14th February, 1890, and is hereby promulgated for general information :—

ACT NO. II OF 1890.

An Act to amend Acts XVII of 1864, X of 1865, II of 1874 and V of 1881.

WHEREAS it is expedient to amend Act XVII of 1864 (*an Act to constitute an Office of Official Trustee*), the Indian Succession Act, 1865, the Administrator General's Act, 1874, and the Probate and Administration Act, 1881; It is hereby enacted as follows :—

Act XVII of 1864.

Addition to section 1, Act XVII, 1864.

1. In section 1 of Act XVII of 1864, before the definition of the expression "High Court", the following shall be inserted, namely :—

"Government."

"The word 'Government' shall mean, in relation to the Presidency of Fort William in Bengal, the Governor General in Council; in relation to the Presidency of Fort St. George, the Governor of Fort St. George in Council; and, in relation to the Presidency of Bombay, the Governor of Bombay in Council:".

Insertion of new section after section 1, Act XVII, 1864.

2. After section 1 of the said Act the following shall be inserted, namely :—

Construction of references to Presidencies.

"2. In this Act references to the Presidency of Fort William in Bengal, the Presidency of Fort St. George and the Presidency of Bombay shall, as regards all persons for whom the Governor General in Council has for the time being power to make laws and regulations, be read as references to the Presidency of Bengal, the Presidency of Madras and the Presidency of Bombay, respectively, as those expressions are severally defined in the law for the time being in force relating to the office and duties of Administrator General."

Substitution of new section for section 5.

3. For section 5 of the said Act the following shall be substituted, namely :—

Appointment, suspension and removal of Official Trustees.

"5. Every Official Trustee appointed under this Act shall be appointed and may be suspended or removed from his office by the Government."

Amendment of section 6, Act XVII, 1864.

4. In section 6 of the said Act, for the words "Chief Justice by whom he is appointed" the word "Government" shall be substituted.

Amendment of section 7, Act XVII, 1864.

5. For the portion of section 7 of the said Act beginning with the words "It shall be lawful for the Chief Justice of the High Court" and ending with the words "it shall be lawful for the Chief Justice to appoint some person to officiate as Official Trustee" the following shall be substituted, namely :—

"It shall be lawful for the Government from time to time to grant leave of absence to the Official Trustee, but subject always to such and the like rules as may be for the time being in force as to leave of absence of officers attached to the High Court. Whenever any Official Trustee shall obtain leave of absence, it shall be lawful for the Government to appoint some person to officiate as Official Trustee,".

Addition to section 11, Act XVII, 1864.

6. To section 11 of the said Act the following shall be added, namely :—

"Provided that the High Court, by its order appointing the Official Trustee to be trustee of such property, may, for special reasons to be recorded by the Court, direct that the Official Trustee shall be entitled by way of remuneration, in respect of the capital moneys, sums and rents aforesaid, or any of them, to a commission at rates or a rate to be specified in the order and exceeding the rates or rate hereinbefore in this section prescribed."

Addition of sections to Act XVII, 1864.

7. To the said Act, after section 32, the following shall be added, namely :—

Compliance with requisitions for returns.

"33. The Official Trustee shall comply with such requisitions as may be made by the Government for returns and statements, in such form and manner as the Government may deem proper.

Division of the Presidency of Fort William in Bengal into Provinces.

"34. (1) Notwithstanding anything in the foregoing provisions of this Act, the Governor General in Council, upon the occurrence of any vacancy in the

office of the Official Trustee of Bengal, may, by notification in the Gazette of India,—

(*a*) divide the Presidency of Fort William in Bengal into so many Provinces as he thinks fit,

(*b*) define the limits of each of those Provinces, and

(*c*) appoint an Official Trustee for each Province,

and, subject to the provisions of this section, the following consequences shall thereupon ensue, namely:—

(i) the office of Official Trustee of Bengal shall cease to exist:

(ii) the Official Trustee of a Province shall have the like rights and privileges, and perform the like duties, in the territories and dominions included in the Province as the Official Trustee of Bengal had and performed as Official Trustee therein:

(iii) the functions of the Government under this Act shall, as regards the territories and dominions included in the Province, be discharged by the Governor General in Council:

(iv) the functions of whatsoever kind assigned by the foregoing provisions of this Act to the High Court of Judicature at Fort William in Bengal in respect of the territories and dominions included in a Province shall be discharged by such High Court as the Governor General in Council may, by notification in the Gazette of India, appoint in this behalf:

(v) in the foregoing provisions of this Act, the word 'Presidency' shall be deemed to include a Province, the expression 'Chief Justice' the Chief Justice, senior Judge or sole Judge, as the case may be, of a High Court appointed by the Governor General in Council under clause (iv) of this sub-section, and the expression 'Advocate General' a Government Advocate or other officer appointed by the Governor General in Council to discharge for a Province the functions under this Act of an Advocate General for a Presidency: and,

(vi) generally, the provisions of the foregoing sections and of any other enactment for the time being in force with respect to the Official Trustee of Bengal shall, in relation to a Province, be construed, so far as may be, to apply to the Official Trustee appointed for the Province under this section.

(*2*) Any proceeding which was commenced before the publication of the notification dividing the Presidency of Fort William in Bengal into Provinces, and to or in which the Official Trustee of Bengal in his representative character was a party or was otherwise concerned, shall be continued as if the notification had not been published, and the Official Trustee of the Province in which the Town of Calcutta is comprised shall for the purposes of the proceeding be deemed to be the successor in office of the Official Trustee of Bengal, and shall hold and execute the trusts of which immediately before the publication of the notification the Official Trustee of Bengal was trustee in all respects as if he were such successor.

(*3*) The Court of the Recorder of Rangoon shall be deemed to be a High Court for the purposes of clause (iv) of sub-section (*1*)."

Official Trustees holding office at commencement of this Act.

8. Every person holding the office of Official Trustee at the commencement of this Act shall be deemed to have been appointed under Act XVII of 1864 as amended by this Act.

The Indian Succession Act, 1865.

Addition of new section after section 326, Act X, 1865.

9. After section 326 of the Indian Succession Act, 1865, the following shall be inserted, namely:— X of

"326A. Where a person not having his domicile in British India has died leaving assets both in British India and in the country in which he had his domicile at the time of his death and there have been a grant of probate or letters of administration in British India with respect to the assets there and a grant of administration in the country of domicile with respect to the assets in that country, the executor or administrator, as the case may be, in British India, after having given such notices as are mentioned in section 320 and after having discharged, at the expiration of the time therein named, such lawful claims as he knows of, may, instead of himself distributing any surplus or residue of the deceased's property to persons residing out of British India who are entitled thereto, transfer, with the consent of the executor or administrator, as the case may be, in the country of domicile, the surplus or residue to him for distribution to those persons."

Transfer of assets from British India to executor or administrator in country of domicile for distribution.

The Administrator General's Act, 1874.

Amendment of definitions of "Presidency of Bengal" and "Presidency of Bombay" in section 3, Act II, 1874.

10. In clause (*b*) of the definition of the expression "Presidency of Bengal" in section 3 of the Administrator General's Act, 1874, the word "Burma" shall be substituted for the words "British Burma", and to clause (*a*) of the definition of the expression "Presidency of Bombay" in the same section of that Act the words "and under the administration of the Chief Commissioner of British Baluchistan" shall be added. II of

Substitution of new paragraph for first paragraph of section 37, Act II, 1874

11. (*1*) For the first paragraph of section 37 of the said Act, as amended by section 5 of the Administrator General's Act, 1881, beginning with the words "If in cases falling within section 36" and ending with the words "as if such letters had been granted to him", the following shall be substituted, namely:— IX

"If, in cases falling within section 36, no person claiming otherwise than as a creditor to be entitled to a share of the effects of the deceased obtains, within three months, a

certificate from the Administrator General under the same section, or letters of administration to the estate and effects of the deceased, and such deceased was not a Hindu, Muhammadan, Parsi or Buddhist, or exempted under the Indian Succession Act, 1865, section 332, from the operation of that Act, the Administrator General may administer the estate and effects without letters of administration, in the same manner as if such letters had been granted to him;".

(2) The portion of section 5 of the Administrator General's Act, 1881, beginning with the words "and in section 37 of the same Act" and ending with the words "from the operation of that Act" is hereby repealed.

Addition of new section after section 41, Act II, 1874.

12. After section 41 of the said Act the following shall be inserted, namely:—

"41A. Where a person not having his domicile in British India has died leaving assets both in British India and in the country in which he had his domicile at the time of his death, and proceedings for the administration of his estate with respect to assets in British India have been taken under section 36 or section 37, and there has been a grant of administration in the country of domicile with respect to the assets in that country, the holder of the certificate granted under section 36 or section 37, or the Administrator General, as the case may be, after having given such notices as the High Court may by any general rule to be made from time to time prescribe, for creditors and others to send in to him their claims against the estate of the deceased, and after having discharged, at the expiration of the time therein named, such lawful claims as he knows of, may, instead of himself distributing any surplus or residue of the deceased's property to persons residing out of British India who are entitled thereto, transfer, with the consent of the executor or administrator, as the case may be, in the country of domicile, the surplus or residue to him for distribution to those persons."

Transfer of certain assets from British India to executor or administrator in country of domicile for distribution.

Addition to section 64, Act II, 1874.

13. To section 64 of the said Act the following shall be added, namely:—

"The District Judge may cause to be paid out of any property of which he or such officer has charge, or out of the proceeds of such property or of any part thereof, such sums as may appear to him to be necessary for all or any of the following purposes, namely:—

(a) the payment of the expenses of the funeral of the deceased and of obtaining probate of his will or letters of administration to his estate and effects,

(b) the payment of wages due for services rendered to the deceased within three months next preceding his death by any labourer, artizan or domestic servant, and

(c) the relief of the immediate necessities of the family of the deceased,

and nothing in section 279, section 280 or section 281 of the Indian Succession Act, 1865, or in any other law for the time being in force with respect to rights of priority of creditors of deceased persons, shall be held to affect the validity of any payment so caused to be made."

Addition to Part VI, Act II, 1874.

14. To Part VI, and after section 66, of the said Act the following shall be added, namely:—

"67. The Administrator General shall comply with such requisitions as may be made by the Government for returns and statements, in such form and manner as the Government may deem proper."

Compliance with requisitions for returns.

Addition to Act II, 1874, of a Part respecting the division of the Presidency of Bengal into Provinces.

15. To the said Act, after Part VI and section 67 thereof, the following shall be added, namely:—

"PART VII.

DIVISION OF THE PRESIDENCY OF BENGAL INTO PROVINCES.

Division of the Presidency of Bengal into Provinces.

68. (1) Notwithstanding anything in the foregoing provisions of this Act, the Governor General in Council, upon the occurrence of any vacancy in the office of the Administrator General of Bengal, may, by notification in the Gazette of India,—

(a) divide the Presidency of Bengal, as defined in this Act, into so many Provinces as he thinks fit,

(b) define the limits of each of those Provinces, and

(c) appoint an Administrator General for each Province,

and, subject to the provisions of this section, the following consequences shall thereupon ensue, namely:—

(i) the office of Administrator General of Bengal shall cease to exist:

(ii) the Administrator General of a Province shall have the like rights and privileges, and perform the like duties, in the territories and dominions included in the Province as the Administrator General of Bengal had and performed as Administrator General therein:

(iii) the functions of the Government under this Act shall, as regards the territories and dominions included in a Province, be discharged by the Governor General in Council:

(iv) the functions of whatsoever kind assigned by the foregoing provisions of this Act to the High Court at Calcutta in respect of the territories and dominions included in a Province shall be discharged by such High Court as the Governor General in Council may, by notification in the Gazette of India, appoint in this behalf, and probate or letters of administration granted to the Administrator General of the Province by the High Court so appointed shall have the same effect throughout the Presidency of Bengal, as defined

in this Act, or, if the Court so directs, throughout British India, as, but for the abolition of the office of Administrator General of Bengal, probate or letters of administration granted to the holder of that office by the High Court at Calcutta would have had :

(v) in the foregoing provisions of this Act the word 'Presidency' shall be deemed to include a Province, the expression 'Presidency-town' the place of sitting of a High Court appointed by the Governor General in Council under clause (iv) of this sub-section, and the expression 'Advocate General' a Government Advocate or other officer appointed by the Governor General in Council to discharge for a Province the functions under this Act of an Advocate General for a Presidency :

(vi) the provisions of this Act with respect to the commission of the Administrator General of Bengal shall regulate the commission payable to the Administrator General of a Province : and,

(vii) generally, the provisions of the foregoing sections of this Act with respect to the High Court at Calcutta, and the provisions of those sections or of any other enactment with respect to the Administrator General of Bengal, shall, in relation to a Province, be construed, so far as may be, to apply to the High Court and Administrator General, respectively, appointed for the Province under this section.

(*2*) Any proceeding which was commenced before the publication of the notification dividing the Presidency of Bengal into Provinces and to or in which the Administrator General of Bengal in his representative character was a party or was otherwise concerned shall be continued as if the notification had not been published, and the Administrator General of the Province in which the town of Calcutta is comprised shall for the purposes of the proceeding be deemed to be the successor in office of the Administrator General of Bengal.

(*3*) The Court of the Recorder of Rangoon shall be deemed to be a High Court for the purposes of clause (iv) of sub-section (*1*).

(*4*) Notwithstanding any division of the Presidency of Bengal, as defined in this Act, into Provinces under this section, the Administrator General of the Province in which the town of Calcutta is comprised shall be deemed to be the Administrator General for the whole of the said Presidency for the purposes of the Regimental Debts Act, 1863." 26 & 27 c. 57.

The Probate and Administration Act, 1881.

16. After section 145 of the Probate and Administration Act, 1881, the following shall be inserted, namely :— V of

Addition of new section after section 145, Act V, 1881.

"145A. Where a person not having his domicile in British India has died leaving assets both in British India and in the country in which he had his domicile at the time of his death, and there have been a grant of probate or letters of administration in British India with respect to the assets there and a grant of administration in the country of domicile with respect to the assets in that country, the executor or administrator, as the case may be, in British India, after having given such notices as are mentioned in section 139 and after having discharged, at the expiration of the time therein named, such lawful claims as he knows of, may, instead of himself distributing any surplus or residue of the deceased's property to persons residing out of British India who are entitled thereto, transfer, with the consent of the executor or administrator, as the case may be, in the country of domicile, the surplus or residue to him for distribution to those persons."

Transfer of assets from British India to executor or administrator in country of domicile for distribution.

S. HARVEY JAMES,
Secretary to the Government of India.

The Calcutta Gazette.

PUBLISHED BY AUTHORITY.

WEDNESDAY, FEBRUARY 19, 1890.

☞ Separate paging is given to this Part in order that it may be filed as a separate compilation.

PART VI.

Bills introduced into the Council of the Governor General for making Laws and Regulations, or published under Rule 22.

GOVERNMENT OF INDIA.

LEGISLATIVE DEPARTMENT.

The following Bill was introduced into the Council of the Governor General of India for the purpose of making Laws and Regulations on the 14th February, 1890:—

No. 4 OF 1890.

A Bill to amend Acts I of 1859, VII of 1880 and V of 1883.

WHEREAS it is expedient to amend Act I of 1859 (*for the amendment of the law relating to Merchant Seamen*), the Indian Merchant Shipping Act, 1880, and the Indian Merchant Shipping Act, 1883, in manner hereinafter appearing; It is hereby enacted as follows:—

Act I of 1859.

Addition of section after section 24, Act I, 1859.

1. After section 24 of Act I of 1859 the following shall be inserted, namely:—

"24A. (*1*) When a running agreement with the crew of a foreign-going ship has been made under section 23 and the ship arrives after the next following thirtieth day of June or thirty-first day of December at a port of destination in India which is not the port therein at which the crew have agreed to be discharged, the master may, with the previous sanction of the shipping-master, renew the agreement with the crew, or may be required by the shipping-master so to renew the agreement, for the voyage from such port of destination to the port in India at which the crew have agreed to be discharged.

Renewal of running agreements in certain cases.

"(*2*) If the master of the ship is required by the shipping-master to renew the agreement as aforesaid and refuses so to renew it, any expenses which may be incurred by the Government for the subsistence of the crew and their conveyance to the port at which they have agreed to be discharged shall be a charge upon the ship, and shall be recoverable as if they were expenses incurred in respect of distressed seamen under the provisions of Chapter III of the Indian Merchant Shipping Act, 1880." VII of

2. To section 115 of the same Act the following shall be added, namely:—

Amendment of section 115, Act I, 1859.

"and for the repayment to the Secretary of State for India in Council of all expenses which may be incurred by the Government in respect of any such lascar or other native seaman who may be discharged or left behind at any port out of India and becomes distressed and is relieved under the provisions of the Merchant Shipping Act, 1854, section 211, and the enactments amending the same." 17 & 1 c. 104.

The Indian Merchant Shipping Act, 1880.

3. In section 74 of the Indian Merchant Shipping Act, 1880, after the words "so appointed" the words "or bringing within such limits any wreck which has been found and taken possession of elsewhere" shall be inserted.

Amendment of section 74, Act VII, 1880. VII of

The Indian Merchant Shipping Act, 1883.

4. To section 6 of the Indian Merchant Shipping Act, 1883, the following shall be added, namely:—

Amendment of section 6, Act V, 1883. V of 1

"(*4*) The word "coasts" in this section includes the coasts of creeks and tidal rivers."

5. For sub-section (*1*) of section 7 of the same Act the following shall be substituted, namely:—

New sub-section substituted for sub-section (*1*) of section 7, Act V, 1883.

"If the Local Government to which the report or notice prescribed by the last foregoing section has been made or given, or within whose territories any competent witnesses of any such loss, abandonment, stranding, damage or casualty as is described in clause (*a*), (*b*), (*c*) or (*d*) of sub-section (*1*) of the same section have arrived or are to be found or any evidence of

Power for Local Government to appoint Special Court of Investigation.

such supposed loss as is described in clause (*e*) of the same sub-section can be obtained, is of opinion that a formal investigation into the facts mentioned in any of the said clauses is requisite or expedient, such Local Government may appoint a special Court, consisting of not less than two nor more than four persons, and direct that Court to make the investigation, and may fix the place for making the same."

Amendment of section 8, Act V, 1883.

6. In section 8 of the same Act, after the words "Local Government" the words "or by such officer as the Local Government has empowered in this behalf" shall be inserted.

Amendment of section 20, Act V, 1883.

7. In section 20 of the same Act, clause (*a*) and the proviso shall be repealed.

Addition of section after section 24, Act V, 1883.

8. After section 24 of the same Act the following shall be added, namely:—

Power to Court to suspend or cancel certificates granted by Local Government.

"24A. (*1*) Notwithstanding anything in the foregoing provisions of this Act, a certificate (whether of competency or service) which has been granted by any Local Government to a master, mate or engineer, but has not been granted under the provisions of the Merchant Shipping (Colonial) Act, 1869, or of any Order in Council under the said Act, may, if a Court conducting an investigation under this Act finds that the loss, stranding or abandonment of or damage to any ship, or loss of life, has been caused by the wrongful act or default of the master, mate or engineer, or that he is incompetent or has been guilty of any gross act of drunkenness, tyranny or other misconduct, be suspended or cancelled by the Court:

"Provided that the Court shall not suspend or cancel a certificate unless the holder of the certificate was furnished before the commencement of the investigation with the copy of the report or statement required by section 9 or section 10, as the case may be.

"(*2*) At the conclusion of the investigation, or as soon afterwards as possible, the Court shall state in open sitting the decision to which it may have come with respect to the cancelment or suspension of any certificate.

"(*3*) A master, mate or engineer whose certificate has been cancelled or suspended by the Court shall, on demand by the Court, deliver the certificate to the Court, and the Court shall forward it to the Local Government together with the report which it is required by section 17, sub-section (*1*), to transmit to that Government.

"(*4*) A master, mate or engineer failing to deliver a certificate as required by sub-section (*3*) shall be punished with fine which may extend to five hundred rupees.

"(*5*) The duties imposed and powers conferred by sections 22, 23 and 24 on the Local Government which cancels or suspends a certificate shall, when a Court has under this section cancelled or suspended a certificate, be performed and exercised by the Local Government to which the Court has forwarded the certificate under sub-section (*3*), as if such Local Government had itself cancelled or suspended the certificate under section 20."

STATEMENT OF OBJECTS AND REASONS.

THE objects of this Bill are the following:—

(*a*) to amend Act I of 1859 (*for the amendment of the law relating to Merchant Seamen*) so as to make it lawful for the master of a foreign-going ship, when the term of a running agreement has expired at a port in India which is not also the port at which the crew have agreed to be discharged, to renew the agreement, with the sanction of the shipping-master at the port at which the agreement has expired, for the voyage from that port to the port in India which is the port of discharge agreed to by the crew (section 1);

(*b*) to provide in section 115 of the same Act for the indemnification of the State against expenses incurred in the relief of lascars left abroad by masters of foreign vessels (section 2);

(*c*) to provide, in amendment of section 74 of the Indian Merchant Shipping Act, 1880, that all wreck found outside, but brought within, the local limits for which a Receiver of Wreck has been appointed, as well as wreck found within those limits, shall be delivered to the Receiver (section 3);

(*d*) to explain that the word "coasts" in section 6 of the Indian Merchant Shipping Act, 1883, includes the coasts of creeks and tidal rivers (section 4);

(*e*) to provide in Chapter II of the same Act for giving power to a Local Government to convene a Court of Investigation into a casualty which has occurred in the jurisdiction of, or been reported to, another Local Government, when it may be advisable to hold such a Court by reason of the witnesses being within the jurisdiction of the Local Government or for other sufficient cause (section 5);

(*f*) to provide in section 8 of the same Act that the Governor of Bombay in Council may delegate to the Political Resident at Adén his powers under that section in respect of investigations at Aden into shipping casualties (section 6); and

(*g*) to provide, in amendment of Chapter III of the same Act, that Courts of Investigation may cancel or suspend local certificates of competency or service as they may now cancel or suspend Board of Trade and Colonial certificates.

2. These amendments of Act I of 1859 and the Indian Merchant Shipping Acts of 1880 and 1883 have been shown by experience to be either necessary or desirable.

The 7th February, 1890.

D. BARBOUR.

S HARVEY JAMES,
Secretary to the Government of India.

[REGISTERED No 29.]

No. 8 of 1890.

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, FEBRUARY 19, 1890.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT *separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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ARRANGEMENTS TO BE ADOPTED FOR THE WORKING OF GOODS TRAFFIC INTO AND OUT OF CALCUTTA AFTER THE COMPLETION OF THE KIDDERPORE DOCKS.

No. 461Marine.

GOVERNMENT OF BENGAL—PUBLIC WORKS DEPARTMENT.

Dated Calcutta, the 18th February 1890.

RESOLUTION.

READ—

A letter No. 0190R.T., dated the 4th February 1890, from the Government of India suggesting that a Committee should be appointed to discuss the various question which will arise in connection with the working of traffic into and out of Calcutta after the completion of the Kidderpore Docks.

RESOLUTION.—On the completion of the Kidderpore Docks the existing arrangements for working both the export and the import goods traffic will have to be largely modified, and, with the concurrence of the Government of India, His Honour the Lieutenant-Governor is pleased to appoint the gentlemen named below to form a Committee to consider and advise on the arrangements that should be adopted on the opening of the Docks:—

The Hon'ble Mr. F. M. Halliday ...	*President.*
Colonel L. Conway-Gordon, R.E., C.I.E. ...	Representing the Government of India.
Mr. W. B. Bestie ...	Representing the Government of Bengal.
The Hon'ble Sir Alexander Wilson ...	Representing the Commissioners for making Improvements in the Port of Calcutta.
Mr. G. H. Simmons	
Mr. J. L. Mackay	Representing the Bengal Chamber of Commerce.
Mr. W. W. Petrie	
Mr. D. W. Campbell, C.I.E. ...	Representing the East Indian Railway Company.
Lieutenant-Colonel G. F. O. Boughey, R.E.	Representing the Eastern Bengal State Railway.

The Committee will consider all questions that require settlement in connection with—

(*a*) the shipment and discharge of the cargoes of the vessels frequenting the port of Calcutta;

(*b*) the transport of goods, whether rail-borne, water-borne, or partly rail-borne and partly water-borne, to and from vessels lying at any place in the port of Calcutta.

The dates for the meetings of the Committee will be fixed by the President, and the Committee's Report will be forwarded by him to the Secretary to the Government of Bengal, in the Public Works Department.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Hon'ble Mr. Halliday and to each Member of the Committee.

Ordered also that a copy of this Resolution be forwarded to the Government of India with reference to the letter from that Government cited above.

By order of the Lieutenant-Governor of Bengal,

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal.

REPORT ON THE STATE OF THE SALT MARKET FOR THE THIRD QUARTER OF 1889-90.

No. 89B, dated Calcutta, the 6th February 1890.

From—K. G. GUPTA, Esq., Offg. Secretary to the Board of Revenue, L.P.,
To—The Secretary to the Government of Bengal, Financial Department.

SALT.

THE HON'BLE F. B. PEACOCK.

I AM directed by the Board of Revenue to submit the following report on the state of the salt market for the third quarter of 1889-90, comprising the months of October, November, and December 1889.

2. The quantity of salt of every description cleared during the quarter under report amounted to 24,35,503 maunds 14 seers 3 chittacks, against 23,98,512 maunds 30 seers 14 chittacks in the previous quarter, and 24,20,274 maunds 38 seers 9 chittacks in the corresponding quarter of the previous year; and the net amount of duty levied thereon was Rs. 57,16,963-2, against Rs. 55,10,452-14 in the previous quarter, and Rs. 56,74,386 in the corresponding quarter of the previous year.

3. The quantity of excise salt sold in Orissa during the quarter under review and the quantity which remained in store at the close of the quarter are shown in table I:—

TABLE I.

	Cuttack.	Pooree.	Balasore.
	Mds. s. t.	Mds. s. t.	Mds. s. t.
Balance at close of the last quarter	232 0 0	1,86,373 0 0	1,940 0 0
Manufactured or added during the quarter	.....	.....	.....
Total ...	232 0 0	1,86,373 0 0	1,940 0 0
Sales during the quarter	.....	15,509 0 0	120 0 0
Wastage	232 0 0	.....	.....
Total ...	232 0 0	15,509 0 0	120 0 0
Balance at close of the quarter	.....	1,70,864 0 0	1,820 0 0

4. The total sale of excise salt during the quarter under review amounted to 15,629 maunds, against 12,101 maunds in the previous quarter, and 34,327 maunds 33 seers 60 tolahs in the corresponding quarter of the previous year.

5. The subjoined table shows in comparison the importations into the port of Calcutta and the total clearances of sea-imported salt during the quarter under review and the corresponding quarters of the previous two years :—

TABLE II.

	1887-88.		1888-89.		1889-90.	
	Third quarter.		Third quarter.		Third quarter.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared.
	Mds	Mds.	Mds.	Mds.	Mds.	Mds.
Liverpool pungah	15,97,645	18,16,109	19,92,487	17,23,633	10,26,804	16,54,525
Foreign kurkutch	6,56,945	5,62,376	5,65,600	4,37,471	10,95,948	5,63,183
Indian ditto	1,54,951	1,57,000	1,50,650	1,31,960	5,640	1,30,002
Total ...	24,09,541	25,35,485	27,08,737	22,93,064	21,28,452	23,47,710

6. The following are the details of the Indian kurkutch salt shown in the above table :—

TABLE III.

	1887-88.		1888-89.		1889-90.	
	Third quarter.		Third quarter.		Third quarter.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay	1,54,951	1,57,000	1,48,650	1,29,960	.....	1,24,362
Coconada	.....	.....	2,000	2,000	5,000	5,000
Madras	.....	.....	.....	.....	600	600
Cuddalore	.....	.....	.....		40	40
Total ...	1,54,951	1,57,000	1,50,650	1,31,960	5,640	1,30,002

7. Table IV shews the quantity of sea-imported salt remaining in the warehouses at the close of the quarter as compared with the results of the previous four quarters :—

TABLE IV.

WHERE STORED.	Third quarter of 1888-89.	Fourth quarter of 1888-89.	First quarter of 1889-90.	Second quarter of 1889-90.	Third quarter of 1889-90.
	Mds.	Mds.	Mds.	Mds.	Mds.
Sulkea Government golahs	15,29,709	16,64,397	22,40,003	23,55,265	17,41,84
Chittagong ditto do.	1,31,640	2,32,656	1,53,597	1,42,880	67,587
Total ...	16,61,349	18,97,053	23,93,660	24,98,145	18,09,427

8. The despatches of salt from Calcutta by water and the three railways passing the several salt-pass stations into the interior of the country, both east and west of the river Hooghly, during the quarter under review and the corresponding quarters of the previous two years, are shown in the table below :—

TABLE V.

PERIOD.	*Vid* Balikhali.	*Vid* Sankrail.	*Vid* Gewakhally.	*Vid* Kidderpore.	*Vid* Balliaghatta.	*Vid* Buthtollah Ghât.	By the East Indian Railway.	By the Eastern Bengal and South-Eastern Railways or *vid* Chitpore.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Third quarter of 1887-88 ...	2,78,480	1,51,959	1,03,292	76,700	5,26,644	19,095	9,18,381	1,90,910
Ditto of 1888-89 ...	2,42,907	1,56,790	88,024	81,153	5,96,465	3,504	8,01,217	2,06,864
Ditto of 1889-90 ...	2,05,554	1,18,313	75,155	63,595	5,03,902	2,119	8,78,548	2,13,578

9. The quantity of salt despatched by the East Indian Railway to stations beyond Buxar during the quarter under review amounted to 2,126 maunds 10 seers, as noted in the margin, against 1,518 maunds 30 seers in the previous quarter, and 8,808 maunds 20 seers in the corresponding quarter of the previous year.

	Mds.	s.
October	...	...
November	1,518	30
December	607	20
Total ...	2,126	10

10. The shipments of Liverpool salt for the port of Calcutta according to published market reports were as follow:—

	Tons.
October	12,890
November	22,770
December	22,570
Total ...	58,230

No shipments were reported during the quarter under review for the port of Chittagong.

11. Table VI shows the market price per 100 maunds of Liverpool and other descriptions of salt at the close of each fortnight during the quarter as compared with those obtaining during the same period last year:—

TABLE VI.

DESCRIPTION OF SALT.	Prices on the 15th October		Prices on the 31st October		Prices on the 15th November		Prices on the 30th November		Prices on the 15th December		Prices on the 31st December	
	1888.	1889.	1888.	1889.	1888.	1889.	1888.	1889.	1888.	1889.	1888.	1889.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Liverpool pungah	86	116	88	105	91	103	95	100	95	105	99	104
French kurkutch	62	...	60	...	60	...	60	...	60	...	60	...
Jedda ditto	60	58	59	58	60	57	60	55	60	54	60	53
Bombay ditto	77	52	90	52	92	60	88	64	90	65	90	64
Italian ditto	62	...	60	...	60	...	60	...	60	...	60	...
Muscat ditto	58	59	56	59	58	56	57	56	58	53	58	52
Rock	55	...	55	...	56	118	56	...	75	150	75	150

12. The following table shows the quantity of sea-imported salt admitted into bond, and cleared from bond and shipboard, at Chittagong and Naraingunge during the quarter under review and the corresponding quarter of 1888-89:—

TABLE VII.

PORT.	DESCRIPTION OF SALT.	ADMITTED INTO BOND.		CLEARED.	
		Third quarter of 1888-89.	Third quarter of 1889-90.	Third quarter of 1888-89.	Third quarter of 1889-90.
		MDS. S. C.	MDS. S. C.	MDS. S. C.	MDS. S. C.
Chittagong	Liverpool	1,20,669 0 0	.....	85,827 16 0	62,814 0 0
	Madras	.....	.....	1 2 0	0 8 0
	Muscat	.....	.....	0 16 0	.....
	American	.....	.....	.....	0 20 0
Naraingunge	Liverpool	.....	.....	7,920 0 0	13,365 0 0
	Total ...	1,20,669 0 0	.....	93,748 34 0	76,179 28 0

No transactions in sea-imported salt have been reported for the quarter from the ports of Cuttack, Pooree, and Balasore.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 15th February, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
	BENGAL.		
	Western Districts.		
Burdwan Divn. 1	Burdwan Feb. 15, '90	Nil	Weather—growing warm. In Ranigunge *rubbi* expected to give an 18-anna crop, and elsewhere it will be from 10 to 14 annas. There is more *rubbi* in Ranigunge than elsewhere, so the district crop may be 15 or 16 annas. Prices of common rice:— Srs. Burdwan ... ... 18; Culna ... . 16; Cutwa ... ... 16½; Ranigunge ... ... 19 } per rupee
2	Bankoora ,, 15, '90	Nil	Weather seasonable. *Rubbi* crops doing well. Pressing of sugarcane continues. Common rice 20½ seers per rupee at Bishenpore and 20 seers at Sudder.
3	Birbhum ,, 15, '90	Nil	Weather—growing warm. Prospects of crops continue excellent. Sugarcane very flouri-hing. Prices of rice all along the southern part of the district range from 18 to 20 seers per rupee, and in the central and northern portions 16 to 17 seers per rupee.
4	Midnapur ,, 15, '90	Nil	Weather—seasonable. General prospects good. *Rubbi* and indigo doing well in the Sudder subdivision. Prices of rice:— Srs. Sudder ... ... 18; Contai ... ... 24; Tamluk ... ... 18; Ghatal ... ... 20 } per rupee.
5	Hooghly ,, 15, '90	Nil	Weather—seasonable. Outturn of *rubbi* very hopeful. Outturn of sugarcane good, especially in Jehanabad. Prices of common rice:— Srs. Sudder ... ... 12½; Serampore ... ... 14; Jehanabad ... ... 17¼ } per rupee.
	Howrah ,, 15, '90	Nil	Weather—getting warmer. Prospects of *rubbi* crops continue good. Prices of common rice:— Srs. Howrah ... ... 12½; Uluberia ... ... 16 } per rupee.
	Central Districts.		
Presidency Divn. 6	24-Perghs. Feb. 15, '90	Nil	Weather—seasonable. Good *amun* crop has been harvested. Prospects of winter crops also good. *Boro* rice is being cultivated in some parts. Price of common rice 16 seers per rupee.
7	Nuddea ,, 15, '90	Nil	Weather—seasonable. Prospects of crops on the ground favourable. Cultivation of lands for *aus* going on.
8	Khoolna ,, 15, '90	Nil	Weather—seasonable. Reaping of *amun* completed; outturn good. State of *boro* crop good and of *rubbi* fair.
9	Jessore ,, 15, '90	Nil	Weather—getting warm. Harvesting of *amun* paddy over; outturn 14 annas in Magura and 16 annas in Narail. Linseed and other spring crops prospering. Prices of common rice 14 to 16 seers per rupee.
10	Moorshedabad ,, 15, '90	Nil	Weather—clear and cold. Prospect of *rubbi* continues favourable.
Rajshahye Divn. 11	Dinagepur ,, 15, '90	Nil	Weather—days getting warmer, though nights still cool. Prospects of *rubbi* crops good. *Amun* harvesting nearly over. Sugarcane being pressed. Land being prepared for *bhadoi*.
12	Rajshahye ,, 15, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops good generally. Ganja manufacture commenced in Nowgong. Rice sells at 17 seers 3 chittacks per rupee.
13	Rungpur ,, 15, '90	Nil	Weather—getting warm. Prospects of tobacco and wheat continue good. Mustard is being gathered. Ploughing for *aus* and jute going on vigorously.
14	Bogra ,, 15, '90	Nil	Weather—nights chilly, but days getting warmer. Reaping of *amun* finished. Mustard, *khesari*, gram, &c., being reaped. Common rice selling at 22 seers per rupee.
15	Pubna ,, 15, '90	Nil	Weather—seasonable. *Amun* outturn about 14 annas in Serajgunge and 12 annas in Sudder. Mustard and tobacco expected to be 12 annas crops. Sugarcane deficient. Prices of food-grains slightly lower.
16	Darjeeling ,, 15, '90	0·01	Weather—getting daily warmer. Wheat and barley progressing favourably. In Terai land is being prepared for *bhadoi* crops. Prices of common rice:— Srs. Darjeeling ... ... 12; Kurseong ... ... 13; Silliguri ... ... 19 } per rupee.
17	Julpigoree ,, 15, '90	Nil	Weather—seasonable. *Haimanti* paddy all cut. Condition of tobacco promising except in Salbari thanna. No change in prices.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.—*concluded.*			
	Eastern Districts.		
18	Dacca Feb. 15, '90	Nil	Weather—seasonable. Winter crops doing well. Sugarcane being pressed. Mustard and pulses being gathered. Fodder is available. No special change in the prices of food-grains Common rice sold at from 13 to 14½ seers per rupee.
19	Furreedpur „ 15, '90	Nil	Weather—seasonable. Cultivation and sowing of *boro*, sugarcane, and jute in progress. State and prospects of wheat, barley, linseed, and other standing *rubbi* crops continue fair. Coarse rice selling at 15 seers per rupee at Madaripur and Sudder, and at 16 seers per rupee at Goalundo.
20	Backergunge „ 15, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops good. Rain wanted. Common new rice sells at 15 seers per rupee.
21	Mymensingh „ 15, '90	Nil	Weather—seasonable; foggy on the morning of the 14th. Transplanting of *boro* paddy nearly over. Mustard being gathered. Standing crops in good condition. Price of coarse rice 14 seers per rupee.
22	Chittagong „ 15, '90	Nil	Weather—seasonable. The state of all miscellaneous crops is good.
23	Noakholly „ 15, '90	Nil	Weather—seasonable. *Rubbi* crops doing well. Ploughing of land for *aus* crop commenced.
24	Tipperah „ 15, '90	Nil	Weather—close and cloudy. Transplanting of *boro* paddy completed. Winter crops prospering.
25	Chittagong Hill Tracts. „ 14, '90	Nil	Weather—cold and foggy in the morning throughout the week. Gathering of mustard continues. Tobacco, chillies, and other standing crops progressing.
	Hill Tipperah Feb. 15, '90	Nil	Weather—getting warm. Sugarcane and tobacco still being cut *Boro* paddy doing well in low places. *Jums* being cleared in the hills.
BEHAR.			
26	Patna „ 15, '90	Nil	Weather—cool. Harvesting of mustard, pea, gram, and *masur* going on. Other spring crops ripening. Opium has commenced to be collected in some places. Prospects favourable. Prices of food-grains almost stationary.
27	Gya „ 15, '90	Nil	Weather—seasonable Poppy plants in flower, and opium being extracted in places. *Rubbi* good. Mustard and *musoori* being reaped.
28	Shahabad „ 15, '90	Nil	Weather—still cool, but getting warmer. Prospects of *rubbi* crops fair. Poppy crop promising. Prices stationary.
29	Durbhunga „ 15, '90	Nil	Weather—days getting warm. Wheat and barley approaching maturity, and prospects continue favourable. Mustard is being harvested and expected to yield a good outturn. Poppy blossoming. Prices almost stationary.
30	Muzufferpur „ 15, '90	Nil	Weather—seasonable; getting warmer. Mustard being cut. Prospects of wheat and other *rubbi* crops good. Poppy in flower, and prospects very favourable.
31	Sarun „ 15, '90	Nil	Weather—seasonable. *Rubbi*, including wheat, continues to look well, and gives prospect of a 16-anna crop. Prospects of poppy also excellent.
32	Chumparun „ 15, '90	Nil	Weather—bright and getting dry with west wind. Prospects of all crops on the ground excellent. *Rubbi*, including wheat, has begun to ripen. Poppy is in flowers. Prices almost stationary.
33	Monghyr „ 15, '90	Nil	Weather—seasonable. West wind prevailing. Standing crops doing well. Mustard and pulses being reaped.
34	Bhagulpur „ 15, '90	Nil	Weather—seasonable Prospects of crops promising, but rain wanted for *rubbi*. Outturn of mustard in the north of the district is said to have been below 12 annas.
35	Purneah „ 15, '90	Nil	Weather—fine and rather warm. Mustard harvested with good outturn. All *rubbi* crops doing well. Ploughing going on.
36	Maldah „ 15, '90	Nil	Weather—getting warmer. Gathering of *kalai* and mustard almost completed. Transplanting of *boro* paddy continues. Prospects of *rubbi* crops continue favourable, but a shower of rain would much improve them. Common rice selling at an average of 17¾ seers per rupee.
37	Sonthal Pergha. „ 15, '90	Nil	Weather—dry, getting hot in the day. Prospects of crops good, but rain wanted.

	No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.				
Orissa Divn.	38	Cuttack ...	...	Report not received.
	39	Pooree ,, 14, '90	Nil	Weather—seasonable. Threshing of the winter crop (late *sarad*) still continues. Mango crop so far promising. *Dalua* and *mung* doing well. Prices of rice stationary.
	40	Balasore ,, 15, '90	Nil	Weather—seasonable. *Dalua* rice is being transplanted, and sugarcane being cut.
CHOTA NAGPORE.				
		South-West Frontier Agency.		
Chota Nagpore Divn.	41	Hazaribagh Feb. 15, '90	Nil	Weather—seasonable. Prospects generally good, but in Chowparun a full crop is not expected.
	42	Lohardugga ,, 15, '90	Nil	Weather—warm; cold and chilly mornings. Prospects of *rubbi* continue good at head-quarters. Much damage has been done to this crop in the subdivision by frost.
	43	Singbhoom ,, 15, '90	Nil	Weather—seasonable. Prospects of crops favourable. Outturn of sugarcane, mustard, and *surgonja* from 12 to 16 annas. Prices stationary.
	44	Manbhoom ,, 15, '90	Nil	Weather—warmer. Spring crops doing well.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 18th February, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

The following Statement shows the Quantities of the Principal Staples of Traffic imported into Calcutta from the Interior during the month of November, 1889.

IMPORTS INTO CALCUTTA.

Provinces imported.	FOOD-GRAINS.							FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.		TOBACCO.	
	RICE AND PADDY.			Wheat.	Gram and pulses.	Other food-grains.	Total.	Jute, raw.	Gunny bags.†	Linseed.	Mustard seed.				Refined.	Unrefined.	Unmanufactured.	Manufactured.
	Rice.	Paddy.	Total (in rice).															
BENGAL.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
dwan	98,304	17,274	1,09,160	34	1,488	.....	1,10,681	.....	15,200	144	4,051	1,295	5	87	.....	.....	...	6
rbhoom... ...	92,054	1,404	93,998	90	.....	80	93,167	.....	6,510	... ..	384	.....	75	439	.....	.....	...	.....
napore	99,211	5,963	1,04,812	.....	.....	.....	1,04,812	6,576	1,550	1,894	... ..	.....	.....	162	320	...	1	...
ghly	41,465	12,032	49,548	823	7,358	.....	57,729	80,910	77,442	3,062	18,010	.....	433	9	46	3,696	5,130	769
ergunnahs ...	47,382	8,593	52,753	.....	6	... ..	52,759	1,43,815	251,645	.....	.....	.....	1,743	.....	1,028	10,145	474	404
idea	5,349	3	5,351	9,350	50,109	1,132	71,942	93,411	2,825	7,355	20	.....	135	42	.....	2	1,980	.....
lna	225	9,275	6,021	143	175	.....	6,340	25,125	.....	.....	.....	.....	.....	.....	.....	4,075	..	...
ore	383	6,950	4,727	.....	1,841	.....	6,568	04,241	420	202	17	.....	.....	.....	13	6,155	428	...
rshedabad ...	430	1	431	9,772	9,488	380	20,071	8,242	... ..	1,698	2,553	... ..	3	103	.....	.....	...	3
ageepore ...	341	.....	341	.....	... ..	.....	341	14,282	176,925	.....	.....	.....	.....	... ..	.....	.....	...	... ..
shahye	42	.....	42	1,132	5,315	172	6,661	52,069	... ..	2,055	205	.....	... ..	244	.....	.....	...	... ..
ngpore	.....	.....	.....	2,576	.....	.....	2,576	2,08,765	59,300	.....	490	.....	140	... ..	.....	.....	5,283	.....
ra	1,980	.....	1,980	.....	.....	.....	1,980	12,319	... ..	.....	... ..	.....	.....	.....	.....	.....	...	.....
na	.....	.....	... ..	110	237	.....	347	4,24,720	496,735	543	2,317	.....	.....	.....	.....	.....	1,344	.....
jeeling	.....	.....	... ..	... ..	.....	.....	......	16,899	90,125	.....	.....	11,051	.....	.....	.....	.....	...	.....
pigoree	.....	.....	.....	.....	.....	.....	.....	88,314	194,740	... ..	.....	25,277	.....	.....	.....	.....	419	.....
ca	108	.....	108	.....	225	.....	333	3,00,590	490	... ..	725	... ..	1,859	... ..	.....	.....	...	.....
reedpore ...	808	.....	808	.....	1,597	.....	2,405	4,18,105	280	.....	155	171	10	10	.....	.....	...	.....
kergunge ...	65,131	350	65,475	.....	27	.....	65,502	6,403	.....	.....	599	.....	.....	.....	.....	.....	...	.....
mensingh ...	.....	.....	.....	.....	350	.....	350	1,13,311	.....	.....	325	.....	.....	.....	.....	.....	...	... ..
perah ...	750	.....	750	.....	.....	.....	750	4,525	.....	... ..	.....	... ..	.....	.....	.....	.....	...	.....
ttagong ...	300	.....	300	.....	.....	.....	300	852	.....	.....	.....	2,141	1,021	... ..	.....	.....	...	.....
kholly ...	22,806	.....	22,806	.....	.....	.....	22,806	3,625	.....	.....	.....	.....	1,025	.....	.....	.....	...	.....
tal of Bengal ...	4,77,189	66,095	5,18,461	24,038	81,216	1,764	6,28,479	21,88,217	1,374,117	16,053	30,841	39,935	7,053	1,006	2,307	30,073	15,008	1,173
BEHAR.																		
na	183	.....	183	1,803	28,534	3,537	34,117	186	1,390	64,044	22,500	.....	5	8	.....	3,250	277	1,880
... ...	.....	.....	.....	604	398	.....	902	... ..	2,135	.....	.....	.....	.....	4	.....	6,616	...	131
habad	.....	.....	.....	4,913	18,439	.....	23,352	.....	980	8,484	303	.....	.....	.....	.....	9,176	...	8
ufferpore ...	.....	.....	.....	557	446	3,742	4,745	.....	35	572	418	.....	.....	.....	.....	37	80	... ..
rbhunga ...	.....	.....	.....	1,000	2,207	.....	3,307	... ..	1,595	37,798	17,770	6	.....	.....	.....	.....	137	10
un	.....	.....	.....	.....	2,473	970	3,443	.....	525	14,219	4,416	1	.....	.....	.....	.....	...	.....
mparun	.....	.....	.....	.....	... .	... ..	.....	20	.....	8,082	6,050	3	.....	.....	.....	.....	...	.....
ghyr	10	.....	10	9,240	18,837	4	28,097	12	1,470	819	4,278	.....	9	.....	.....	.....	13	4
gulpore ...	6,803	.....	6,805	21,804	4,042	1,778	35,329	.....	.....	4,794	30,717	.....	.....	65	.....	.....	27	... ..
neah	497	... ..	497	4,195	4,430	7	9,120	5,171	7,800	5,055	24,602	.....	.....	.....	.....	.....	933	.....
ldah	.....	.....	.....	13,804	6,029	989	20,822	9,131	.....	922	830	.....	.....	.....	.....	.....	...	.....
thal Pergunnahs.	94	.....	94	16,844	2,876	2,184	21,998	3,743	595	3,578	32,470	... ..	.....	79	.....	.....	...	.....
tal of Behar ...	7,589	.....	7,589	74,851	89,611	13,181	1,85,232	18,253	16,435	1,49,266	1,44,361	10	14	159	.....	19,109	1,467	2,012
ORISSA.																		
ttack	690	.....	690	.....	.....	.....	690	.....	.....	.....	.....	.....	.....	.....	.....	... ..	...	.....
asore	24,888	5,501	29,320	.....	1,745	.....	30,071	7,958	325	1,004	989	.....	.....	4	.....	.....	212	.....
tal of Orissa ...	25,578	5,501	29,010	.....	1,745	.....	30,761	7,958	325	1,004	989	.....	.....	4	.....	.....	212	.....
OTA NAGPORE.																		
zaribagh ...	.....	.....	.....	.....	185	.....	185	.....	525	.....	.....	328	.....	.....	.....	.....	...	...
nbhoom ...	45	.....	45	.....	19	.....	64	.....	1,330	.....	169	.....	.....	.....	.....	.....	...	...
al of Chota Nagore.	45	.....	45	.....	204	.....	249	.....	1,855	.....	169	328	.....	.....	.....	...	...	....
nd Total of pplies from the ovinces under e Lieutenant-vernor of Bengal.	5,10,401	71,536	5,55,111	98,889	1,75,776	14,945	8,44,721	22,14,438	1,392,732	1,67,823	1,76,360	40,273	7,069	1,259	2,307	49,182	16,747	3,215
HER PROVINCES.																		
am	5	.....	5	.....	11	.....	16	8,751	900	.....	23,760	1,00,635	... ..	629	... ..	.....	...	...
th-Western Provinces and Oudh.	313	.....	313	62,903	45,928	6,883	1,16,117	. ....	420	40,075	6,220	560	59,897	1	2,647	440	1	13
jab	2	.....	2	42,520	10,642	3,081	56,251	.....	.....	.....	420	347	.....	.....	.....	.....	...	.....
ral Provinces	.....	.....	.....	2,301	1,021	.....	3,323	.....	.....	1,008	.....	... ..	... ..	.....	... ..	.....	...	.....
putana and entral India ...	.....	.....	.....	.....	.....	8	8	.....	.....	672	.....	.....	11	.....	.....	.....	...	.....
nbay	.....	... ..	.....	.....	.....	.....	... ..	.....	4,000	.....	.....	.....	4,881	.....	.....	.....	...	3
dras	.....	.....	.....	.....	8,630	.....	8,630	.....	... ..	.....	.....	39	607	.....	10	.....	210	168
rmah	.....	.....	.....	.....	1,563	.....	1,563	.....	7,200	.....	.....	2	342	1	...	8	...	19
ner places ...	12	.....	12	... ..	42	.....	54	.....	12,150	.....	.....	.....	.....	.....	27,872	.....	84	410
nd Total { 1889 Imports { Nov. 1888	5,10,733	71,536	5,55,445	2,06,709	2,43,613	24,917	10,30,682	22 23,189	1,417,402	2,16,178	2,06,766	1,51,156	72,807	1,890	32,330	49,630	17,048	3,822
	10,22,743	1,28,630	11,02,760	2,76,983	3,95,050	41,324	18,16,123	24,54,873	2,025,270	5,58,672	92,040	1,45,630	58,749	3,042	13,323	79,092	12,392	18,741

* One maund of paddy is equivalent to 25 seers of rice. † Exclusive of bags obtained by local manufacture.

The Sea-borne Trade of Calcutta in these Staples during the month of November, 1889, was as follows:—

EXPORTED FROM CALCUTTA—																		
To Indian ports, viz.—																		
Bombay	1,19,903	80	1,19,981	2,781	60	.....	1,22,822	2,436	1,542,950	.....	35,167	489	535	.....	455	.....	183	.....
Madras	.....	200	187	235	10,082	150	16,654	.....	328,350	.....	.....	.....	.....	174	10	.....	80	.....
Other ports in Madras ...	63,565	... .	63,565	.....	1,448	.....	65,013	6,320	257,650	.....	.....	3	.....	9	.....	.....	...	
Burmah	4,534	... .	4,534	243	12,153	6,770	23,702	4	216,000	... ..	20	91	120	5	595	207	...	
Other Indian ports	1,501	... ..	1,501	.....	1,007	... ..	3,108	.....	173,500	.....	.....	1	.....	.....	1,532	378	1,800	93
Pondicherry ...	.....	.....	.....	129	.....	.....	129	.....	130,000	.....	.....	.....	.....	.....	... ..	.....	1,123	131
Sind	99	.....	99	.....	.....	.....	99	.....	43,450	.....	.....	.....	.....	.....	.....	.....	...	.....
Total of Inter-portal trade ...	1,89,602	329	1,89,807	3,390	31,350	6,920	2,31,527	8,760	2,690,900	.....	35,187	684	655	188	2,592	585	3,390	442
To Foreign ports— United Kingdom	30,526	... ..	30,526	88,444	19,842	.....	1,44,812	2,14,727	753,103	1,53,507	1,47,229	1,52,127	2,700	200	.....	.....	1	6
Other Foreign ports	3,48,232	6,824	3,52,496	1,342	38,596	4,639	3,97,075	3,88,742	4,417,100	66,908	72,069	4,611	32,720	1,304	54	.....	338	131
Total of Foreign Trade	3,84,758	6,822	3,89,022	89,786	58,438	4,639	5,41,885	6,04,469	5,170,200	2,20,415	2,19,298	1,56,738	35,420	1,504	54	.....	339	136
Grand Total { 1889 of Exports { Jan. to Nov. 1888	5,74,420	7,151	5,78,989	93,176	60,788	11,559	7,73,412	6,13,229	7,861,100	2,20,415	2,54,485	1,57,322	36,075	1,692	2,646	585	3,729	578
	6,47,714	1,748	6,49,462	90,457	1,45,403	20,605	9,05,271	22,59,774	8,590,974	3,38,921	185	1,80,370	7,153	1,849	2,956	736	14,199	666

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of November, 1889.

IMPORTS INTO CALCUTTA.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.					FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.		TOBACCO.	
	Rice.	Paddy.	Wheat.	Gram and pulses.	Other food-grains.	Jute, raw.	Gunny-bags.	Linseed.	Mustard seed.				Drained.	Undrained.	Unmanufactured.	Manufactured.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
By country boats ...	2,41,980	41,043	43,456	92,903	5,980	7,64,215	295,187	31,485	60,231	... ..	3 980	163	3,631	26,631	7,429	2,06
,, river steamers ...	33,508	750	8,860	3,410	..	2,01,928	... ..	20,324	10,384	1,05,926	1,750	79	...	...	476	.....
,, rail { East Indian Railway.	1,84,304	23,625	1,53,139	1,20,995	18,751	24,700	33,215	1,55,733	25,854	2,541	60,901	745	525	19,535	395	24
,, rail { Eastern Bengal State Railway.	2,715	.....	1,254	14,865	136	11,19,238	1,028,125	1,008	1,289	40,507	269	898	.....	2,046	8,199	.....
,, road	25,564	1,572	.....	.. ..	.. ..	1,01,235	37,309	... ..	.....	... ..	181	.....	708	1,408	37	93
,, sea	22,472	4,746	.....	11,980	..	8,474	23,575	1,604	508	2,183	6,626	5	27,382	8	5 2	59
Grand total of Imports in November ... { 1889 ...	5,10,733	71,536	2,06,709	2 44,615	24,917	22,23,189	1,417,402	2,10,178	2,00,706	1,51,156	72,807	1,890	32,330	49,630	17,048	3,81
1888 ...	10,22,743	1,26,036	2,76,983	3 35,050	41,325	24, 4,873	2,025,270	5,58,672	92,049	1,45,650	58,719	3,042	13,323	70,092	12,392	18,74

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported Inland from Calcutta during the month of November, 1889.

EXPORTS FROM CALCUTTA.

Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.		
	Rs.	Rs.	Mds.	Mds.	Mds.	No.
BENGAL.						
Burdwan ...	3,65,606	8,250	403	1,071	35,106	84,870
Beerbhoom ...	1,68,147	1,210	64	787	13,730	105,603
Midnapore ...	2,70,309	... ...	2,451	16	15,335	19,786
Hooghly ...	1,15,188	8,795	498	179	2,105	58,185
24-Pergunnahs ...	1,33,930	3,068	211	.....	11,433	7,285
Nuddea ...	3,59,015	... ..	2,798	.....	28,700	20,759
Khulna ...	80,648	.....	95	.....	5,792	... ...
Jessore ...	1,15,021	.....	846	... .	27,316	2,150
Moorshedabad ...	1,21,416	.....	74	13	18,910	7,485
Dinagepore ...	1,28,162	.....	208	... ..	10,290	4,120
Rajshahye ...	2,22,579	.....	97	... ...	17,335	4,160
Rungpore ...	6,05,241	... ...	138	... ...	16,346	420
Bogra ...	2,04,300	... ..	50	.....	7,413	17,710
Pubna ...	2,93,958	.....	282	... ..	51,950	985
Darjeeling ...	91,556	.....	89	.....	5,726	420
Julpigoree ...	2,13,086	.....	76	.....	8,490	248
Dacca ...	10,05,039	.....	1,221	294	40,481	9,465
Furreedpore ...	3,66,951	.....	864	.....	37,212	3,290
Backergunge ...	3,03,953	.....	1,173	.....	33,600	175
Mymensingh ...	2,07,315	.....	7	.....	31,445	.....
Tipperah ...	.....	.....	.....	.....	7,290	.....
Chittagong ...	87,745	.....	137	... .	200	95,400
Noakholly ...	200	.....	.....	.....	3,425	.....
Total of Bengal...	54,07,423	21,323	11,283	2,360	4,29,600	442,575
BEHAR.						
Patna ...	2,47,787	440	123	178	31,830	83,050
Gya ...	1,92,024	1,320	52	967	15,046	16,055
Shahabad ...	3,13,866	9,350	39	1,111	22,555	.....
Mozufferpore ...	1,08,549	.....	2	6	10,175	1,540
Durbhunga ...	5,47,074	1,540	20	1,153	64,071	36,505
Sarun ...	3,33,081	.....	8	36	22,031	34,335
Chumparun ...	4,14,908	.....	16	112	24,503	14,780
Monghyr ...	1,91,268	.....	2	453	10,790	24,080
Bhagulpore ...	3,53,867	1,650	62	546	36,787	58,965
Purneah ...	2,14,363	2,200	115	760	17,618	19,410
Maldah ...	.....	.....	.....	... ...	10,744	6,050
Southal Pergunnahs ...	3,52,074	330	302	1,075	15,617	61,145
Total of Behar ...	32,72,901	16,830	741	6,397	2,83,750	356,315
ORISSA.						
Cuttack ...	37,400	.....	1,556	.....	2,096	14,850
Balasore ...	65,075	.....	3,835	.....	14,957	64,250
Total of Orissa ...	1,02,475	.....	5,391	.....	17,053	79,100

Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.		
	Rs.	Rs.	Mds.	Mds.	Mds	No.
CHOTA NAGPORE.						
Hazaribagh	67,914	6,400	.....	85	5,413	52
Manbhoom	77,931	5,060	69	1,628	5,413	59
Total of Chota Nagpore ...	1,45,845	11,550	69	1,713	10,826	1,12
Grand total of supplies into the Provinces under the Lieutenant-Governor of Bengal ...	89,88,704	49,703	17,484	10,470	7,41,220	879,110
OTHER PROVINCES.						
Assam	7,75,308	.....	994	763	49,332	2,203
North-Western Provinces and Oudh	30,40,183	7,480	2,224	1,377	37,083	347,270
Punjab	8,10,999	4,070	779	.....	.....	261,450
Central Provinces	25,830	770	170	.....	.....	23,100
Rajputana and Central India	40,698	.....	123	.....	... ...	3,600
Berar	441	... ...	.....	.....	.....	21,210
Bombay	693	.....	.....	.....	.....	1,542,950
Madras	61,915	100	1,352	389	.....	586,000
Pondicherry	2,500	.....	.....	... .	.....	130,000
Burmah	2,50,020	.....	213	1,898	3	216,000
Sind	1,260	.....	.....	... ...	.....	43,456
Other places	25,647	710	.....	15,443	64	5,170,300
Grand Total of Exports in Nov. ... { 1889 ...	1,60,23,198	62,859	23,385	28,340	8,27,711	9,226,850
1888 ...	1,90,20,346	82,199	30,524	15,031	8,71,599	10,414,380

The Sea-borne Trade of Calcutta in these Staples during the month of November 1889, was as follows:—

IMPORTED INTO CALCUTTA—	Rs.*	Rs.	Mds.	Mds.	Mds.	No.
From Foreign Ports—						
United Kingdom	98,13,843	.....	9,352	... ..	6 31,074	.....
Other Foreign ports ...	46,821	.....	196	.....	2,17,313	12,150
Total of Foreign Trade ...	98,60,664	.....	9,548	.... .	8,48,387	12,150
From Indian Ports—						
Bombay	7,142	2,42,640	29	7,719	43,190	4,000
Sind	980	3,050	.....	.....	....	.....
Madras	300	20,071	.....	253	.....	.....
Other ports in Madras ...	.....	400	.....	24	.....	... ..
Burmah	3,950	1,615	.....	.....	.....	7,
Other Indian ports ...	300	850	.....	25	....	
Total of Interportal Trade...	12,652	2,69,226	29	8,021	45,186	11,
Grand Total of Imports in Nov. ... { 1889...	98,73,316	2,69,226	9,577	8,021	8,93,573	23,
1888 ..	1,43,30,997	2,78,155	17,612	7,756	8,92,141	48,

* As per tariff declaration value.

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported fr Calcutta during the month of November, 1889.

SPECIFICATION OF ROUTES.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.		
	Rs.	Rs.	Mds.	Mds.	Mds.	No.
By country boats	2,30,351	8,796	1,916	16	3,07,493	108,581
,, river steamers	13,36,635	.....	2,754	1,057	40,595	85,309
,, rail ... { East Indian Railway	98,95,095	50,160	4,528	11,400	3,71,699	1,141,315
,, rail ... { Eastern Bengal State Railway	38,90,817	.....	6,711	.....	88,678	44,875
,, road	1,51,895	3,068	411	137	3,836	5,400
,, sea	5,18,475	816	7,065	15,730	15,420	7,851,100
Grand Total of Exports in November ... { 1889 ...	1,60,23,198	62,859	23,385	27,340	8,27,711	9,226,850
1888 ...	1,90,20,346	82,199	30,524	15,031	8,71,599	10,414,380

STATISTICAL DEPARTMENT,
The 15th February, 1890.

P. NOLAN,
Secretary to the Govt. of Bengal.

I.—Table showing the Monthly and Annual Rainfall at 258 *Rainfall-recording Stations in Bengal for* 1889.

District.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
ORISSA.														
Pooree	Pooree	—	0·17	—	—	1·08	12·31	10·58	21·16	4·02	13·01	17·65	0·21	80·8
	Khurdah	—	0·10	0·07	0·12	1·12	14·83	15·08	16·30	8·23	11·85	10·16	.	76·8
	Banpur	—	0·22	—	—	1·20	7·37	11·54	14·71	4·88	12·50	14·06	0·14	66·9
	False Point	—	2·04	—	0·68	1·13	15·18	11·48	15·79	6·10	10·30	16·58	1·04	80·3
	Gop	—	0·64	—	—			11·44	10·65	3·94	19·95		—	
	Pipli	—		—	—									
Cuttack	Jagatsingpore	—	2·43	—	—	2·11	8·70	24·03	11·98	4·55	11·80	10·41	—	70·4
	Banki	0·09	1·22	0·02	0·06	0·62	11·94	7·19	13·67	3·08	8·45	7·09	—	54·0
	Cuttack	—	0·33	0·03	0·83	3·20	18·60	12·75	14·59	5·59	8·84	11·54	—	76·3
	Kendrapara	—	1·38	0·01	0·72	2·82	13·11	16·60	15·01	5·46	8·59	10·31	0·20	74·1
	Jajpore	0·30	0·85	0·10	0·58	4·82	12·55	10·28	8·69	4·74	7·03	9·80	—	59·8
	Dharmsalla	—	0·50	0·25	1·25	2·40	12·60	9·85	12·20	5·10	8·10	9·00	—	61·2
	Salipore	—	0·90	—	0·70	1·85	16·54	15·08	16·97	3·70	7·80	10·55	—	74·0
Balasore	Chandbali	—	1·80	0·30	0·80	3·43	5·06	8·32	10·12	9·33	8·30	9·90	0·12	57·3
	Bhuddruck	0·50	0·38	1·0	—	5·36	7·03	11·02	12·14	7·93	4·73	8·23	—	60·4
	Sorah	—	1·00	0·07	1·27	5·01	4·13	8·60	8·42	5·80	6·94	6·90	—	49·0
	Balasore	—	0·72	—	1·51	4·45	4·35	4·48	11·51	4·37	12·31	6·17	—	50·0
	Jellasore	—	1·06	0·08	—	1·20	8·16	3·59	8·57	4·83	9·02	4·12	—	40·7
	Baripodah	—	1·88	0·09	1·73	4·31	13·01	9·92	13·08	5·41	5·02	4·27	—	60·5
SOUTH WEST BENGAL.														
Midnapore	Contai	—	1·78	0·16	—	1·77	11·50	5·71	13·14	9·43	5·82	7·71	0·05	57·0
	Saugor Island	—	1·51	—	—	2·13	12·39	9·02	10·70	4·96	10·91	6·60	0·03	58·2
	Tumlook	—	2·40	—	0·70	1·70	11·50	9·20	12·50	5·10	7·10	2·30	—	52·0
	Midnapore	1·67	5·60	—	1·40	2·64	9·19	7·85	13·06	7·10	2·32	4·25	—	55·0
	Ghattal	0·46	1·27	0·03	1·14	3·68	8·17	8·27	11·41	5·57	4·29	2·10	—	46·3
	Kukrahatty	0·09	2·14	—	1·09	4·34	19·05	9·31	10·97	4·00	6·43	4·05	—	62·9
	Heria	0·03	1·67	0·15	0·14	5·48	20·50	7·46	10·37	7·36	8·01	4·98	—	67·0
	Bhagwanpore	1·18	4·94	0·15	—	4·67	18·11	6·15	11·42	7·85	5·34	3·18	—	57·9
	Garbetta	0·28	1·20	—	—	3·10	13·36	12·13	8·00	6·52	0·75	2·43	—	47·7
24-Pergunnahs.	Diamond Harbour	—	1·70	0·03	1·27	5·08	17·93	10·15	13·46	5·52	5·85	5·38	0·04	66·3
	Canning Town	0·57	1·24	0·22	1·05	3·81	10·90	8·57	12·96	8·12	10·26	3·01	0·17	60·8
	Alipore Jail	0·27	2·60	1·16	2·45	3·92	12·73	12·98	8·52	5·38	4·58	3·69	—	58·2
	Barrackpore	0·10	1·52	0·31	0·83	1·62	13·42	9·52	8·35	9·50	6·74	4·64	—	54·5
	Dum-Dum	0·44	2·38	1·06	0·66	2·42	19·30	8·98	13·93	7·16	7·84	4·69	—	69·1
	Baraset	0·22	2·73	0·36	0·40	2·12	14·76	11·85	10·10	5·87	8·63	4·86	—	61·4
	Bussoorhat	0·27	1·46	0·29	0·62	1·80	13·72	12·69	9·01	8·01	12·54	3·15	—	63·5
Howrah	Howrah	0·15	2·03	0·08	1·18	2·19	17·95	12·37	9·93	7·28	6·53	2·02	—	64·1
	Mohesreka (*Ooloobariah*)	0·42	3·53	0·24	1·44	1·61	10·93	10·69	13·88	4·57	5·35	1·61	—	60·2
Hooghly	Serampore	0·27	1·85	0·32	0·89	1·90	13·76	10·43	10·15	7·48	8·75	2·74	—	58·4
	Hooghly	0·18	1·00	0·22	1·70	1·79	8·21	8·03	7·30	6·77	2·61	3·61	—	40·4
	Jehanabad	0·08	1·18	0·47	1·54	1·53	13·74	8·97	7·64	4·57	1·53	3·25	0·03	46·0
Burdwan	Culna	0·73	0·37	0·31	1·04	2·72	11·35	6·95	8·87	7·55	2·11	5·77	—	48·7
	Burdwan	0·98	0·36	0·16	1·36	4·36	11·74	9·68	5·39	9·53	1·44	4·93	—	49·3
	Cutwa	0·60	0·61	0·43	0·34	1·90	7·32	7·14	7·61	6·01	2·51	10·42	—	45·0
	Raneegunge	1·43	0·41	0·48	0·11	5·02	12·83	12·93	10·18	7·03	0·51	7·33	—	58·9
	Mankur	1·18	1·24	0·19	0·12	4·03	9·28	13·82	6·76	12·41	2·07	5·84	—	56·7
Bankoora	Bankoora	0·55	0·30	0·37	1·44	3·80	14·38	10·19	8·60	6·59	3·06	4·17	—	53·7
	Bishenpore	0·75	1·57	1·68	1·05	3·18	15·02	18·02	7·76	9·61	5·77	3·54	—	62·5
	Maliara	0·65	1·08	0·24	0·40	2·67	14·16	10·11	7·86	9·50	?	?	—	46·0
	Khatra	—	1·67	—	1·78	2·19	21·76	13·52	12·26	9·39	2·10	3·09	—	68·3
	Indas	0·14	0·54	0·27	1·88	4·78	14·65	11·01	5·25	6·04	1·00	3·39	—	48·7
	Kotalpur	1·89	0·85	0·62	1·20	2·19	14·88	14·05	6·06	7·90	Nil	2·43	—	52·0
	Anda	0·25	0·95	0·50	0·25	0·93	10·08	14·27	8·03	4·52	0·76	1·33	—	42·4
	Gangajalghati	0·53	1·33	0·23	0·25	3·06	11·67	13·39	9·26	10·78	3·65	7·36	—	61·5
	Raipore	—	0·73	0·45	0·86	1·42	17·17	14·62	10·45	5·08	5·66	3·95	—	60·3
	Sonamukhi	0·87	0·47	1·12	1·53	4·95	15·09	11·94	5·92	10·67	1·43	4·33	—	58·0
Beerbhoom	Bh. Scory	1·14	1·11	0·38	0·03	3·90	12·69	11·61	11·92	11·91	3·09	3·94	—	61·8
	Hetampore	1·36	0·87	0·41	0·12	5·30	13·30	8·36	6·16	7·69	1·71	4·56	—	49·8
	Rampore Haut	2·48	0·96	1·59	0·11	2·92	11·20	10·23	7·47	12·80	0·64	2·52	—	53·9
	Bolpore	1·45	0·73	0·49	0·18	3·85	10·52	9·81	10·76	12·74	2·67	4·62	—	57·8
	Murarai	?	?	?	—	3·86	9·07	13·75	5·90	17·23	1·76	1·78	—	53·3
Nuddea	Ranaghat	1·72	0·44	0·49	0·92	2·17	13·48	9·14	12·03	10·06	4·28	3·90	—	59·5
	Kishnaghur	1·07	0·51	0·44	0·31	1·51	9·36	8·60	4·58	5·11	4·83	8·90	—	45·3
	Chooadanga	0·94	0·80	0·95	0·75	1·95	8·93	8·16	7·05	10·00	3·72	10·45	—	51·9
	Meherpore	2·15	0·87	2·21	7·39	3·21	10·45	7·16	11·30	11·50	6·09	5·26	—	67·5
	Koushtea	0·57	0·76	—	0·85	2·83	14·07	10·11	9·14	10·94	1·91	8·96	—	59·4
Khoolna	Satkhira	0·86	0·94	1·55	0·74	1·46	11·28	11·38	9·31	6·51	9·35	3·60	0·01	57·0
	Bagirhat	0·29	0·78	0·57	3·46	0·79	14·05	10·96	9·37	5·23	10·46	2·93	0·31	59·1
	Khoolna	0·25	0·40	0·64	2·73	0·44	11·28	8·65	9·30	10·91	11·39	3·65	0·18	59·8
	Nakipur	?	?	?	?	?	?	?	?	?	?	?	0·39	?
Jessore	Narail	0·78	1·00	0·83	2·72	3·19	11·15	9·19	8·38	5·27	7·19	5·10	—	54·7
	Jessore	0·49	0·30	0·91	2·02	2·14	18·18	9·65	7·17	9·69	7·98	7·62	—	66·7
	Jhenidah	0·65	0·65	0·15	2·80	3·67	10·33	7·43	8·55	9·79	4·50	8·99	—	59·7
	Magoora	0·05	0·38	0·57	2·91	3·79	15·76	9·57	8·86	2·46	7·21	9·73	—	61·8
	Bongong	0·45	0·90	0·57	0·82	1·23	9·71	11·19	5·66	4·47	9·81	8·95	—	48·7
Moorsheda-bad	Kandi	0·76	0·89	0·84	0·10	4·82	16·12	9·57	8·91	9·75	0·51	5·70	—	57·0
	Berhampore	1·38	0·90	0·39	—	7·74	10·12	7·35	6·67	9·27	1·31	3·94	—	48·9
	Lalbagh	1·68	0·81	0·19	0·08	5·31	5·78	12·27	7·36	9·26	2·43	4·64	—	50·0
	Azimgunge	2·44	0·82	—	1·45	4·89	8·80	10·92	5·82	12·71	0·60	?	?	48·4
	Jungipore	2·97	1·00	0·06	1·47	3·29	12·91	13·30	6·15	15·40	2·10	2·16	—	60·1
	Lalgola	2·34	1·14	0·00	0·55	4·75	17·31	13·82	5·63	13·90	2·20	1·80	—	63·5
	Jugunge	1·08	0·81	0·14	0·00	4·86	7·94	9·36	6·08	12·48	0·38	2·77	—	47·4
	Akhriguni	2·36	1·41	—	—	2·73	10·24	12·02	3·93	10·00	1·02	2·97	—	46·6
	Patkabari	0·50	—	—	0·50	3·08	10·90	1·60?	3·70	?	3·80	5·50	—	
EAST BENGAL.														
Chittagong	Cox's Bazar	—	0·50	0·56	—	6·02	25·31	28·53	37·19	22·83	7·47	1·11	0·13	129·6
	Chittagong	—	0·90	0·58	3·47	4·90	18·47	11·23	25·10	13·01	3·77	1·96	0·71	84·4
	Kutubdia	—	0·53	0·30	1·26	3·22	24·16	24·08	30·20	17·45	2·86	1·73	0·05	115·4
	Satkanya	—	0·28	0·65	0·64	3·35	17·79	9·68	19·61	7·64	3·55	1·25	0·10	64·5
Chittagong Hill Tracts.	Rangamati	—	1·54	0·72	4·08	6·03	13·73	10·14	14·45	8·37	1·60	4·32	0·40	71·3
	Rema	—	1·04	0·70	—	4·00	14·40	13·05	13·35	11·27	7·33	4·45	0·95	71·7
Backergunge	Patuakhally	—	2·07	0·35	1·22	5·38	20·92	20·33	19·44	10·46	8·03	2·09	0·05	91·4
	Perosepore	0·27	0·74	0·27	3·08	2·88	21·21	18·09	13·08	4·34	16·79	2·14	0·20	70·9
	Burrisal	0·60	1·45	0·78	1·76	2·95	20·34	19·21	10·11	9·38	9·07	2·26	0·44	77·2
	Bhola	0·26	0·80	1·53	1·58	3·35	19·43	14·63	15·96	11·91	7·66	4·38	0·27	83·7
	Gournaddi	—	1·55	1·00	4·82	2·07	20·71	6·40	10·82	7·27	8·90	4·24	—	68·6
	Baupkal	0·03	1·13	0·20	1·43	3·01	25·87	15·28	27·21	13·38	7·84	1·77	0·35	97·0

District.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
EAST BENGAL —concluded.														
Noakholly ...	Noakholly	—	1·55	3·12	1·06	6·07	25·41	20·62	23·13	18·25	6·81	3·54	0·1	109·68
	Feuny	—	1·45	3·48	5·07	4·95	16·15	27·85	15·17	9·95	2·94	2·44	0·40	89·80
	Harishpore	—	0·84	0·56	0·13	3·00	8·24	20·43	25·81	23·38	1·66	0·47	0·39	84·90
	Ramganj	0·12	1·54	0·87	1·20	2·25	28·22	22·05	18·00	15·24	5·13	1·91	—	92·26
Furreedpore ...	Madaripore	0·40	0·66	0·26	1·69	3·24	17·76	9·52	10·77	6·11	9·90	3·94	0·00	64·31
	Furreedpore	0·70	0·62	0·36	3·31	2·02	19·10	12·79	11·87	6·90	4·09	7·23	—	69·89
	Goalundo	0·07	0·22	0·19	3·58	7·52	17·36	9·40	9·25	5·05	3·78	7·87	—	65·19
Dacca ...	Munshigunge	0·45	0·19	0·09	3·28	8·42	20·41	14·39	13·24	8·54	9·06	4·93	—	83·00
	Dacca	0·34	0·99	0·11	2·12	6·98	23·86	14·55	11·95	8·50	7·30	3·88	—	80·28
	Narsingunge	0·29	1·04	0·03	2·83	11·06	20·25	13·58	16·62	9·10	7·91	5·78	—	88·49
	Manickgunge	1·69	0·20	—	1·68	7·24	17·89	15·04	12·61	5·99	5·45	5·82	—	73·11
	Joydebpore	0·37	0·24	0·01	3·09	10·77	18·50	12·86	14·07	8·67	5·37	3·03	—	78·48
Hill Tipperah ...	Agartola	0·42	0·52	—	7·27	7·78	12·18	4·44	4·79	7·46	8·37	3·23	—	56·46
	Comillah	—	1·26	—	6·33	7·23	21·83	10·50	6·84	9·33	7·44	2·51	0·08	73·15
	Chandpore	0·68	1·04	0·90	0·94	3·65	12·50	11·51	13·58	11·61	11·08	3·40	—	70·01
	Brahmunberia	0·39	0·97	0·12	6·59	6·00	16·66	10·37	3·21	8·21	7·42	1·83	—	61·67
Tipperah ...	*Ramchandrapore*	0·02	0·08	0·05	3·42	4·83	21·57	6·66	5·29	9·01	10·41	3·93	—	65·72
	Nasirnagar	0·25	0·40	0·30	4·44	7·95	11·95	2·85	2·50	4·14	3·90	1·20	—	39·78
	Inaukandi	—	—	0·05	1·70	6·50	20·69	7·80	9·07	4·73	3·45	3·20	—	57·19
	Kasba	0·32	0·05	0·44	5·04	6·29	14·23	8·00	4·77	17·92	11·35	2·16	—	71·46
	Laksham	—	2·29	1·10	3·00	1·70	18·35	10·15	11·63	12·97	4·35	5·44	—	75·48
Mymensingh ...	Kishoregunge	0·69	0·21	—	7·80	6·93	21·06	13·19	12·59	12·57	4·88	1·90	—	81·88
	Atia (*Tangail*)	1·04	0·24	—	1·46	12·96	16·80	11·20	11·59	7·20	2·79	4·90	0·02	70·20
	Mymensingh	0·57	0·21	0·05	4·79	7·34	24·91	20·41	20·71	10·25	8·17	2·14	—	10[illegible]
	Jamalpore	1·84	0·49	—	0·92	4·83	27·52	13·50	11·97	21·74	5·67	1·02	—	89·90
	Netrokona	0·80	—	0·28	8·38	9·38	38·04	28·70	22·00	16·21	11·90	2·37	—	137·74
	Subornakhally	1·32	0·06	0·03	2·94	4·20	15·50	12·27	8·74	7·54	8·02	2·32	—	63·03
	Duryapore	1·90	0·20	—	6·01	11·41	47·03	35·03	31·33	24·90	3·10	0·50	—	102·93
	Sherepore Town	1·06	0·45	—	3·11	4·74	29·95	19·40	11·30	20·42	2·33	0·57	—	94·53
	Dewanganj	1·04	—	—	2·00	2·13		10·99	9·02	11·42	0·72	0·36	—	
NORTH BENGAL.														
Pubna ...	Pubna	0·53	0·64	0·01	2·26	3·04	15·27	7·20	7·00	9·82	1·81	8·40	0·04	56·71
	Serajgunge	2·12	0·26	—	0·94	8·24	13·50	11·00	9·03	7·40	8·20	2·75	0·13	64·56
Bogra ...	Shorepore	1·16	1·09	0·03	0·59	2·68	18·12	10·86	15·01	11·67	3·60	1·46	—	66·47
	Nowkhilla	1·44	1·15	0·05	1·34	4·77	21·11	8·72	8·14	17·26	1·24	1·09	—	66·31
	Bogra	2·02	0·44	—	—	1·14	24·16	15·40	8·25	19·26	1·34	1·20	0·03	73·25
	Panchbibi	3·23	0·55	—	—	0·66	28·03	8·40	5·94	17·13	4·07	0·47	—	68·74
Rajshahye ...	Beauleah	1·78	1·01	0·00	0·16	2·28	15·25	9·39	4·19	11·74	1·98	2·44	—	50·28
	Natore	2·70	0·35	—	1·28	0·56	21·71	14·45	7·20	9·92	2·90	3·24	—	63·41
	Naogaon	2·81	1·59	—	0·03	0·75	19·00	10·01	6·86	17·50	2·85	0·80	—	62·20
	Lalpore	0·88	0·40	—	1·62	0·90	21·04	6·84	8·68	4·89	1·39	3·33	—	40·07
	Manda	3·00	0·20	—	—	1·50	17·28	6·66	4·23	8·93	4·12	0·55	—	46·47
Maldah ...	Maldah	3·89	0·30	—	—	1·28	10·91	8·34	5·71	19·71	3·83	0·83	—	54·80
	Chanchal	2·74	0·09	0·01	—	0·13	5·04	9·06	2·30	11·08	0·29	0·18	—	31·82
	Gajol	2·59	0·05	—	—	0·43	7·56	8·61	4·64	16·05	2·50	Nil	—	43·33
	Sibgunj	2·69	0·36	0·07	0·32	2·75	11·09	8·77	6·53	15·33	5·72	1·78	—	55·21
Dinagepore ...	Mohadebpore	3·28	0·48	0·01	—	0·65	19·40	8·81	7·08	14·37	2·67	0·65	—	57·43
	Churamon	3·10	1·72	—		0·21	11·15	13·74	7·63	18·51	0·16	0·42	—	56·64
	Raigunge	3·04	1·33	0·02	—	0·10	18·59	11·42	11·52	14·30	1·27	Nil	—	56·54
	Dinagepore	2·42	0·57	—	—	1·05	23·78	11·82	12·60	18·22	0·42	Nil	—	70·88
	Baloorghat	2·05	0·51	—	—	1·02	19·10	8·34	6·92	20·57	4·38	0·26	—	64·74
	Thakoorgaon	2·47	0·57	0·20	0·08	0·93	35·65	22·97	9·08	17·52	1·27	0·05	—	91·99
Rungpore ...	Bhawanigunge (*Gyabanda*).	2·79	0·51	—	1·99	5·05	30·86	12·98	11·54	19·35	1·71	0·20	—	92·98
	Rungpore	2·75	0·03	0·40	2·03	2·61	29·99	16·53	11·89	11·78	1·60	0·04	—	81·45
	Kurigram	2·36	0·61	0·25	3·20	5·90	36·26	16·82	9·43	23·68	Nil	Nil	—	98·50
	Bagdogra (*Nilphamari*) ...	2·28	1·23	0·02	3·64	1·93	28·95	22·07	19·45	14·53	0·76	Nil	—	94·86
	Ulipore	1·50	0·78	0·05	2·10	4·02	35·19	13·11	9·50	17·41	Nil	Nil	—	84·86
Julpigoree ...	Julpigoree	2·45	0·88	—	1·13	6·56	33·81	38·38	23·17	20·12	1·35	1·03	—	128·89
	Alipore Doar	1·08	1·10	3·14	6·5[illegible]	6·37	27·30	40·00	27·80	18·13	1·84	Nil	—	133·98
	Pallacatta	1·70	0·80	0·45	4·58	10·83	22·83	47·72	3·[illegible]8	14·43	4·85	0·16	—	138·8[illegible]
	Debiganj	2·28	1·66	—	1·40	3·03	27·85	28·07	18·45	12·30	0·62	0·15	—	96·41
	Bhagatpore (*Nagrakatta*)	1·68	1·52	2·31	2·73	10·80	37·94	37·78	31·37	15·89	7·29	0·22	—	140·62
Cooch Behar ...	Dinhatta	2·16	1·10	0·56	2·44	9·01	28·95	21·11	14·09	24·94	1·92	0·13	—	106·41
	Cooch Behar	2·62	2·55	0·15	2·2[illegible]	10·60	27·07	41·47	29·70	16·19	2·45	0·40	—	136·35
	Mickligunge	1·88	2·47	0·12	1·87	3·70	30·74	34·42	28·85	10·53	1·34	0·15	—	128·07
	Matabhanga	1·72	1·95	1·11	1·21	10·93	25·18	49·05	22·17	11·54	1·01	0·21	—	126·70
Darjeeling Hill.	Buxa	2·24	2·70	6·25	2·90	17·70	37·71	71·12	38·70	25·12	6·29	0·71	0·01	211·45
	Siliguri	2·06	1·00	2·08	2·24	4·68	31·53	41·71	18·05	20·04	3·20	1·27	—	128·46
	Darjeeling	2·85	2·65	0·39	3·48	5·20	31·35	55·01	20·30	14·18	2·50	0·15	—	138·84
	Kalimpong	2·92	1·39	1·77	2·50	4·65	26·44	33·97	15·00	10·21	3·10	0·27	—	102·31
	Kurseong	?	?	?	?	8·49	33·77	71·87	36·45	19·20	3·34	0·67	—	
NORTH BEHAR.														
Purneah ...	Kissengunge	1·98	0·20	—	0·47	3·18	31·81	30·24	11·82	25·03	0·20	Nil	—	105·02
	Arrareah	2·20	0·36	—	—	1·24	26·67	19·63	14·90	17·17	Nil	Nil	—	82·16
	Purneah	2·58	0·37	0·01	—	2·88	11·41	19·57	9·20	18·88	1·81	Nil	—	66·41
	Gundara	2·98	—	—	—	1·50			9·51	11·83	2·70	Nil	—	
	Baluramporo	2·90	0·75	—	—	0·40	14·18	14·97	3·90	13·75	1·60	Nil	—	52·45
	Matiari	2·81	—	—	—	0·78	34·00	28·01	10·01	14·79		0·23	—	
	Kaliaganj	1·62	0·36	—	0·38			27·51	18·18	19·25	1·68	0·65	—	
North Behar Suiffore.	Maddapore	4·17	1·28	—	—	1·05	14·37	17·30	8·64	17·44	1·45	Nil	—	66·30
	Soopool	3·37	1·01	—	—	1·04	14·51	15·55	10·96	16·06	0·14	Nil	—	71·04
	Protabganj	2·92	0·44	—	—	0·90	31·56	29·41	13·14	12·84	Nil	Nil	—	91·21
Durbhunga ...	Tajpore	4·18	1·75	0·07	—	1·47	11·82	10·10	8·16	10·69	0·12	0·03	—	48·39
	Durbhunga	3·23	0·67	0·10	—	0·21	10·88	14·37	12·81	11·20	0·54	Nil	—	54·01
	Madhubani	2·73	0·87	—	—	2·89	14·05	15·57	12·06	17·94	Nil	Nil	—	66·71
	Bahera	3·61	0·85	0·05	—	0·92	13·54	15·86	18·73	20·75	0·14	Nil	—	74·17
	Roshera	3·33	0·90	—	—	0·90	12·24	7·63	17·61	17·56	Nil	Nil	—	60·07
Mozuffer-pore.	Sitamarhi	3·93	0·84	0·03	—	0·22	13·72	18·48	11·52	10·72	Nil	0·30	—	59·86
	Mozufferpore	3·44	1·50	0·15	—	0·45	16·77	11·79	5·40	13·88	Nil	0·12	—	53·66
	Hajipore	1·02	1·90	0·10	0·01	1·21	10·42	9·12	10·52	11·05	Nil	0·20	—	46·45
	Pora	1·48	1·89	—	—	0·60		9·24	6·78	14·52	Nil	0·14	—	
	Mahua	2·89	1·31	0·10	—	0·57		12·67	9·99	10·30	Nil	0·40	—	
	Sishar	13·87	1·25	—	—	0·29		11·29	7·32	13·15	Nil	0·45	—	
	Pupri	2·40	—	—	—	Nil	9·92	16·98	12·15	8·55	Nil	Nil	—	50·00
Chumparun ...	Motihari	2·58	1·27	0·04	—	0·53	22·79	24·82	7·50	14·16	0·38	0·62	—	78·65
	Bettiah	1·81	2·02	0·13	—	1·27	13·88	16·65	6·30	13·37	Nil	0·73	—	56·25
	Bagaha	2·89	1·24	0·09	—	2·35	15·71	21·79	14·94	13·95	Nil	1·13	—	74·09
	Burhurwa	2·88	1·24	0·40	—	2·10	12·81	15·50	8·50	12·13	Nil	0·56	—	56·21

District.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
NORTH BEHAR—*concld.*														
Saran ..	Gopalgunge	3·29	1·75	0·39	—	0·21	6·55	9·62	4·84	12·11	Nil	0·35	—	40·82
	Sewan	2·60	1·01	0·25	—	1·11	12·58	10·09	9·03	8·37	Nil	1·57	—	46·06
	Chuprah	2·09	1 13	0·54	—	0·27	7·76	13·88	7·88	1·004	Nil	1·21	—	44·39
SOUTH BEHAR.														
Shahabad ...	Buxar	1·33	1·22	0·04	—	0·19	9·81	16·89	11·09	6·00	1·02	2·44	—	50·03
	Dehree	0·49	1·01	1·15	—	0·25	6·27	7·42	19·21	7·00	2·34	0·87	—	45·31
	Bhaboosh	0·50	0·80	0 75	—	0·20	1·90	10·55	18 05	6·85	1·11	1·50	—	40·21
	Sasseram	0·50	0·66	1·22	—	0·21	3·10	6·30	15·24	3·07	1·03	0·44	—	31·79
	Arrah	1·04	1·03	0·18	—	0·90	8·28	13·58	13·08	5·15	0·92	0·18	—	45·39
	Mohaniah	0·60	1·20	0·51	—	Nil	2·80	—	7·00	0·55	1·80	1·50	—	
Gya ...	Aurungabad	0·65	0·90	0·27	0·14	0·03	3·09	9·22	17·03	3·46	0·41	0·38	—	37·38
	Gya	0·72	3·13	0·80	—	Nil	12·05	10·75	10·06	5·16	1·10	0·13	—	44·80
	Nowadah	2·12	0·86	0·35	—	0·14	11·49	10·87	11·01	4·86	1·16	0·06	—	32·02
	Johanabad	1·90	1·08	0·25	—	0·27	7·17	8 04	12·68	4·50	0 35	0·39	—	37·23
	Arwal	0·92	1·04	0·23	—	0·30	5·75	14 15	9·09	4·06	0·07	0·32	—	37·43?
	Daudnagar	0·40	0·45	—	—	0·50	4·22	8·11	10·20	3·03	Nil	Nil	—	27·34
	Sherrghati	1·41	1·10	—	—	0·25	9·10	6·50	6·03	5·41	1·40	Nil	—	31·80
	Rajauli	0·10	0·55	—	—	0·10	3·32	6 60	3·80	2·10	0 20	0·50	—	18·27
	Pakri Barawan	1·00	0·65	0·20	—	1·70	9·46	11·48	4·05	4·31	Nil	Nil	—	33·75
Patna ...	Patna	2·12	1·52	0·25	—	2·89	14·29	1·84	9·49	15·70	0·05	0·25	—	55·38
	Dinapore	2·00	1·21	0·38	—	0·74	10 31	13·57	10·22	10 40	0·04	0·25	—	49·07
	Behar	1·89	2·68	—	—	1·58	11·63	10·45	11·40	5·44	0·36	0·18	—	45·65
	Barrh	3 13	2·71	0·20	—	2·96	8·29	12·21	7·07	4·79	0·41	0·10	—	41·87
	Nickram	1·30	0·60	0·15	—	0 60	0·60	13·86	15·35	6 35	Nil	0 32	—	45·33
	Hilsa	1 88	2 19	0·28	—	2·83	11·05	6·83	8·12	6·18	0 08	0·12	—	39 56
Monghyr ...	Beegoosera	3 15	2 36	0·15	—	2·51	5·81	15·27	6·81	16·07	0·45	0·10	—	53·28
	Monghyr	2·30	0·92	0·10	—	0 74	10·24	8·07	11·08	11·04	Nil	Nil	—	44·99
	Jamui	2·48	1·04	0·17	—	2·01	10·80	10·58	6·79	9·00	Nil	0 21	—	43·17
	Gogri	5·45	0·63	0·09	—	1·35	12 05	13·02	18·17	13·70	Nil	Nil	—	65·36
	Sheikpura	1·45	1·10	—	—	0 60	10·31	14·12	11·27	7·02	Nil	Nil	—	45·87
South Bhagulpore.	Bhagulpore	2·03	1·70	—	—	1·61	13·04	11·20	8·30	9·97	Nil	0·04	—	48·79
	Banka	3 31	0 79	—	—	1·27	10·46	10·01	5·44	10·54	0 46	0·26	—	42·47
	Kolgong	2·32	1 14	—	—	3·01	10·65	9·71	11·38	11·20	0·20	0·02	—	50·43
	Bangaon	?	?	?	?	?	?	11 20	15·45	14·71	N.l	Nil	—	
Sonthal Pergunnahs.	Rajmehal	2·34	0·82	—	—	1·65	14·03	12·52	12 66	17·02	1·72	0·30	—	63·06
	Godda	3·65	0 88	—	—	4·90	16·16	8·55	4·25	11·91	2·54	0·73	—	53 57
	Pakour	2·82	0·78	0·04	0·49	2·25	12·48	21·15	9·43	20·14	7·45	0·91	—	77·04
	Nya Doomka	2 02	1 14	0·19	0·59	4·16	11·01	17·49	8·56	8·71	4·20	2·53	—	60·69
	Deoghur	1·49	0 45	0·17	—	0·57	5·67	1·35	8·22	10 13	2·47	1·99	—	42·51
	Jamtara	1·02	0·51	0·55	0·34	0 56	9·2	10·69	8·66	10·06	2·27	3 74	—	47·03
	Mohagama	1·42	2·45	-	—	1 05	12·47	13·21	8 81	20·09	1·66	0·18	—	61·28
	Nanihat	0·84	0 08	—	—	1·25	5·78	4·98	4·79	4·02	0·79	0·45	—	23·56
CHUTIA NAGPUR.														
Hazaribagh...	Pachamba (*Giridi*) ...	1·45	1·26	0·38	0 35	1·76	8·40	7·73	13 09	5·29	0·90	1·40	—	42·01
	Hazaribagh	0·44	0·12	0 08	0·42	0·83	10 06	12·23	13 51	7 72	3· 6	1·49	—	51·86
	Semtagurah	0·77	0·77	0 41	1·11	1·15	6 70	12·04	6·53	7·53	1·14	1 15	—	39 30
	Mahudi Hills	1·21	0·20	0·06	0 47	2·24	14·48	10·54	10 88	9 28	1·61		—	
	Jhoomra Hills	1·20	1·55	—	—	1·10	10·80	9·80	10 90	7·70	0·50	2·20	—	45·75
	Barki	0·58	1·02	0·24	—	0·43	0·56	8·2.	6 05	7·54	2 21	0 30	—	33·10
	Chatra	0·30	3·81	0·26	0·18	1·45	12·47	13 04	9·66	4 05	4 36	0·71	—	50·59
	Karagdeha	2·00	0·65	0·12	—	1·10	12·90	6·70	6 15	8·70	0·70	3·10	—	42·12
	Ranghar	—			—	Nil				11·07			—	
Lohardugga	Lohardugga	0·38	1·79	0·70	0· 8	0·70	8 12	7·61	15·87	9·86	2·63	0·45	—	48·99
	Ranchee	0·07	0·75	0·30	0·70	0·72	10·32	18·53	10·10	8·33	3 76	1·85	—	55 43
	Palamow	1·37	0 23	0·56	0·25	1·69	5·86	7 40	7·33	0·65	4·53	0·01	—	30·50
	Silli	—	0·70	0·10	0·40	1·60	0·70	3·30	12·40	7·80		1·50	—	
	Balumat				—				7·07	3·09	2·05	0·30	—	
	Hoseinabad	1·09	0·18	0·81	0·83	0·31	4·32	13·22	18·13	6·90	1·80	Nil	—	47·59
	Garwah	0·25	0·50	0 65	0·20	0·65		4 75	11·08	2·00	5·59	0 90	—	
Singbhoom ...	Chyebassa	0·21	0·33	0·32	1·19	1·06	16·37	8·79	12·55	2·81	3·84	2·44	—	50·81
	Chakradharpore	—	1·72	—	0·85	2·51	7·15	7·79	11·04	7·50	2·13	2·66	—	42·37
	Ghatsilla	0·25	0·55	—	0·94	0·95	11·82	10·47	20·03	7·38	3·06	4·99	—	60·44
	Baharagura	—	2·59	1·27	—	1·97	12 88	8·77	9·77	13·03	4·43	3·00	—	57·57
Manbhoom ...	Purulia	0·98	0 57	0·19	1·20	1·98	11·19	10·87	8·26	7·44	1·22	2·50	—	46·40
	Gobindpore	0·77	0·58	0·47	0·11	1·43	8·20	8·36	6·13	6 90	0·57	1·60	—	35·12
	Raghunathpore	0 53	2·10	0·40	0·04	1·55	6·75	13·06	9·97	7·79	0 52	6 27	—	48·98
	Barrabhoom ...	—	0·65	0 43	1·93	2·39	9·40	12 44	9·61	5·73	0·46	4·20	—	47·33
	*Jhalda**					0·89	16·93	6·19	19·65	5 01	0·78	1·97	—	
	*Chas**					0·29	16·59	11·19	14·93	10·53	1·76	2·98	--	

METEOROLOGICAL OFFICE, BENGAL,
The 18th February 1890.

A. PEDLER,
Meteorological Reporter to the Government of Bengal.

II.—Table showing the Monthly and Annual Average Rainfall at 169 *Rainfall-recording Stations in Bengal.*

District.	Station.	Number of years.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
ORISSA.															
Pooree	Pooree	31—34	0·26	1·10	0·57	0·80	2·00	7·56	9·91	10·03	9·95	8·05	2·10	0·73	54·68
	Khurdah	18—19	0·27	0·72	0·82	0·76	3·34	9·10	12·55	12·56	10·36	6 80	1·81	0·50	59·31
	Banpur	10—11	0·09	0·48	0·72	0·64	2·06	7·16	10·66	12·11	8·90	6·55	3·09	1·18	54·14
	False Point	21—22	0·58	0·88	1·16	2·19	3·63	8·92	14·15	13·00	11 14	10·27	2·28	0·04	69·44
Cuttack	Jagatsingpore	16—18	0·35	0·61	0·81	0·72	2·76	7·54	10·08	11 37	8·61	6·47	1·34	0·39	51·95
	Banki	7—8	0 25	0·73	1·28	0·39	1·94	10 12	11 37	10·01	8·99	4·01	2·05	0·71	52·45
	Cuttack	28—31	0·40	0·56	1·20	1·41	3 27	10·50	12·10	11·04	9 70	5·45	1·07	0·48	58·08
	Kendrapara	18	0 44	0·73	0·87	1·06	3·94	8·52	11·79	13·24	9·14	5·94	0 95	0·48	57·10
	Jajpore	16—18	0 43	1·31	1·13	1·81	4·35	9·52	13·19	11·74	9 94	5·12	0·75	0·71	60·00
Balasore	Chandbali	15—16	0·48	1·02	1·09	1·02	4·89	7·33	11·83	11·90	11·04	6·07	1·55	0·58	58·80
	Bhuddruck	18—19	0·39	1 32	1·38	1 09	5·17	8·68	12·09	11·22	10·50	4·43	0·99	0·37	58 53
	Soorah	15 16	0·25	0·84	1·63	1·81	4·99	6·59	11·05	11·45	11·13	5·24	0·85	0·13	56·88
	Balasore	29 30	0·73	1·27	1·70	3 00	4·97	9·87	11·89	12·78	12·03	6·61	1·05	0·24	66·74
	Jellasore	15 16	0·72	1·02	0 99	1·41	3·64	7·71	15·10	11·55	10·18	4·34	0·42	0·11	57·19
	Baripada	11	0·28	0·80	1·21	1·39	4·91	10·16	12·77	12·45	11·11	3·93	0·98	0·30	60·19
SOUTH-WEST BENGAL.															
Midnapore	Contai	20—22	0·31	1·38	1·17	1·51	4·42	10·32	14·41	14·22	11·74	8·09	1·02	0·14	68·99
	Saugor Island	21—22	0·34	1 17	1·35	1·31	4·47	10 86	15·98	16·01	12 56	9·06	0·81	0·29	74·21
	Tumlook	18	0·38	1·16	1·77	1·64	4·80	8·92	12 25	14·56	8·35	4·19	0·19	0·26	58·45
	Midnapore	23—25	0 72	0·84	1·41	1·64	5·32	9·52	13·90	12·52	8·19	4·02	0·32	0·28	59·58
	Ghattal	12 14	0·51	0·80	1·68	1·81	5·14	9·79	13·62	16·05	8·08	3·32	0·15	0·27	62·15
	Garbeta	8—10	0·56	1·05	1 46	2·05	4·06	7·44	13 37	14·26	9·04	2·45	0 01	0·19	56·52
24-Pergunnahs.	Diamond Harbour	18—19	0·64	1·68	1·44	2·32	4·99	9·35	14·53	15·00	11·01	5·05	0·38	0·27	66·66
	Alipore Jail	18—19	0·71	1·47	1·09	1·81	5·20	9·79	13·37	14·22	9·90	4·50	0·42	0·33	63 30
	Barrackpore	18—19	0·55	1·27	1·72	1·81	5·17	8·89	12·40	1·57	7 44	3·33	0·59	0·30	56·03
	Dum-Dum	18—19	0·52	1·12	1·57	2·03	5·91	9·60	12 18	13·40	8·79	4·28	0·29	0·30	59 99
	Paraset	18—19	0·59	1·29	1·57	2·03	5·85	9 09	11 24	12·51	9·02	4·36	0·36	0·29	58·80
	Busseerhat	18—19	0·42	1 04	2·18	2·13	6·30	10·69	12·82	13·25	8·70	4·23	0·37	0·22	62·44
Howrah	Howrah	20—21	0 59	1·26	1·88	2·03	5·08	10·67	12·60	13·34	9·10	4·13	0·41	0·27	61·36
	Mohesreka (*Oolooberiah*)	13—14	0·51	1·44	1·18	1·47	6·03	8·04	13·48	14·90	8·33	3·33	0·45	0·30	60·06
Hooghly	Serampore	17—18	0·42	1·24	1·39	2·00	4·06	9·52	13·13	12·06	7·90	4·10	0·10	0·27	58·29
	Hooghly	24 25	0·45	1·38	1·77	2·71	5·64	10·39	12·22	13 00	7·63	3·95	0·40	0·26	59·80
	Jehanabad	17—18	0·39	1·27	1·15	1·91	5·07	9·29	12·88	10·35	9·02	4·16	0 26	0·19	62·54
Burdwan	Culna	18—19	0·46	1·08	1·39	2·39	4·78	8·36	11·26	12·00	6·54	3·74	0·58	0·21	52·85
	Burdwan	28 29	0·31	0 77	1 30	2·25	5·05	9·37	12·45	12·38	8 26	4·40	0·67	0·17	57·19
	Cutwa	18—19	0·45	1·16	1·29	1·80	5·37	9·90	10 48	12·69	8·20	3·85	0·31	0·10	53·60
Bankoora	Bankoora	31—34	0·37	1·08	1·41	1·61	3·42	9·08	12·78	12·36	8·54	4·52	0·45	0·17	56·41
	Bishenpore	10—11	0·42	0·77	1·37	1·60	4·80	10·01	12·12	15·12	9·10	2·71	0·37	0·24	58·63
	Maliara	9—10	0·35	0·67	0·67	0 87	3·25	9·14	13·94	13·84	6·52	?	?	0·21	49·46
	Khatra	9 10	0·49	0·68	1·14	0 83	3 33	11·41	15·01	14·17	9·66	3·71	0·90	0·42	61·73
	Raipur	10—11	0·32	0·85	1·17	0·85	4·00	8 71	11 79	16·74	8 90	3·55	0·68	0·30	57·74
Beerbhoom	Bh. Soory	26—29	0·46	0·92	0·67	0·94	3·20	10·10	12·64	13·17	9·77	3·59	0 16	0·16	55·88
	Hetampore	13—14	0·51	0·97	0·45	1·13	3 28	10·92	14·34	13·13	10 32	2·71	0·20	0·12	58·08
	Rampore Haut	16	0·54	0·84	0·71	1·52	3·47	9 35	11·13	13·55	11 22	3 69	0·26	0·18	56·45
	Raneegunge	19	0·33	1·19	0·65	1·26	3·09	8·43	14·06	13·04	7·14	2·25	0·21	0·12	53·08
Nuddea	Ranaghat	18—19	0·46	0·93	1·32	2·99	5·08	9·40	10·88	13·00	6·93	3·64	0 60	0·22	55·47
	Kishnaghur	25—28	0·42	1·02	1·25	2·47	6·44	9·52	10·32	11·29	7·84	4·53	0·40	0·15	57·65
	Chooadanga	18—19	0·31	1·11	1·88	2·83	7·85	8·96	10·09	12·50	9·84	4·35	0·50	0 15	60·37
	Meherpore	18—19	0·31	1·02	2·16	2·93	5·98	9·36	10 11	12·00	7·02	3·51	0·20	0 18	56·28
	Kooshtea	19	0·38	1·11	1·87	3·01	7·06	10·56	11·02	11·96	9·96	4·73	0·26	0·19	62·11
Khoolna	Satkira	18 19	0·40	0·93	2·56	2·93	5·93	12·05	13·41	12·38	8·71	4·45	0·40	0·34	64·49
	Bagirhat	17—18	0·69	1·31	1·82	3·36	6·60	12·73	14·86	12·86	9·70	5·03	0·63	0·27	69·86
	Khoolna	17—18	0·60	1·23	2·20	3·21	6·33	12·54	12·09	12·24	9·58	4·07	0·43	0·32	64·83
Jessore	Narail	17—18	0·68	1·16	1·94	3·22	6·56	10·82	9·09	10·53	7·08	3·14	0·50	0·23	54·95
	Jessore	29—34	0·51	0·85	2·14	4·44	7·40	13·13	11·70	11·76	9·24	5·36	0·87	0·19	67·61
	Jhenidah	17—18	0·34	1·10	2·19	3·36	6·47	12·45	9·75	12·55	8·71	4·58	0·33	0·17	65·00
	Magoora	17—18	0·31	1·05	2·53	3·96	7·78	11·65	10·28	9·97	7·09	3·75	0·29	0·16	59·72
Moorsheda-bad.	Bongong	19	0·33	1·10	1·79	2 74	5·64	9·62	11·20	12·97	8·34	4 60	0·34	0·34	59 01
	Kandi	13—14	0·42	0·85	0·97	1·66	4·40	9·36	12·62	11·75	8·87	3·70	0·42	0·25	55·27
	Berhampore	34 36	0·44	0·95	1·15	1·92	4·87	9·48	10·39	10·91	9·63	5·20	0 33	0·12	55·39
	Lalbagh	16	0·50	0·80	0·89	1·21	4·81	8·80	10 63	12·71	10·12	4 26	0·39	0·10	53·22
	Azimgunge	16—17	0·56	0·76	0·93	1·32	4·66	8·90	10·71	12·08	9·53	4·02	?	?	54·97
	Jungipore	18	0·44	0·71	0·65	1·20	4·82	8·53	10·97	11·79	10 04	3 49	0·11	0·14	53·49
	Lalgola	15—16	0·61	0·65	0·86	1·31	5·46	9·04	11·24	11·47	9·71	4·13	0·23	0·14	54·84
EAST BENGAL.															
Chittagong	Cox's Bazar	18—19	0·77	0·49	1·82	2·53	10·38	83·09	41·31	28·06	14·71	7·88	2·54	0·36	143 94
	Chittagong	30—34	0·51	1·19	1·94	4·62	9·19	24·93	22·18	21·19	13·75	5·96	1·59	0·57	105·57
Chittagong Hill Tracts.	Rangamati	20	0·56	1·14	2·94	4·01	9·89	18 02	18·78	18·94	12·56	6·85	1·75	0·53	95·97
	Ruma	11—12	0·68	0·61	2·38	3·30	8·55	19·42	15·53	15·39	12·29	7·39	2·37	0·59	88·50
Backergunge	Patuakhally	16—17	0·77	1·13	1·81	3·04	7·97	21·44	22·13	17·05	12·85	6·11	1·56	0·43	97·21
	Perozepore	18—19	0·71	1·30	1·61	2·65	6·70	15·98	16·46	15·13	11·15	5·49	1·15	0·27	75·06
	Burrisal	23—24	0·69	0·96	2·38	3·61	7·60	16·51	16·78	14·19	11·44	4·78	1·11	0·25	79·30
	Bhola	11—12	0·59	0·82	2·52	3·59	6·81	20 19	18·46	19·08	11·81	6·26	1·30	0·47	91·90
Noakholly	Noakholly	30—32	0·54	0·87	2·85	4·31	9·14	23·67	21·36	23·22	16·32	7·08	1·75	0·37	112·38
	Feeny	12—13	0·79	1·19	3·99	4·77	10·50	26·23	23·64	24·59	16·01	6 14	2·98	0·84	121·67
Furreedpore	Madaripore	18—19	0·61	0·97	2·83	3·62	8·82	18·09	12·59	1·20	8·30	4·02	0·51	0·13	67·69
	Furreedpore	22	0·34	1·29	2·78	4·07	8·43	12·85	12·67	12·21	9·39	4·32	0·48	0·12	65·95
	Goalundo	17—18	0·40	1·22	2·33	3·93	7·43	11·07	11·89	11·54	8·11	4 00	0·53	0·15	62·98
Dacca	Munshigunge	16—17	0·54	1·35	3·95	4·82	9·05	16·17	16·12	14·72	12·20	5·24	0·85	0·31	85·32
	Dacca	38—40	0·30	1·01	2·63	5·81	9·03	13·00	12·90	12·39	9·95	5·09	0·67	0·21	73·05
	Naraingunge	6—7	0·31	1·16	3·11	4·78	8·20	14·12	15·32	12·18	10·35	4·45	1·28	0·29	75·50
	Munickgunge	16—17	0·44	1·15	1·99	3·97	8·06	9·62	12·11	11·71	7·88	3·78	0·39	0·12	61·82
Hill Tipperah	Agartola	16—17	0·83	1·12	4·86	5·28	11·00	14·21	11·63	13·77	10·15	4·45	0·92	0·39	78·61
Tipperah	Comilla	31—32	0·60	0·89	3·07	6·53	10·37	18 34	17·00	16·77	11·43	5·24	1·26	0·25	92·65
	Chandpore	11—12	0·53	0·89	3·30	4·30	8·63	16·78	15·11	13·53	11·80	6·48	0·81	0·30	88 50
	Brahmunberia	18—19	0·77	1·30	4·68	5·06	11·02	15·53	11·17	12·96	11 61	4·69	0·55	0·20	79·60
Mymensingh	Kishoregunge	18—19	0·87	0·86	3·01	5·09	10·85	18·86	13·93	13·12	12·24	5 18	0·42	0·30	83·34
	Atia	18—19	0·39	1·18	1·45	3·51	6 89	12·77	11·17	11·96	9·47	4·99	0·23	0·09	64·01
	Mymensingh	27—29	0·35	1·19	2·23	5·44	12·02	20·59	16·09	14·52	14·03	5·30	0·72	0·12	92 69
	Jamalpore	18—19	0·43	1·07	1·46	3·26	9·12	15·24	12·47	13·71	13·70	4·80	0·29	0·26	75·87
	Netrokona	7—8	0·14	0·46	2·57	4·24	11·32	21·20	15·73	10·79	14·07	6·31	0·33	0·15	93·81

District.	Station.	Number of years.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
NORTH BENGAL.															
Pubna	Pubna	25—27	0·30	1·13	1·77	3·11	6·81	11·54	10·71	12·67	11·06	4·57	0·33	0·11	64·20
	Serajgunge	18-19	0·45	1·01	1·33	2·78	7·83	11·10	10·95	11·32	9·48	4·29	0·37	0·14	60·95
Bogra	Sherpore	12—13	0·35	0·90	1·48	1·54	8·47	11·71	12·71	12·29	9·94	3·95	0·61	0·22	64·17
	Nowkhilla	12—13	0·36	0·85	1·21	1·99	7·79	12·04	11·47	10·80	9·42	4·76	0·54	0·16	61·99
	Bogra	26—29	0·43	0·97	0·88	3·27	8·79	15·09	15·83	12·20	11·76	4·53	0·76	0·12	74·69
	Panchbibi	12—13	0·32	0·52	0·96	1·60	7·65	11·03	12·40	11·43	10·41	3·99	0·66	0·18	60·40
Rajshahye	Beauleah	30—34	0·29	0·89	1·23	1·73	5·59	10·51	11·49	10·74	10·85	4·77	0·27	0·08	58·44
	Nattore	18—19	0·60	0·89	0·93	2·17	6·79	9·98	12·90	12·32	11·78	4·26	0·26	0·11	62·24
	Noagaon	6—7	0·77	0·41	1·27	0·63	5·36	13·36	10·53	9·02	12·68	2·29	0·17	0·17	56·66
Maldah	Maldah	31—33	0·64	0·73	0·85	1·35	3·87	9·83	10·74	10·27	10·78	4·23	0·21	0·33	53·83
	Chanchal	11—13	0·51	0·60	0·45	1·01	4·80	11·05	12·37	13·73	10·25	3·02	0·26	0·07	58·68
Dinagepore	Mohadebpore	11—12	0·57	0·51	0·70	0·90	0·24	12·80	10·81	12·65	11·59	3·00	0·14	0·16	60·16
	Churamon	10—11	0·63	0·47	0·43	0·63	4·70	11·93	11·90	10·65	12·59	2·42	0·18	0·14	56·67
	Raigunge	12—13	0·57	0·50	0·62	1·12	6·39	13·74	12·69	12·55	10·35	3·56	0·10	0·14	62·33
	Dinagepore	20—31	0·28	0·57	0·79	2·27	7·03	16·84	14·99	13·21	12·02	4·72	0·22	0·10	74·54
	Baloorghat	8	0·62	0·29	0·58	0·95	5·89	12·47	10·03	9·12	10·92	3·40	0·11	0·22	54·60
Rungpore	Bhawanigunge (*Gyabanda*)	18	0·34	0·51	1·46	2·73	9·11	15·69	11·91	10 29	11·67	4·85	0·13	0·16	68·83
	Rungpore	28—32	0·14	0·38	1·15	3·08	10·07	21·03	15 77	13·00	13·06	4·76	0·30	0·12	83·76
	Kurigram	13—14	0·51	0·31	1 03	4 79	13 58	24·01	13·37	10 86	12·71	4·19	0·22	0·23	86·70
	Bogdogra (*Vilphamari*)	12—14	0·50	0·52	1·18	3·43	11·87	25·33	13·58	15·17	14·83	3·89	0·06	0·19	90·57
Julpigoree	Julpigoree	19—20	0·54	0·30	1·89	3·96	11·48	20·12	20·06	25·01	23·59	5·25	0·10	0·08	123·28
Cooch Behar	Dinhatta	12—13	0·54	0·34	1·61	4·18	14·37	31·23	16·19	15·70	21·20	4·74	0·05	0·19	110·84
	Cooch Behar	17—18	0·43	0·20	1·93	5·46	14·57	30·02	22·35	21·03	21·46	5·21	0·11	0·10	129·56
	Mickligunge	12—13	0·27	0·28	1·39	4·79	13·01	27·51	21·24	22·02	22·89	4·21	0·05	0·16	117·82
	Matabhanga	12—13	0·34	0·29	2·29	4·54	12·96	32·23	21·18	22 35	22·74	5·24	0·05	0·12	124·33
Darjeeling Hill.	Buxa	19—20	1·12	0·92	3·16	8·79	20·93	44·19	47·68	43·60	31·85	0·96	0·50	0·57	213 27
	Siliguri	6—7	0·91	0·27	1·71	3·18	8·80	25·89	27·61	21·83	14·93	4·34	0·32	0·09	109·88
	Darjeeling	28 -31	0·69	1·14	2·28	3·93	7·57	24·02	30·36	26·67	17·42	6 10	0·23	0·21	120·51
	Kalimpong	8	1·29	0·73	1·75	2·99	5 01	18 73	23·61	20·41	10·55	4·09	0·26	0·26	90·58
NORTH BEHAR.															
Purneah	Kissengunge	17—18	0·62	0·44	0·66	1·87	6·45	15·39	16·49	15·71	13·79	3·13	0·07	0·14	74·73
	Arrareah	16—18	0·51	0·53	0·62	1·59	5·77	12 99	16·18	13·50	13·28	3·33	0·06	0·09	68·36
	Purneah	18—19	0·47	0·55	0·40	1·40	4·49	10·86	14·13	14·40	13·47	3·76	0·08	0·15	64·16
North Bhagulpore.	Maddapore	18 -19	0·47	0·56	0·39	1·03	4·31	8·33	12·01	11·86	10·29	4·32	0·06	0·08	53·71
	Soopool	17—18	0·47	0·39	0·40	0·88	3·08	8·97	11·34	11·88	9·40	2·72	0·05	0·12	50·60
Durbhunga	Tajpore	18	0·64	0·38	0·23	0·32	2·27	7·46	12·51	10·49	8·00	3·00	0·10	0·02	45·28
	Durbhunga	18	0·52	0·43	0·29	0·69	2·61	7·84	12·02	11·14	9·33	2·82	0·08	0·17	47·93
	Madhubani	17—18	0·74	0·41	0·37	1·06	3·03	8·45	10·84	10·47	9·90	2·48	0·03	0·07	47·85
Mozufferpore	Sitamarhi	18	0·53	0·30	0·65	1·18	2·64	7·84	10·87	0·52	9·23	2·65	0·01	0·12	45 56
	Mozufferpore	30—34	0·89	0·40	0·46	0·52	2·36	6·81	10·94	10·25	8·23	2 87	0·08	0·08	43·09
	Hajipore	17—18	0·65	0·46	0·38	0·19	2·03	6·54	12·21	10·64	7·10	3 76	0·14	0·12	44·22
Chumparun	Motihari	29—31	0·47	0·28	0·51	0·64	2·44	8·25	10·96	12·23	8·69	3·56	0·09	0 15	48·26
	Bettiah	17—18	0·69	0·41	0·30	0·75	2 66	8·35	12·99	12·12	9·32	3·38	0·01	0·23	51·27
Sarun	Gopalgunge	10—12	0·84	0 53	0·14	0·22	2·66	6·43	12·51	10·16	7·30	4·59	0·13	0·16	45·73
	Sewan	19—19	0·75	0·18	0·23	0·27	1·80	6·68	11·08	10·89	8·83	3·51	0·11	0·14	45·05
	Chuprah	33 36	0·71	0·43	0·38	0·38	1·44	6·17	10·85	9·35	7 21	2 93	0·21	0·09	40·15
SOUTH BEHAR.															
Shahabad	Buxar	20—21	0·79	0·32	0·27	0·16	0·99	4·76	11·07	10·06	7·43	3·20	0·14	0·21	39·40
	Dehree	6 - 7	0·73	0·23	0·70	0·11	3·20	3·71	11·01	12·59	7·67	2·89	0·25	0·57	43·66
	Shubcoah	18—19	0·08	0·40	0·50	0·14	1·12	5·06	12·37	12·00	6·70	3·11	0·50	0·35	43·08
	Sasseram	18—19	0 50	0·48	0·30	0·17	1·12	5·00	11·58	12·25	6·95	3·48	0·24	0·28	42·35
	Arrah	30—33	0 83	0·54	0·40	0·00	1·53	6·45	12·02	10·35	8·35	2·94	0·21	0·14	44·95
Gya	Aurungabad	17—19	0·61	0·34	0·38	0·23	1·03	5·21	12·39	12 09	7·15	2·64	0·23	0·30	44·15
	Gya	27—29	0·73	0·50	0·42	0·32	1·25	6·15	11·81	10·61	7·15	2·34	0·24	0·19	41·69
	Nowadah	18—19	0·70	0·46	0·47	0·30	1·91	5·36	11·87	11·48	6·84	2·50	0·18	0·22	42·29
	Jehanabad	16	0·72	0·40	0·35	0·15	1·65	4·91	12·23	12·90	5·72	3·33	0·27	0·18	42·81
Patna	Patna	33—36	0·69	0·47	0·34	0·27	1·74	6·72	10·60	10·00	7·07	2·81	0·23	0·16	41·90
	Dinapore	18—19	0·59	0·30	0·18	0·23	1·05	6·40	11·71	11·50	6·62	3·00	0·14	0·18	42·50
	Behar	18—19	0·67	0·52	0·34	0·28	2·16	6·17	13·04	11·33	6·38	3·06	0·26	0·13	44·28
	Barrh	18—19	0·47	0·43	0·34	0·12	2·32	4·88	12·73	9·80	7·38	3·03	0·25	0·12	42·37
Monghyr	Becgooserai	18—19	0·56	0·53	0·24	0·36	2·35	6·01	11·39	10·33	7·29	3·00	0 31	0·08	42·45
	Monghyr	34—37	0·45	0·64	0·43	0·45	2·12	6·59	11·72	10·72	8 44	3·81	0·26	0·10	45·73
	Jamui	17—19	0·71	0·60	0·43	0·50	2·13	6·35	12·30	12·14	7·29	2 53	0·09	0·09	45·16
South Bhagulpore.	Bhagulpore	34—35	0·50	0·64	0·39	0·84	2·07	8·14	11·56	10·80	7·92	3·03	0·22	0·09	47 70
	Banka	18—19	0·59	0·50	0·34	0·56	2·57	7·50	10·42	11·55	8·03	3·43	0 15	0·14	45·78
Southal Perguunahs.	Rajmehal	17—19	0·19	0·46	0·33	1·04	4·93	10·02	12·91	10·63	11·86	3·03	0·23	0·06	55·69
	Godda	16—17	0·35	0·54	0·40	0·49	3·55	6·70	11·21	11·95	9·53	2·94	0·10	0·13	47·89
	Pakour	11—12	0·53	0·67	0·57	0·44	4·68	10·83	13·36	11 2	13·16	4·45	0·17	0·14	62·35
	Nya Doomka	18	0·55	0·68	0·72	1·05	5·03	8·79	13·49	14·07	10·27	3 88	0·23	0·23	57·89
	Deoghur	19—20	0·43	0·63	0·64	0·80	3·01	8·12	13·64	12·37	8·64	4·36	0 15	0·16	52·89
	Jamtara	13—15	0·45	0·50	0·77	0·61	3·39	7·90	13·54	13·24	7·83	3·03	0·30	0·14	51·70
CHUTIA NAGPORE.															
Hazaribagh	Pachamba (*Giridi*)	18—19	0·39	0·69	0·65	0·64	2·25	7·64	13·29	12·94	8·66	3·21	0·20	0·17	50·93
	Hazaribagh	27—29	0·55	0·74	0·69	0·35	1·72	7·94	13·01	13·14	7·83	3·29	0·32	0·22	49·79
	Semtagurah	11—12	0·51	0·52	1·18	0·30	2·58	7·61	12·78	12·28	8·04	2·81	0·39	0·29	49·29
	Mahudi Hills	10—11	0·83	0·58	0·74	0·10	2·31	7·30	12·43	14·35	8·94	2·47		0·27	
	Jhoomra Hills	8—9	0·55	0·41	0·64	Nil	2·90	9·89	16·46	17·08	10·91	2·93	0·48	0·39	69·84
Lohardugga	Lohardugga	6	0·98	0·57	0·63	0·26	2·53	7·75	12·11	14·05	9·70	2·37	0·30	0·51	51·96
	Ranchee	31—33	0·79	1·02	1·30	0·62	2·36	7·64	12·42	12·37	8·19	3·05	0·29	0·21	50·16
	Palamow	18—19	0·77	0·50	0·65	0·29	1·55	5·91	12·91	12·03	7·95	2·66	0 43	0·28	45·73
Singbhoom	Chyebassa	19—20	0·73	0·84	1·21	0·68	3·89	8·01	14·00	13·78	8·89	2·94	0·24	0·35	54·96
Manbhoom	Purulia	24—26	0·42	0·94	0·89	0·81	2·76	8·77	11·44	12·96	7·80	3·60	0·18	0·26	50·83
	Gobindpore	17—18	0·51	0·88	0·44	0 63	2·00	7·00	11·87	12·49	7·22	4·00	0·12	0·19	47·35

METEOROLOGICAL OFFICE, BENGAL;
The 18th February 1890.

A. PEDLER,
Meteorological Reporter to the Government of Bengal.

III.—Comparison Table of the Rainfall of 1889 *at* 169 *Rainfall-recording Stations in Bengal with the Average of previous years.*

District.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
ORISSA.														
Pooree	Pooree	−0·26	−0·33	−0·57	−0·86	−1·00	+4·75	+0·07	+10·21	−5·30	+4·96	+15·55	−0·52	+26·12
	Khurdah	−0·27	−0·62	−0·75	−0·54	−2·22	+5·73	+2·53	+2·72	−2·13	+5·25	+8·35	−0·50	+17·55
	Banpur	−0·09	−0·76	−0·72	−0·84	−0·80	+0·41	+0·88	+2·60	−4·02	+5·05	+11·07	−1·04	+12·78
	False Point	−0·58	+1·16	−1·18	−1·51	−2·80	+6·26	−2·67	+2·19	−5·04	+0·03	+14·30	+0·40	+10·88
Cuttack	Jazatsingpore	−0·35	+1·82	−0·81	−0·72	−0·65	+1·25	+13·35	+0·61	−4·06	+5·33	+9·07	−0·39	+24·45
	Hanki	−0·16	+0·49	−1·21	−0·33	−1·32	+1·82	−4·18	+8·66	−5·11	+3·84	+5·04	−0·71	+1·58
	Cuttack	−0·40	−0·23	−1·17	−0·58	+0·02	+8·10	+0·33	+2·95	−4·11	+3·39	+10·47	−0·48	+18·29
	Kendrapara	−0·44	+0·05	−0·86	−0·34	−1·12	+4·59	+4·81	+1·77	−3·68	+2·56	+9·36	−0·23	+17·08
	Jajpore	−0·13	−0·46	−1·03	−1·23	+0·47	+3·03	−2·91	−3·05	−5·20	+1·01	+9·14	−0·71	−0·17
Balasore	Chandbali	−0·48	+0·78	−0·79	−0·22	−1·46	−2·27	−3·51	−1·78	−1·71	+2·23	+8·41	−0·16	−1·26
	Bhuddruck	+0·11	−0·94	+0·24	−1·99	+0·19	−0·75	−0·47	+0·02	−2·57	+0·30	+7·24	−0·37	+1·80
	Soreh	−0·25	+0·76	−0·98	−0·56	+0·02	−2·16	−3·35	−3·03	−5·31	+1·70	+8·05	−0·13	−7·24
	Balasore	−0·73	−0·55	−1·70	−1·40	−0·52	−5·52	−7·41	−1·27	−4·28	+5·70	+5·32	−0·24	−16·67
	Jellasore	−0·72	+0·04	−0·91	−1·41	−2·44	+0·46	−11·51	−2·78	−5·05	+4·08	+3·80	−0·11	−15·56
	Haripodah	−0·28	+1·08	−1·12	+0·34	−0·61	+3·75	−2·85	+1·51	−3·70	+1·09	+3·29	−0·20	+0·32
SOUTH-WEST BENGAL.														
Midnapore	Contai	−0·31	+0·40	−1·01	−1·51	−2·05	+1·18	−8·70	−1·08	−2·31	−2·27	+6·09	−0·20	−11·66
	Saugor Island	−0·34	+0·34	−1·35	−1·31	−2·34	+1·51	−6·06	−5·31	−7·60	+1·85	+5·70	−0·26	−15·96
	Tumlook	−0·38	+1·24	−1·77	−0·94	−3·10	+2·58	−3·05	−2·06	−3·24	+2·91	+2·11	−0·26	−5·95
	Midnapore	+0·95	+4·76	1·41	−0·24	−2·68	−0·33	−6·05	+0·54	−1·09	−2·00	+3·96	−0·28	−4·80
	Ghattal	−0·05	+0·38	−1·50	−0·07	−1·46	−1·02	−5·35	−4·04	−3·41	+0·07	+1·05	−0·27	−15·76
	Garbetta	−0·24	+0·17	−1·46	−2·05	−0·90	+5·92	−1·24	−6·20	−2·52	−1·70	+1·82	−0·19	−8·75
24-Pergunnahs.	Diamond Harbour	−0·64	+0·11	−1·41	−1·05	+0·00	+8·58	−4·38	−1·54	−5·49	+0·80	+5·00	−0·23	−0·16
	Alipore Jail	−0·44	+1·13	−0·53	+0·04	−1·37	+2·94	−0·39	−5·71	−4·52	+0·28	+3·27	−0·33	−5·02
	Barrackpore	0·35	+0·25	−1·41	−0·98	−3·55	+4·53	−2·97	−4·22	+2·06	+3·41	+2·05	−0·30	−1·48
	Dum-Dum	−0·08	+1·26	−0·51	−1·37	−3·49	+0·71	−3·20	+0·53	−0·84	+3·56	+3·80	−0·40	+9·13
	Baraset	−0·37	+1·44	−1·21	−1·03	−3·73	+5·07	+0·61	−2·41	−3·15	+4·27	+4·00	−0·20	+2·30
	Bussoerhat	−0·15	+0·42	−1·89	−1·51	−4·59	+3·03	0·13	−4·24	−0·39	+8·31	+4·78	−0·22	+1·72
Howrah	Howrah	−0·44	+1·37	−0·90	−0·85	−2·80	+7·26	−0·23	−3·41	−1·82	+3·40	+2·51	−0·27	+2·75
	Mohesreka (*Ootooberiah*)	−0·09	+2·09	−0·94	−0·03	−4·42	+2·20	+3·21	−1·02	−3·76	+2·02	+1·10	−0·30	+0·21
Hooghly	Serampore	−0·15	+0·41	−1·07	−1·12	−2·07	+4·24	−2·70	−2·81	−0·12	+4·65	+2·34	−0·27	+0·13
	Hooghly	−0·27	−0·38	−1·57	−1·01	−3·85	2·18	−4·15	−5·70	−0·86	−1·34	+2·21	−0·26	−15·40
	Jehanabad	+0·29	−0·09	−0·68	−0·37	−3·04	+4·45	−3·91	−8·81	−5·05	−2·63	+2·99	−0·16	−17·51
Burdwan	Culna	+0·27	−0·71	−1·08	−1·35	−2·26	+2·60	−5·31	−6·19	+1·01	−1·63	+5·19	−0·21	−9·08
	Burdwan	+0·02	−0·41	−1·14	−0·87	−0·69	+2·37	−2·05	−4·99	+1·27	−2·96	+4·36	−0·17	−7·88
	Cutwa	+0·15	−0·56	−0·86	−1·46	−3·47	−2·58	−3·54	−4·88	−2·19	−1·34	+10·11	−0·10	−10·32
Bankoora	Bankoora	+0·18	−0·69	−0·84	−0·17	+0·38	+4·70	−2·59	−3·76	−1·07	−1·46	+3·73	−0·17	−2·17
	Bishenpore	+0·33	+0·80	+0·51	−0·55	−1·02	+5·01	+0·30	−7·57	+0·51	+3·06	+3·17	−0·24	+3·91
	Maliara	+0·30	+0·41	−0·43	−0·47	−0·58	+5·02	3·83	−5·98	+2·08	?	?	−0·21	−2·70
	Khatra	−0·49	+1·01	−1·14	+0·05	−1·14	+0·35	−1·49	−1·91	−0·27	−1·61	+2·79	−0·42	+0·63
	Raipur	−0·32	−0·12	−0·72	+0·01	−2·58	+8·46	+2·83	−0·29	−3·82	+2·11	+3·29	−0·20	+2·05
Beerbhoom	Bh. Soory	+0·06	+0·18	−0·11	−0·91	+0·01	+2·19	−1·03	−1·25	+2·14	−0·50	+3·78	−0·16	+5·97
	Hetampore	+0·85	−0·10	0·00	−1·01	+2·02	+2·38	−5·98	−5·07	−2·04	−1·00	+4·36	−0·12	−5·25
	Rampore Haut	+1·95	+0·12	+0·88	−1·41	−0·55	+1·85	−0·90	−6·08	+1·68	−3·05	+2·26	−0·18	−3·53
	Raneegunge	+1·10	−0·78	−0·17	−1·15	+1·93	+4·40	−1·13	−3·76	−0·11	−2·73	+7·12	−0·12	+4·00
Nuddea	Ranaghat	+1·20	−0·49	−0·83	−2·07	−2·91	+4·08	−1·74	−0·07	+4·03	+0·04	+3·30	−0·22	+4·08
	Kishnaghur	+0·65	−0·51	−0·81	−1·86	−4·83	−0·16	−1·72	−6·71	−2·73	+0·30	+8·56	−0·18	−10·17
	Chooadanga	+0·61	−0·31	−0·93	−2·08	−5·40	−0·03	−1·93	−5·46	+0·10	−0·63	+10·15	−0·15	−0·47
	Meherpore	+1·84	−0·15	+0·05	+4·46	−2·77	+1·09	−2·85	−1·30	+3·58	+2·58	+5·06	−0·18	+11·31
	Koushtea	+0·19	−0·35	−1·87	−2·16	−4·23	+3·51	−0·91	−2·82	+0·98	−2·82	+8·00	−0·19	−2·67
Khoolna	Satkira	+0·46	0	−1·01	−2·19	−4·47	−0·77	−2·03	−3·07	−2·18	+4·90	+3·30	−0·33	−7·49
	Bawirhat	−0·40	−0·53	−1·25	+0·10	−5·81	+1·32	−4·09	−3·49	−4·47	+5·43	+2·30	+0·04	−10·76
	Khoolna	−0·35	−0·77	−1·50	−0·48	−5·80	−1·26	−3·41	−2·04	+1·33	+7·32	+3·21	−0·14	−4·97
Jessore	Narail	+0·05	−0·16	−1·11	0·50	−3·37	+0·33	+0·10	−2·15	−1·81	+4·05	+4·60	−0·23	−0·20
	Jessore	−0·02	−0·55	−1·23	−1·82	−5·26	+5·05	−2·05	−4·59	+0·43	+2·62	+6·75	−0·19	−0·80
	Jhenidah	+0·31	−0·45	−2·04	−0·76	−3·40	−2·12	−2·32	−4·00	+1·08	−0·08	+8·06	−0·17	−5·29
	Magoora	+0·34	−0·67	−1·90	−1·05	−3·89	+4·11	−0·71	−1·11	−5·53	+3·46	+9·44	−0·16	+2·17
	Bongong	+0·12	−0·20	−1·22	−1·92	−4·41	+0·09	−0·02	−7·31	−3·87	+5·21	+3·61	−0·34	−10·26
Moorsheda-bad.	Kandi	+0·54	+0·04	−0·13	−1·56	+0·42	+6·70	−3·05	−2·84	+0·88	−3·19	+5·28	−0·25	+2·70
	Berhampore	+0·94	−0·05	−0·86	−1·92	+2·87	+0·64	−3·04	−4·24	−0·36	−3·80	+3·61	−0·12	−6·42
	Lalbagh	+1·78	+0·01	−0·70	−1·13	+0·78	−3·02	+1·04	−5·35	−0·86	−1·83	+4·25	−0·10	−5·13
	Azimgunge	+1·89	+0·06	−0·83	+0·13	+0·23	−0·10	+0·21	−0·86	+3·18	−4·32	?	?	−6·82?
	Jungipore	+2·83	+0·20	−0·80	+0·27	−1·83	+4·38	+2·33	−5·64	+4·76	−1·30	+2·05	−0·14	+7·41
	Lalgola	+1·73	+0·49	−0·80	−0·76	−0·71	+8·27	+2·58	−5·84	+4·25	−1·93	+1·58	−0·14	+8·72
EAST BENGAL.														
Chittagong	Cox's Bazar	−0·77	+0·01	−1·26	−2·53	−5·36	−7·78	−12·78	+0·13	+8·12	−0·41	−1·48	−0·23	−14·29
	Chittagong	−0·51	−0·29	−1·36	−1·15	−4·29	−4·46	−10·00	+3·91	−0·14	−2·19	+0·07	+0·14	−21·17
Chittagong Hill Tracts.	Rangamati	−0·56	+0·40	−2·22	+0·07	−3·86	−4·29	−2·04	−4·49	−4·19	−5·25	+2·57	−0·13	−24·59
	Ruma	−0·68	+0·43	−1·68	−3·30	−3·05	−5·02	−2·48	−1·74	−1·02	−0·06	+2·08	+0·36	−16·70
Backergunge	Patuakhally	−0·77	+1·54	−1·46	−1·82	−2·19	−0·52	−1·30	+1·49	−2·39	+1·92	+0·53	−0·10	−5·77
	Perozepore	−0·44	−0·56	−1·34	+0·43	−4·43	+5·23	−3·37	−8·05	−6·81	+11·36	+4·99	−0·07	−2·14
	Burrisal	−0·09	+0·49	−1·60	−1·85	−4·65	+3·73	−4·57	+2·92	−2·05	+4·29	+1·15	+0·19	−2·05
	Bhola	−0·33	−0·02	−0·99	−2·01	−2·98	−0·76	−3·83	−2·12	+0·10	+1·40	+3·38	−0·20	−8·56
Noakholly	Noakholly	−0·54	+0·68	+0·27	−3·28	−3·37	+1·74	−0·74	−0·09	+1·93	−0·87	+1·79	−0·25	−2·70
	Fenny	−0·79	+0·26	−0·54	+0·80	−5·55	−10·08	+4·19	−9·42	−6·06	−3·20	−0·54	−0·44	−31·87
Furreedpore	Madaripore	−0·21	−0·31	−2·57	−1·93	−5·58	+4·67	−3·07	−1·43	−2·19	+5·88	+3·43	−0·07	−3·38
	Furreedpore	+0·86	−0·67	−3·42	−0·76	−5·51	+6·25	+0·12	−0·34	−2·49	−0·23	+0·75	−0·12	+0·94
	Goalundo	+0·57	−1·00	−2·14	−0·35	+0·09	+6·29	−2·49	−2·29	−3·06	−0·82	+7·54	−0·15	+2·21
Dacca	Munshigunge	−0·09	−1·16	−3·86	−1·54	−0·63	+4·24	−1·73	−1·48	−3·66	+3·82	+4·08	−0·31	−2·32
	Dacca	+0·04	−0·02	−2·52	−3·09	−2·05	+10·84	+1·59	−0·44	−1·45	+2·21	+2·01	−0·21	+7·23
	Narsingunge	−0·02	−0·12	−3·08	−1·90	+2·86	+6·13	−1·74	+4·44	−1·25	+3·46	+4·50	−0·29	+12·90
	Manickgunge	+1·25	−0·95	−1·99	−2·29	−1·43	+8·27	+2·93	+0·90	−1·89	+1·07	+4·93	−0·12	+11·29
Hill Tipperah	Agartola	−0·41	−0·60	−4·86	+1·99	−3·12	−2·03	−7·19	−8·98	−2·60	+3·92	+2·31	−0·39	−22·15
Tipperah	Comilla	−0·60	+0·37	−3·07	−0·20	−3·14	+5·49	−7·00	−9·93	−2·10	+2·20	+1·25	−0·17	−19·50
	Chandpore	+0·15	+0·15	−2·40	−3·40	−4·97	−4·28	−3·00	−5·94	−0·19	+4·60	+2·65	−0·35	−17·59
	Brahmunberiah	−0·38	−0·33	−4·56	+1·53	−5·02	+1·13	−0·90	−9·75	−3·40	+2·73	+1·28	−0·26	−17·93

District.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
EAST BENGAL —*concluded.*														
Mymensingh	Kishoregunge...	+0·12	−0·65	−3·01	+2·86	−3·92	+2·20	+0·26	−0·53	+0·33	−0·30	+1·48	−0·30	− 1·46
	Atia	+0·65	−0·94	−1·45	−2·05	+6·07	+4·03	+0·09	−0·37	−2·27	−2·11	+4·67	- 0·07	+ 6·35
	Mymensingh	+0·32	−0·98	−2·18	- 0·65	−4·68	+4·32	+4·32	+6·19	+2·32	+2·78	+1·48	−0·12	+13·86
	Jamalpore	+1·41	−0·58	−1·46	−2·34	−4·29	+12·29	+1·03	−1·74	+8·04	+0·81	+0·73	−0·24	+13·63
	Netrokona	+0·16	−0·46	−2·29	+4·14	−1·79	+10·84	+12·97	+5·21	+2·14	+5·09	+2·04	−0·15	+43·90
NORTH BENGAL.														
Pubna	Pubna	+0·14	−0·40	−1·73	−0·85	−3·17	+3·73	−3·51	−5·61	−1·24	−2·76	+3·07	−0·07	− 7·49
	Serajgunge	+1·67	−0·81	−1·34	−1·84	+0·41	+2·40	+0·05	−1·29	−2·02	+3·91	+2·37	−0·01	+ 3·51
Bogra	Sherpore	+1·01	+0·19	−1·45	−0·05	−5·79	+6·41	−1·85	+2·73	+1·73	−0·35	+0·85	−0·22	+ 2·30
	Nowkhilla	+1·08	+0·30	−1·16	−0·05	−3·02	+8·47	−2·75	−2·06	+7·84	−3·52	+0·85	−0·16	+ 4·33
	Bogra	+1·59	−0·53	−0·88	−3·27	−7·64	+9·07	−0·43	−4·01	+7·50	−3·19	+0·44	−0·09	− 1·44
	Panchbibi	+2·91	+0·03	−0·90	−1·00	−0·99	+17·00	−4·04	−5·49	+7·02	+0·08	+0·41	−0·18	+ 8·25
Rajshahye	Beauleah	+1·49	+0·12	−1·17	−1·57	−3·31	+4·74	−2·10	−6·55	+0·89	−2·79	+2·17	−0·08	− 8·16
	Nattore	+3·10	−0·54	−0·03	−0·89	−0·23	+11·73	+2·25	−5·12	−1·81	−2·26	+2·98	−0·11	+11·17
	Naogaon	+2·04	+1·18	−1·27	−0·60	−4·01	+5·04	−0·52	−2·16	+4·82	−3·56	+0·72	−0·17	+ 5·03
Maldah	Maldah	+3·25	−0·43	−0·85	−1·35	−2·59	+1·08	−2·40	−4·56	+8·93	−0·40	+0·02	−0·33	+ 0·07
	Chanchal	+1·63	+0·03	−0·42	−1·01	−4·07	−6·61	−3·21	−11·43	+1·73	−2·73	−0·10	−0·07	−20·88
Dinagepore	Mohadebpore	+2·71	−0·03	−0·66	−0·89	−5·59	+6·01	−2·00	−5·57	+2·78	−0·36	+0·51	−0·16	− 2·73
	Churamon	+2·47	+1·25	−0·43	−0·03	−4·49	−0·78	+1·84	−3·02	+5·92	−3·26	+0·24	−0·14	− 0·03
	Raigunge	+2·47	+0·84	−0·60	−1·12	−0·29	−0·15	−1·27	−1·03	+4·00	−2·29	−0·10	−0·14	− 5·69
	Dinagepore	+2·14	0	−0·79	−2·27	−6·88	+6·89	−3·17	−0·01	+5·61	−4·30	−0·22	−0·10	−3·71
	Balooghat	+2·33	+0·22	−0·58	−0·95	−4·27	+6·72	−1·09	−2·20	+9·65	+0·98	+0·15	−0·22	+10·14
Rungpore	Bhawanigunge (*Gyabanda*)	+2·45	0	−1·46	−0·74	−4·06	+21·17	+1·07	+1·25	+7·68	−3·12	+0·07	−0·16	+24·15
	Rungpore	+2·31	+0·55	−0·75	−0·15	−8·06	+8·96	+0·76	−1·11	−1·24	−3·16	−0·26	−0·12	− 2·31
	Kurigram	+1·85	+0·30	−1·08	−1·59	−7·78	+12·24	+3·45	−1·48	+10·97	−4·18	−0·22	−0·23	+11·80
	Bagdogra (*Nilphamari*) ...	+1·78	+0·71	−1·16	+0·21	−0·94	+3·62	+8·49	+4·28	−0·30	−3·13	−0·04	−0·19	+ 4·29
Julpigoree	Julpigoree	+1·92	+0·58	−1·89	−2·83	−4·92	+4·69	+12·32	−2·74	−3·47	−3·90	+0·83	−0·08	+ 0·61
Cooch Behar	Dinhatta	+1·62	+0·76	−1·25	−2·04	−5·36	−2·28	+4·02	−1·41	+3·74	−2·82	+0·08	−0·19	− 4·13
	Cooch Behar	+2·19	+2·26	−1·78	−3·21	−3·97	−8·65	+10·12	+8·67	−5·27	−2·76	+0·29	−0·10	+ 6·79
	Mieligunge	+1·61	+2·19	−1·27	−2·92	−9·31	+0·23	+13·18	+0·83	−6·30	−2·87	+0·10	−0·16	+10·25
	Matabhanga	+1·38	+1·66	−1·18	−3·33	−2·05	−7·05	+27·87	−0·18	−11·20	−3·61	+0·14	−0·12	+ 2·37
Darjeeling Hill.	Ruxa	+1·12	+1·78	+3·09	−5·89	−3·23	−6·48	+23·44	−4·00	−6·73	−3·67	+0·21	−0·56	− 1·82
	Silliguri	+1·15	+0·73	+0·37	−0·24	−4·14	+5·04	+14·10	−3·17	+5·11	−1·14	+0·95	−0·09	+18·57
	Darjeeling	+2·16	+1·61	1·89	−0·45	−2·28	+7·33	+25·25	−6·17	−3·24	−3·51	−0·07	−0·21	+18·13
	Kulimpong	+1·63	+0·66	+0·02	−0·43	−1·26	+7·71	+10·36	−5·41	−0·34	−0·99	+0·01	−0·38	+11·7
NORTH BEHAR.														
Purneah	Kissengunge	+1·36	−0·24	−0·66	−1·40	−3·24	+16·42	+13·75	−3·89	+11·24	−2·84	−0·07	−0·14	+30·29
	Arrareah	+1·08	−0·17	−0·62	−1·50	−4·53	+15·68	+3·45	+1·40	+3·89	−3·33	−0·06	−0·09	+13·80
	Purneah	+2·11	−0·18	−0·39	−1·40	−1·61	+0·55	+5·44	−5·20	+5·41	−2·25	−0·04	−0·15	+ 2·23
North Bhagulpore.	Maddapore	+3·70	+0·72	−0·39	−1·03	−2·66	+6·04	+5·29	−3·22	+7·15	−2·87	−0·06	−0·08	+12·59
	Soopool	+2·90	+0·62	−0·49	−0·88	−2·94	+5·54	+4·21	+8·08	+6·66	−2·53	−0·05	−0·12	+21·04
Durbhunga	Tajpore	+3·54	+1·37	−0·16	−0·32	−0·80	+4·36	−2·21	−2·33	+2·69	−2·89	−0·07	−0·08	+ 3·11
	Durbhunga	+2·71	+0·24	−0·19	−0·69	−2·41	+3·04	+2·35	+1·67	+1·87	−2·28	−0·06	−0·17	+ 6·08
	Madhubani	+1·09	+0·46	−0·37	−1·06	−0·14	+5·60	+4·73	+2·19	+8·04	−2·48	−0·03	−0·07	+18·36
Mozufferpore	Sitamarhi	+3·40	+0·54	−0·02	−1·18	−2·32	+5·88	+7·61	+2·00	+1·47	−2·05	+0·29	−0·12	+14·30
	Mozufferpore	+2·55	+1·06	−0·31	−0·52	−1·01	+9·96	+0·85	−4·85	+5·05	−2·87	+0·04	−0·08	+ 9·57
	Hajipore	+1·27	+1·44	−0·28	−0·18	−0·82	+3·88	−3·09	−0·12	+3·05	−3·70	+0·06	−0·12	+ 2·23
Chumparun	Motihari	+2·11	+0·09	−0·47	−0·64	−1·92	+14·54	+13·86	−4·73	+0·47	−3·18	+0·54	−0·15	+30·42
	Bettiah	+1·12	+1·61	−0·23	−0·75	−1·39	+5·53	+3·06	−5·73	+4·05	−3·38	+0·72	−0·23	+ 4·98
Saran	Gopalgunge	+2·45	+1·22	+0·16	−0·22	−0·65	+0·12	−2·89	−5·32	+4·75	−4·59	+0·22	−0·16	− 4·91
	Sewan	+1·85	+0·53	+0·02	−0·27	−0·09	+5·87	−0·49	−1·26	−0·46	−3·81	+1·46	−0·14	+ 2·41
	Chuprah	+1·38	+0·79	−0·04	−0·38	−1·17	+1·59	+3·03	−1·77	+2·83	−2·93	+1·09	−0·09	+ 4·15
SOUTH BEHAR.														
Shahabad	Buxar	+0·54	+0·90	−0·23	−0·16	−0·81	+5·05	+5·82	+1·03	−1·43	−2·18	+2·30	−0·21	+10·68
	Dehree	−0·24	+0·78	+0·45	−0·11	−2·95	+2·56	−3·79	+6·62	−0·07	−0·55	+0·12	−0·57	+ 1·65
	Bhubhoosah	−0·18	+0·31	+0·19	−0·14	−0·92	−3·16	−1·82	+4·05	+0·15	−2·00	+1·01	−0·35	− 2·87
	Sasseram	0	+0·18	+0·92	−0·17	−0·91	−1·90	−5·28	+3·01	−3·88	−2·45	+0·20	−0·28	−10·56
	Arrah	+0·81	+0·54	−0·31	−0·50	−0·63	+1·83	+0·96	+3·33	−3·20	−2·02	−0·03	−0·14	+ 0·64
Gya	Aurungabad	+0·04	+0·56	−0·11	−0·09	−0·70	−1·22	−3·17	+4·05	−3·69	−2·23	+0·11	−0·36	− 6·77
	Gya	−0·01	+2·63	+0·38	−0·32	−1·25	+5·92	−1·06	+0·05	−1·99	−1·34	−0·11	−0·19	+ 2·81
	Nowada	+1·42	+0·40	−0·12	−0·30	−1·77	+6·13	−1·00	−0·17	−1·98	−1·31	−0·12	−0·22	+ 0·63
	Jehanabad	+1·18	+1·28	−0·10	−0·15	−1·38	+2·26	−4·19	−0·22	−1·22	−3·98	+0·12	−0·18	− 5·53
Patna	Patna	+1·43	+1·05	−0·09	−0·27	+1·15	+7·57	−1·76	−0·51	+7·81	−2·76	0	−0·16	+13·48
	Dinapore	+1·41	+0·91	+0·15	−0·23	−0·91	+3·91	+1·86	−1·28	+3·78	−2·96	+0·11	−0·18	+ 6·57
	Behar	+1·22	+2·16	−0·34	−0·22	−0·58	+5·46	−2·89	+0·07	−0·90	−2·70	−0·08	−0·13	+ 1·37
	Barrh	+2·06	+2·28	−0·14	−0·12	+0·64	+3·41	−0·52	−2·73	−3·09	−1·62	−0·15	−0·13	− 0·50
Monghyr	Beegoosorai	+2·59	+1·83	−0·09	−0·36	+0·16	−0·20	+3·88	−3·52	+9·38	−2·55	−0·21	−0·08	+10·83
	Monghyr	+1·85	+0·28	−0·33	−0·45	−1·38	+3·65	−3·95	+0·36	+3·10	−3·81	−0·36	−0·10	− 0·74
	Jamui	+1·77	+0·44	−0·26	−0·50	−0·12	+4·45	−1·72	−5·35	+1·80	−2·53	+0·12	−0·09	− 1·99
South Bhagulpore.	Bhagulpore	+1·53	+1·06	−0·39	−0·84	−1·06	+5·80	−0·36	−2·50	+2·05	−3·93	−0·18	−0·09	+ 1·09
	Banka	+2·75	+0·29	−0·34	−0·56	−1·30	+2·86	−0·41	−6·11	+2·51	−2·97	+0·11	−0·14	− 3·31
Sonthal Pergunnahs.	Rajmehal	+2·15	+0·36	−0·31	−1·04	−3·28	+4·01	−0·39	+2·03	+5·16	−1·31	+0·07	−0·06	+ 7·37
	Godda	+3·30	+0·34	−0·40	−0·40	+1·35	+9·46	−2·66	−7·70	+2·38	−0·40	+0·63	−0·13	+ 5·63
	Pakour	+2·29	+0·11	−0·53	+0·01	−2·43	+1·65	+7·59	−3·69	+6·99	+1·09	+0·74	−0·14	+15·56
	Nya Doomka	+1·47	+0·46	−0·53	−0·46	+0·53	+2·23	+4·00	−5·51	−1·56	+0·41	+2·30	−0·21	+ 3·10
	Deoghur	+1·06	−0·18	−0·51	−0·80	−2·41	−2·45	−2·29	−4·15	+1·59	−1·89	+1·34	−0·16	−10·35
	Jamtara	+0·57	+0·01	−0·23	−0·27	−2·83	+1·33	−2·85	−4·58	+2·23	−0·76	+3·44	−0·14	− 4·07
CHUTIA NAGPUR.														
Hazaribagh	Pachamba	+1·06	+0·57	−0·27	−0·29	−0·49	+0·56	−5·56	+0·15	−3·37	−2·31	+1·20	−3·17	− 8·93
	Hazaribagh	−0·11	+0·18	+0·29	+0·07	−0·80	+2·12	− 0·78	+0·37	−0·10	−0·03	+1·17	−0·23	+ 2·07
	Seetagurah	+0·26	+0·25	−0·77	+0·81	−1·43	−0·91	−0·74	−5·75	−0·51	−1·07	+0·76	−0·29	− 9·99
	Mahudi Hills	+0·38	−0·29	−0·06	+0·37	+0·03	+7·18	−1·69	−3·47	+0·33	−0·86		−0·27	
	Jhoomrah Hill	+0·05	+1·14	−0·05	Nil	−1·80	+0·91	−6·66	−6·18	−3·21	−2·43	+1·72	−0·29	−16·79
Lohardugga	Lohardugga	−0·80	+1·22	+0·07	+0·62	−1·83	+0·37	−4·50	+1·82	+0·16	+0·26	−0·05	−0·51	− 2·97
	Ranchee	−0·72	−0·27	−1·00	+0·06	−1·64	+2·68	+6·11	−2·17	+0·14	+0·71	+1·36	−0·21	+ 5·27
	Palamow	+0·60	−0·27	−0·19	−0·04	+0·34	−0·05	−5·43	−4·70	−1·30	+1·87	+0·18	−0·28	− 9·17
Singbhoom ...	Chyebassa	−0·52	−0·51	−0·89	+0·51	−1·86	+8·36	−5·21	−1·23	−5·57	+0·90	+2·30	−0·35	− 4·17
Manbhoom	Purulia	+0·56	−0·37	−0·70	+0·39	−0·78	+2·42	−0·57	−4·70	−0·36	−2·38	+2·32	−0·26	− 4·43
	Gowindpore	+0·26	−0·30	+0·03	−0·52	−0·57	+1·20	−3·51	−6·36	−0·33	−3·43	+1·48	−0·19	−12·23

METEOROLOGICAL OFFICE, BENGAL,
The 18th February 1890.

A. PEDLER,
Meteorological Reporter to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from 9th to 15th February 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature. Mean.	Maximum.	Range.	Minimum.	Hygrometry. Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Wind. Prevailing direction.	Miles recorded.	Rain.	Weather.
1890.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Feb.	9th	136·2	9·5	30 039	68·0	82 5	26·2	56·3	55 9	0·410	53·4	63	NNE, N and calm ...	47	Nil	Clear, ⌓.
„	10th	134·5	8·4	·049	67·9	81·7	25·4	56·3	60·1	·417	53 9	65	SSE, NNW and variable.	47	„	Chiefly clear, ⌓, —.
„	11th	137·5	9·6	·052	66·8	81 3	27·0	51 3	57·7	·360	49 8	59	SE, NE by N and NNW.	66	„	Clear, ⌓.
„	12th	134 2	9·2	·009	65 5	81·1	30·4	50·7	57·4	·367	50·4	62	NNW and W	42	„	Clear, ⌓.
„	13th	135·5	8·6	29 963	68 1	82·6	27·9	54 7	60·0	·415	53·8	61	S by W and WSW .	59	„	Chiefly Clear ⌓.
„	14th	140 6	9·0	·893	70 6	84 2	25 7	58·5	65·4	·532	60·7	74	SSW and WSW	96	„	Partially cloudy, ⌓, =.
„	15th	134 3	7·2	·820	72 3	82·2	18·1	64·1	68 3	·644	66 2	82	SSW, SW by S and variable.	66	„	Partially cloudy, ⌓, =.

		Inches.
The mean pressure of the seven days		29·975
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...		29·951
		Hours.
The total number of hours of bright sunshine		61·5
The maximum possible number of hours of sunshine		79·1
		°
The mean temperature of the seven days		68·5
The average temperature of the corresponding period for 24 years, S.-G.'s Office		72·2
The extreme variation of temperature		33·5
The maximum temperature		84 2
		Miles.
The highest velocity of the wind in one hour		9
		lbs.
The highest pressure of wind on one square foot	Not measurable.	
		%
The mean relative humidity		67
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office		69
		Inches.
The total fall of rain from 9th to 15th February 1890		Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		0·39
The total fall from 1st January to 15th February 1890		0·77
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		1·04

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

⌓ dow, = fog.

C. Little,

For Meteorological Reporter to the Govt. of India.

Meteorological Office, Govt. of India;

Calcutta, the 17th February 1890.

Meteorological Report of the Province of Bengal

STATION OBSERVATIONS.

Meteorological Division	District.	Representative station.	Air pressure. Mean barometric height, 8 A.M.	Air pressure. Mean reduced to sea-level.	Air pressure. Variation from mean.	Wind. Prevailing direction.	Wind. Mean wind velocity.	Temperature. Highest during week.	Temperature. Date.	Temperature. Lowest during week.	Temperature. Date.	Temperature. Mean maximum temperature.	Temperature. Mean minimum temperature of week.	Temperature. Mean daily temperature of week.	Temperature. Variation from normal of week.	Temperature. Mean, 8 A.M., temperature.
Orissa.	Pooree	Pooree ...	30·041	30·054	—	Calm	0	83·2	13th Feb.	?	?	82·3	?	?	—	69.1
		Gopalpore	30·035	30·057	+·049	NNW	190·0	84·2	12th ,,	64·9	13th Feb.	81·8	68·1	75·0	+6·2	72·4
		False Point ...	30 040	30·062	+·022	NW	144 0	84·4	10th ,,	55 5	12th ,,	82 3	50·1	70 7	—1·9	60·4
	Cuttack	Cuttack ...	29·987	30·072	+·038	Calm	24·0	89 4	9th–14th Feb.	61·3	12th ,,	89·2	64·7	77·0	+0·2	68 8
	Balasore	Balasore ..	30·013	30 075	+·032	NNW	80·8	86·4	10th ,,	53·5	12th ,,	84·5	58·3	71·5	—0·3	62 7
South-West Bengal.	South-West Midnapore / South 24-Pergunnahs	Saugor Island	30·049	30 076	+·038	North-Westerly	195 0	83 7	10th ,,	53·8	12th ,,	80·6	60·6*	70·7*	—1·0*	67 3
	Midnapore	Midnapore ...	29 921	30·079	+·029	N	28·0	90·3	14th ,,	54·2	12th ,,	87·2	57·9	72 6	+1·6	65 0
	24-Pergunnahs ... .. / Howrah ... .. / Hooghly	Calcutta	30·054	30 077	+·030	Calm	55 0	82 5	10th & 14th Feb.	50·8	12th ,,	81·6	55 6	68·0	—1·1	61·0
	Burdwan	Burdwan	29·968	30 075	+ 024	Calm	25·0	87·0	14th ,,	50·3	12th ,,	84·4	53·4	68 9	—0 7	60·9
	Bankoora	Bankoora ..	29·741	30·061	+·026	WNW	46·0	87·6	14th ,,	53·2	12th ,,	84·0	50 3	70 6	+1 2	61·9
	Beerbhoom ... ... / West Burdwan	Raneegunge	29·747	30·100	+·040	WNW	41·9	87·9	14th ,,	54·4	12th ,,	85·4	55·5	70·5	+1·4	60 9
	Moorshedabad	Berhampore...	30 000	30·071	+ 026	NW	35·7	84·1	14th ,,	50·7	8th ,,	82·0	52 7	67·4	—0·4	56·8
	Nuddea	Krishnaghur	30·026	30·096	+·054	W NW	64·3	86·2	14th ,,	47·8	8th & 11th Feb.	83·5	50·0	66·7	+0·6	60 9
	Jessore ... .. / Khoolna	Jessore	30·051	30 066	+·023	Calm	28·8	83·2	11th & 14th Feb.	52 5	8th ,,	81 9	54·6	68·3	—0·1	58·6
	Chittagong	Chittagong	29 963	30 058	+·007	North-Westerly	45·7	84·6	11th 13th Feb.	53·2	8th ,,	83 3	55·4	69·4	+0·5	61·7
East Bengal.	Chittagong Hill Tracts	Demagiri ..	Observations not received.													
	Backergunge	Barrisal	30·049	30·062	+ 042	Calm	42·1	81·8	14th Feb.	53·6	10th & 12th Feb.	80·7	54 3*	67·4*	—1·0*	61·6
	Noakholly	Noakholly ...	30·032	30·07	—	N	80·5	83·3	13th ,,	49·0	8th ,,	82·2	51·7	66·9	—	61·4
	Furreedpore	Furreedpore...	30 031	30 073	+ 029	Calm	39·0	81 0	14th ,,	51·0	8th ,,	75·7	53 7	64·7	—2·1	59·0
	Dacca	Dacca .	30·028	30 052	+·010	Calm & Northerly	65·3	83·6	14th ,,	52·3	8th ,,	82·0	53 7	68 4	—0·4	61·2
	Tipperah	Commillah ..	30·037	30·074	+·018	Variable	18·0	83·4	14th ,,	51·1	8th, 10th, & 11th Feb.	81 9	53·1	67·5	—0·8	61·3
	Mymensingh	Mymensingh.	30·005	30·066	+·020	North-Easterly	39 3	81·9	14th ,,	51 1	11th ,,	79·6	54·0	66·8	+1 4	59·2
North Bengal.	Bogra	Bogra	29·977	30·044	+·032	Calm	28·3	83·8	11th ,,	49·0	9th & 11th Feb.	81·5	51·6	66·6	+1·4	56·9
	Pubna	Serajgunge ..	30·006	30·055	+ 022	Westerly	11·9	83·9	14th ,,	46 2	11th ,,	81·7	50·1	65·9	+0·4	58·1
	Rajshahye	Rampore Beauleah.	29 993	30·067	+·050	N	65·5	82·8	14th ,,	47·0	8th ,,	80·5	51 8	66·2	+1·4	59 3
	Maldah	Maldah ..	29·995	30·081	—	Calm	51·4	82 6	14th ,,	46 2*	11th ,,	80 9	48·7	64 8	—	61·3
	Dinagepore	Dinagepore	29 952	30 001	+·015	SW	35·2	83 1	14th ,,	43 3	9th ,,	81·0	49 7	65·3	+2·0	55 2
	Rungpore	Rungpore	29·948	30 082	+·044	Calm	13·1	82·1	13th ,,	46·9	10th ,,	8[illegible]	49·2	64·8	+3·6	57·0
	Julpigoree ... ... / Cooch Behar	Julpigoree ..	29·760	30 065	+·027	NW	57·3	?	——	50 9	8th ,,		52 9[illegible]			59·5
	Darjeeling Hill Tracts ..	Darjeeling .	23·029	—	—	South-Westerly.	96·3	55·6	13th ,,	30·2	8th, 9th ,,	50·7	38·4	44·5	+0 5	42·6
South Behar.	Purneah ... ... / North Bhagulpore	Purneah ..	29·932	30 069	+·029	South-Westerly	55·8	80 2	14th ,,	45·0	8th & 11th	79 1	47·6	63·4	+0·1	52 6
	Mozufferpore	Mozufferpore	Observations suspended.													
	Durbhunga	Durbhunga	29·909	30·088	+ 043	WNW	63·7	81·4	14th Feb.	?	?	79·7	?	?	?	57·6
	Chumparun	Motihari ..	29·834	30·078	+ 040	Southerly	119·5	80·2	10th, 13th, 14th Feb.	44·9	8th & 11th	78·3	47·8	63·1	+2·1	54·8
	Sarun	Chupra ..	Observations incomplete.													
South Behar.	Shahabad	Dehree ..	29·728	30·103	+·051	SW	140·6	85·3	14th ,,	50 5	11th ,,	83·1	55·9	69·5	+5·3	60·7
		Buxar ..	29·840	30·099	+·060	N-Wly	85 1	85 9	14th ,,	47·9	11th ,,	82·1	52·0	67·0	+3·6	58·4
		Arrah* ..	29·875	30 084	+·052	WSW	84·5	85·3	14th ,,	43·9	11th ,,	84·0	50·5	66·3	+3·1	57·0
	Gya	Gya ..	29·700	30·102	+·047	S	107·2	86·2	11th ,,	53·4	8th ,,	83 1	55·7	69·4	+2·0	60 6
	Patna	Bankipore ..	29 892	30·087	+·030	Westerly	57·4	81·9	14th ,,	48·4	11th ,,	80 2	51·8	66·0	+1·9	59·7
	South Bhagulpore ... / Monghyr	Bhagulpore ...	29·895	30·067	+·042	Calm	?	82·8	10th & 14th Feb.	48·0	11th ,,	81·5	51·4	66·4	+1·9	57·9
Chutia Nagpur.	Sonthal Pergunnah ...	Doomka ..	29·559	30 091	—	NW	55·6	85·1	14th ,,	48·6	11th ,,	82·8	50·8	66·8	—	58·7
	Hazaribagh	Hazaribagh	28·020	30 105	+·048	North-Westerly	154·1	83 3	14th ,,	49·8	11th ,,	79 8	55·0	67 4	+2·6	63·4
	Lohardugga ... ... / Manbhoom	Ranchee ..	27·888	30 095	+·045	Calm	94·0	83·5	14th ,,	47·5	11th ,,	80·9	53·6	67·3	+2·9	63·8
	Singbhoom	Chyebassa ...	29·295	30·098	—	Calm	23·5	88·4	14th ,,	51·5	12th ,,	85·2	50·1	70·7	—	62·5

* Means of six days.

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the last [illegible]. The *humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The numbers are the [illegible]merical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the past [illegible] stations in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 14th of February 1890.

Average humidity at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	Of week. Mean for district.	Of week. Normal mean.	Rainfall. Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since 1st May 1889. Mean for district.	Since 1st May 1889. Normal mean.	Since 1st May 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
90	2·6	Nil	Nil	0·23	Nil	0·38	−0·38	74·91	56·01	+18·93	0·0	0·7	Pooree	Pooree	Orissa.
74	0·7	Nil											Gopalpore		
91	2·7	Nil											False Point		
77	2·4	Nil	Nil	0·22	Nil	0·43	−0·43	66·39	52 41	+13·98	0·0	0·7	Cuttack	Cuttack	
82	0	Nil	Nil	0·26	Nil	0·59	−0·59	49·96	53·90	−3·94	0·0	0·7	Balasore	Balasore	
90	1·4	Nil	Nil	0·35	Nil	0·92	−0·92	58·57	63·29	−4·72	0 0	0·0	Saugor Island	South-West Midnapore / South 24-Pergunnahs	South-West Bengal.
57	0·7	Nil	Nil	0·17	Nil	0·60	−0·60	46·39	52·17	−8·78	0·0	0·5	Midnapore	Midnapore	
85	1·3	Nil	Nil	0·20	Nil	0 80	−0·80	54·10	52·16	+1·64	0·0	0·8	Calcutta	24-Pergunnahs / Howrah / Hooghly	
60	0·7	Nil	Nil	0·25	Nil	0·67	−0 67	43·89	47·38	−3·49	0·0	0·6	Burdwan	Burdwan	
60	1·1	Nil	Nil	0·30	Nil	0·42	−0·42	55·93	52 70	+3·23	0·0	0·6	Bankoora	Bankoora	
55	0·6	Nil	Nil	0·33	Nil	0·63	−0·63	52·46	52 25	+0·21	0·0	0·5	Ranegunge	Beerbhoom / West Burdwan	
84	1·1	Nil	Nil	0·20	Nil	0·48	−0·48	51·17	51 03	+0·14	0·0	0·5	Berhampore	Moorshedabad	
70	0·6	Nil	Nil	0·24	Nil	0·62	−0·62	51 61	49·76	+1·85	0·0	0·5	Krishnaghur	Nuddea	
90	1·4	Nil	Nil	0·26	Nil	0·65	−0 65	54 75	53 87	+0·88	0 0	0 5	Jessore	Jessore / Khoolna	
84	0·6	Nil	Nil	0·29	Nil	0·41	−0 41	100·35	114·19	−13·84	0 0	0·5	Chittagong	Chittagong	East Bengal.
			Nil	0 29	Nil	0·48	−0 48	65·17	82·08	−16·91	0·0	0·7	Demagiri	Chittagong Hill Tracts	
83	0·7	Nil	Nil	0·32	Nil	0·62	−0·62	78·41	77 63	+0·78	0·0	0 7	Barrisal	Backergunge	
77	0	Nil	Nil	0·34	Nil	0 64	−0·64	90·82	107·75	−16 93	0·0	0·7	Noakholly	Noakholly	
83	0·4	Nil	Nil	0·24	Nil	0 61	−0·61	62·22	56 33	+5·89	0·0	0·5	Furreedpore	Furreedpore	
74	1·1	Nil	Nil	0·34	Nil	0·69	−0·69	76·19	60·29	+15·90	0·0	0 7	Dacca	Dacca	
84	0·4	Nil	Nil	0·42	Nil	0·65	−0·65	50·62	63·96	−13·34	0·0	0 8	Commillah	Tipperah	
88	0·6	Nil	Nil	0·37	Nil	0·63	−0·63	88·78	67·94	+20 84	0 0	0 7	Mymensingh	Mymensingh	
77	0	Nil	Nil	0·28	Nil	0·47	−0·47	65·62	57·70	+7·92	0·0	0 6	Bogra	Bogra	
81	0·1	Nil	Nil	0·32	Nil	0·62	−0·62	55·37	53 97	+1 40	0 0	0 6	Serajgunge	Pubna	
66	0·1	Nil	Nil	0·21	Nil	0·44	−0·44	54·35	54·32	+0 03	0·0	0 4	Rampore Beauleah	Rajshahye	North Bengal.
68	0	Nil	Nil	0·17	Nil	0·35	−0 35	39·76	54·57	−14 81	0 0	0·5	Maldah	Maldah	
81	0	Nil	Nil	0·21	Nil	0·27	−0·27	57·09	57·07	−0 18	0·0	0 6	Dinagepore	Dinagepore	
87	0	Nil	Nil	0·20	Nil	0·26	−0 26	85 87	74·09	+11·78	0·0	0 6	Rungpore	Rungpore	
88	0	Nil	Nil	0·16	Nil	0·19	−0·19	117·73	111·44	+6·29	0 0	0·5	Julpigoree	Julpigoree / Cooch Behar	
88	4·9	0·01	Nil	0·19	Nil	0·31	−0·31	133·46	121·68	+11 78	0·0	0·8	Darjeeling	Darjeeling Hill Tract	
81	0	Nil	Nil	0·25	Nil	0·37	−0·37	75·00	59·05	+15·95	0·0	0·6	Purneah	Purneah / North Bhagulpore	North Behar.
			Nil	0·18	Nil	0·29	−0·29	48·83	43 83	+5·00	0·0	0 6	Mozufferpore	Mozufferpore	
73	0	Nil	Nil	0·20	Nil	0·31	−0·31	52·11	45 03	+7 08	0·0	0 6	Durbhunga	Durbhunga	
80	0·6	Nil	Nil	0·16	Nil	0·29	−0·29	63·96	47·08	+16 88	0·0	0·5	Motihari	Chumparun	
			Nil	0·18	Nil	0·24	−0·24	40 13	43·22	−3 09	0 0	0 5	Chupra	Sarun	
55	0	Nil											Dehree	Shahabad	South Behar.
56	0	Nil	Nil	0·13	Nil	0·27	−0·27	40·07	40·35	−0·28	0·0	0 5	Buxar		
63	0	Nil											Arrah		
91	0	Nil	Nil	0 10	Nil	0·28	−0·28	37·07	41 90	−4·83	0·0	0·4	Gya	Gya	
52	0	Nil	Nil	0·15	Nil	0·34	−0·34	43·19	41 66	+1·83	0·0	0·5	Bankipore	Patna	
64	0	Nil	Nil	0·12	Nil	0·30	−0 30	42·43	43·47	−1·04	0·0	0·4	Bhagulpore	South Bhagulpore / Monghyr	
62	0	Nil	Nil	0·11	Nil	0·33	−0·33	54·15	51·12	+3·03	0·0	0·4	Doomka	Sonthal Pergunnahs	South Behar.
38	0	Nil	Nil	0·25	Nil	0·37	−0·37	43 03	50·83	−7·80	0·0	0·6	Hazaribagh	Hazaribagh	
48	0·3	Nil	Nil	0·23	Nil	0·46	−0·46	44·34	49·59	−5·25	0·0	0·6	Ranchi	Lohardugga / Manbhoom	Chutia Nagpur.
			Nil	0·29	Nil	0·70	−0·70	38·30	47·02	−9·26	0·0	0·6			
68	1·0	Nil	Nil	0·21	Nil	0·58	−0·58	48·76	52·16	−3·40	0·0	0·7	Chyebassa	Singbhoom	

ten years. The variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
17 years. The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at the subdivisional

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 14th of February 1890.

Meteorological division.	District.	Station.	Rainfall.							Total		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 18th May 1889.	Average rainfall from 15th May to date.
			Saturday, 8th February.	Sunday, 9th February.	Monday, 10th February.	Tuesday, 11th February.	Wednesday, 12th February.	Thursday, 13th February.	Friday, 14th February.	Number of rainy days.	Rainfall of week.				
Orissa	Pooree	Pooree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·47	80·71	51·79
		Khurdah	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·35	76·57	50·85
		Banpur	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·32	65·50	49·33
		False Point	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·38	77·00	64·26
		Gop	.....	.	.....	..	.....	.....	.....	Nil	Nil	Nil	?		?
		Pipli	.....	.....	.....	..	.....	.....	.....	Nil	Nil	Nil	?		?
	Cuttack	Jagatsingpore	.....	..	.....	..	.....	.....	..	Nil	Nil	Nil	0·23	74·49	47·31
		Banki	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·34	58·43	49·84
		Cuttack	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·45	78·18	50·80
		Kendrapara	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·45	72·24	53·67
		Jajpore	.....	.....	..	..	.....	.....	.....	Nil	Nil	Nil	0·68	57·64	54·13
		Dharmsala	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	59·25	?
		Salipore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	72·47	?
	Balasore	Chandbali	.....	.	..	..	.	..	..	Nil	Nil	Nil	0·53	55·04	53·00
		Bhuddruck	.....	.	..	..	.....	.....	.....	Nil	Nil	Nil	0·75	57·66	52·65
		Sorah	.....	.	..	..	.....	.....	.....	Nil	Nil	Nil	0·44	46·05	51·56
		Balasore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·80	49·61	58·75
		Jellasore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·57	52·50	54·49
		Baripodah	.....	.....	.....	..	.....	.....	.....	Nil	Nil	Nil	0·40	54·79	54·17
South-West Bengal.	Midnapore	Contai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·83	55·18	62·10
		Sangor Island	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·90	56·74	68·00
		Tumlook	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·82	49·60	52·03
		Midnapore	.....	..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·50	46·26	49·41
		Ghattal	.....	..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	43·30	55·03
		Kukrahaty	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	59·84	?
		Bhapwanpore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	51·72	?
		Garbetta	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	46·29	?
	24-Pergunnahs	Diamond Harbour	.....	..	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·01	63·70	59·53
		Canning Town	.....	..	..	.....	.....	.....	..	Nil	Nil	Nil	?	57·85	?
		Alipore Jail	.....	..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·85	52·87	50·70
		Barrackpore	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	0·87	52·12	50·72
		Dum-Dum	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	0·69	65·43	52·39
		Baruset	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	0·86	58·71	50·83
		Basseerhat	.....	..	..	.....	.....	.....	..	Nil	Nil	Nil	0·74	62·61	55·29
	Howrah	Howrah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·70	59·64	52·51
		Mohesroka (*Oolooberiah.*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·82	55·04	52·82
	Hooghly	Serampore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·84	55·63	50·97
		Hooghly	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·83	57·53	49·00
		Jehanabad	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·52	44·61	45·97
	Burdwan	Culna	.....	.....	..	.....	.....	.....	.....	Nil	Nil	Nil	0·65	41·32	44·98
		Burdwan	.....	.....	..	.....	.....	.....	.....	Nil	Nil	Nil	0·65	47·25	48·45
		Catwa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·75	43·11	48·53
		Raneegunge	.....	.....	..	..	.....	.....	.....	Nil	Nil	Nil	0·85	55·90	49·86
		Mankur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·80	?
	Bankoora	Bankoora	.....	.....	..	.....	.....	.....	.....	Nil	Nil	Nil	0·52	50·86	52·01
		Bishenpore	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	0·41	57·49	52·39
		Mahara	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·36		52·29
		Khatra	.....	..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	65·91	54·60
		Indas	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	?
		Kotulpore	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	?
		Anda	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	?	40·44	?
		Gangajalghati	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	?	59·17	?
		Raipore	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	?
		Sonamukhi	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	54·44	?
	Beerbhoom	Ps. Soory	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·66	59·06	54·37
		Dewanpore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·79	47·07	54·89
		Rampore Haut	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·12	47·78	51·96
		Ratpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·04	?
		Mararai	.....	..	..	.....	.....	.....	.....	Nil	Nil	Nil	?	53·10	?
	Nudden	Ranaghat	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·67	56·10	47·63
		Kissnaghur	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·71	42·95	46·72
		Chooadanga	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·63	49·80	51·02
		Meherpore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·58	54·15	48·06
		Koushtea	.....	.....	..	..	.....	.....	.....	Nil	Nil	Nil	0·61	56·06	55·02
	Khoolna	Satkhira	.....	.....	..	..	.....	.....	.....	Nil	Nil	Nil	0·58	54·54	55·74
		Bagerhat	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·90	55·18	62·40
		Khoolna	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·58	56·82	55·40
		Nohipur	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Rampal	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Jessore	Narail	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	52·01	46·60
		Jessore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	49·90	55·03
		Jhenidah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·64	50·74	53·09
		Magoorah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·64	56·90	49·71
		Bongong	.....	..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·66	47·04	52·42
	Moorshedabad	Kandi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	57·38	51·54
		Berhampore	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·56	46·28	51·86
		Lalbagh	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	0·45	47·13	51·20
		Azimgunge	.....	..	.....	..	.....	.....	.....	Nil	Nil	Nil	0·50	?	51·70
		Jungipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·43	55·01	49·62
		Lalgola	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	58·02	51·34
		Jaganga	.....	..	..	..	.....	.....	.....	Nil	Nil	Nil	?	43·29	?
		Akrigunj	.....	..	.....	.	.....	.....	.....	Nil	Nil	Nil	?	45·06	?
		Patkabari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
Bengal	Chittagong	Cox's Bazar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	123·30	136·05
		Chittagong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·58	77·08	95·00
		Kutubdia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113·09	?
		Satkanya	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	63·66	?
	Chittagong Hill Tracts.	Rangamati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·73	63·12	84·47
		Rama	.....	..	.....	.....	.....	.....	..	Nil	Nil	Nil	0·23	67·20	80·74
	Backergunge	Patuakhally	.....	.....	..	.....	..	.....	.....	Nil	Nil	Nil	0·70	87·00	88·55
		Perozepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·79	72·64	70·81
		Burrisal	.....	.....	.....	.....	..	.....	.....	Nil	Nil	Nil	0·59	73·21	68·34
		Bhola	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	80·69	82·93

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 14th of February 1890—contd.

Meteorological Division.	District.	Station.	Rainfall: Saturday, 8th February.	Sunday, 9th February.	Monday, 10th February.	Tuesday, 11th February.	Wednesday, 12th February.	Thursday, 13th February.	Friday, 14th February.	Total: Number of rainy days.	Total: Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
EAST BENGAL —concld.		*Gournaddi*	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	61·31	?
		Bauphal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	93·12	?
	Noakholly	Noakholly	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·60	102·58	108 40
		Feeny	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·08	79·03	107 40
		Harishpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	84·32	?
		Ramganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	80·75	?
	Furreedpore	Madaripore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	62·93	56·01
		Furreedpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·62	65·00	56·88
		Goalundo	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·77	58·05	53·71
	Dacca	Munshigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·70	77·51	70·79
		Dacca	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	76·45	59·01
		Narainguage	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·87	81·14	60 65
		Manickgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·56	69 67	50 56
		Joydebpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	68·55	?
	Hill Tipperah	Agartola	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·68	44·38	62 23
	Tipperah	Comilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·60	62·07	76·71
		Chandpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	65·07	76·40
		Brahmunberia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·83	53·12	63·54
		Ramchandrapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·83	?
		Nasirnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	32·39	?
		Daudkandi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·71	?
		Kasba	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	62 44	?
		Laksham	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·18	?
	Mymensingh	Kishoregunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·61	70·80	70·73
		Atia (*Tangail*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·66	67·69	56·09
		Mymensingh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·66	97·95	74·04
		Jamalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·84	86·01	65·10
		Netrekona	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	126·47	73 15
		Subornakhali	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·43	?
		Durgapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	150 28	?
		Sherepore Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	88·17	?
		Dewanganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·08	?
NORTH BENGAL.	Pubna	Pubna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·50	59·20	54·74
		Serajgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·75	60·51	53·01
	Bogra	Sherepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	62·67	57·88
		Nowkhilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·40	63·44	54·60
		Bogra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·72	71·33	61·21
		Panchbibi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·37	65·98	56·09
	Rajshahye	Rosulgah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·49	46·34	53·40
		Nattore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 63	58·84	55 55
		Naogaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	57·87	51·01
		Lalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30·72	?
		Manda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·27	?
	Maldah	Maldah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	50·53	52 05
		Chanchal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 37	28 95	57·08
		Gajol	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30·79	?
		Sibganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·77	?
	Dinagepore	Mohadel pore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	53·03	56 08
		Churamon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	51·82	52·83
		Raigange	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	52·37	58·10
		Dinagepore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 35	68·33	63·77
		Balooghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	61 20	51·71
		Thakoorgaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·81	?
	Rungpore	Buswanigunge (*Gyabanda*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 31	88·39	61·97
		Rungpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 23	74·98	74·78
		Kurigram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 19	91 62	73 53
		Bagdogra (*Nilphamari*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	88·49	85 44
		Ulipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	79·10	?
	Julpigoree	Julpigoree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	123·45	117 18
		Alipore Door	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·58	?
		Fallacotta	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	128·23	?
		Debiganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	90·04	?
		Bhagalpore (*Nagrakatta*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	139·22	?
	Cooch Behar	Dinhatta	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	98·83	90·01
		Cooch Behar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	125 89	118·49
		Mickligunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 19	122·40	10·03
		Matabhanga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 16	118·03	111·30
	Darjeeling Hill.	Buxa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	102·37	103 24
		Silliguri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 05	121·02	105 18
		Darjeeling	0 01	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	128·28	100·16
		Kalimpong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 34	92·15	84·31
		Kurseong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	170·23	?
NORTH BEHAR	Purneah	Kissengunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 34	103·07	70·77
		Arrarsh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	79·75	64 09
		Purneah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	63·17	61·09
		Gondwara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Balarampore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Matiari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Kataganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
	North Bhagulpore.	Nurrainpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·38		?
		Scogool	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	60·85	49·03
		Protabganj	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil		67 26	48·50
														88·16	?
	Durbhunga	Rajpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	42·57	43·51
		Duromunga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	50·24	46·19
		Madhubani	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·31	63·56	45·39
		Bahera	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·86	?
		Boshera	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·84	?
	Mozufferpore	Sitamarhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	55·45	43·34
		Mozufferpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·3	48·47	45 88
		Hajipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	42·57	42·39
		Pare	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	37·69	?
		Mahua	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41·02	?
		Sishar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Pupri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·14	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 14th of February 1890—concld.

Meteorological Division.	District.	Station.	Rainfall.							Total.		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
			Saturday, 8th February.	Sunday, 9th February.	Monday, 10th February.	Tuesday, 11th February.	Wednesday, 12th February.	Thursday, 13th February.	Friday, 14th February.	Number of rainy days.	Rainfall of week.				
North Behar —concluded	Chumparun	Motihari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	78·28	45·16
		Bettiah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	52·57	48 45
		Bagaha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	70·24	?
		Burhuriwa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·70	?
	Saran	Gopalgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	35·48	43·85
		Sewen	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·20	44·20	44·21
South Behar	Shahabad	Chuprah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	40·74	40·86
		Buxar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·24	47·44	38·86
		Dehree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·10	42·66	40·13
		Bhaboosh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	38·16	41·38
		Rasseram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·33	29·41	41·02
		Arrah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·29	42·09	40·09
		Mohaniah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Gya	Aurungabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·19	35·42	43 11
		Gya	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	39·85	43·01
		Nowadah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·36	39·59	40·56
		Jehanabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	33·40	40·43
		Arwal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34·34	?
		Daudnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28·69	?
		Sherghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	29·29	?
		Rajauli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17·92	?
		Pakri Barawan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·90	?
	Patna	Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	31·49	42·3
		Dinapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·23	45·53	41·7
		Behar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·02	41·08	42·3
		Barrh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·32	35·83	40·1
		Bukram	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41·28	?
		Hilsa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	35·21	?
	Monghyr	Begoosera	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	47·62	40·5
		Monghyr	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	41·07	46·8
		Jamui	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·34	38·48	43·3
		Gogri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·19	?
		Sheikpura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·32	?
	South Bhagulpore	Bhagulpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	45·06	42·5
		Barka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	38·34	44·0
		Kolgong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·07	?
		Bangadn	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Sonthal Pergunnahs.	Rajmohal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·18	59·90	52·4
		Godda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·35	49·04	47·8
		Pacour	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·30	73·59	55·0
		Nya Doomka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·41	56·77	53·7
		Deoghur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	40·10	51·3
		Jamtara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	46·21	49··
		Mohagama	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		?	56·41	?
		Namkat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·87	?
...IA NAG-...I.	Hazaribagh	Pachamba (*Garás*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46	38·90	47·9
		Hazaribagh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·55	49·10	47·3
		Somtagurah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·22	36·24	47··
		Mahudi Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26		48·3
		Jhoomra Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 35	43·00	63·
		Barki	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31·36	
		Chatra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·04	
		Karagdeha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39·35	
		Ramphar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		
	Lohardugga	Lohardugga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·26	45·24	51·
		Ranchi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·73	55 61	52·
		Palamow	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·39	34·16	44·
		Silli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33·80	
		Balumat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Hosseinabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·40	
		Garwah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28 77	
	Singbhoom	Chyebassa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·58	48·76	52·
		Chakradharpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40·80	
		Ghatsilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·70	
		Raharagura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53·80	
	Manbhoom	Purulia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·72	48·52	49
		Gobindpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·67	33·19	45·
		Raghunathpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·91	
		Burrabhoom	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44·32	
		Jhalda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51·42	
		Oaus	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	5 8·56	

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 18th February* 1890.

SUMMARY OF THE RAINFALL AND METEOROLOGICAL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 14TH FEBRUARY 1890.

In the report on the meteorology of the previous week it was remarked that conditions had been fairly normal, but that towards the close of that period, the northerly wind current blowing over Bengal was beginning to fall off in force, and light southerly winds and calms were being reported at the southerly stations; so that there was a decided tendency for humidity and temperature to rise. At the commencement of the present week, that is on the 8th, the very light northerly wind current continued, pressure rose, and became generally about a twentieth of an inch above the normal, while temperature also rose distinctly and became on the whole nearly normal; though the western stations recorded temperatures in excess and the eastern stations were in defect of the normal. Conditions remained practically unchanged on the 9th, except that pressure and temperature had again risen slightly, so that generally on this day both temperature and pressure were in excess of the normal. On the 10th, winds became less regular in direction, and at some of the southern and western stations south-westerly winds were blowing, pressure and temperature again continued to rise, and were both very considerably in excess of the normal, while also the southerly winds brought up considerable amounts of moisture to the province. On the 11th rather variable and light winds were reported in most districts, and pressure continued to rise at almost all stations; but in the case of temperature there was a rather rapid fall, particularly in Behar, the fall in the mean temperature in several cases in this district equalling from 3° to 5°; but notwithstanding this, both temperature and pressure were both generally distinctly in excess of the normal. On the 12th a rapid fall of pressure commenced, amounting generally to about a twentieth of an inch, and on this date the fall of temperature had spread from Behar to South Bengal and Orissa, where on this day temperature was 2° to 3° below the normal, though in other parts of the province there was a distinct excess. On the 13th variable and light winds were generally reported, pressure again fell rapidly, the fall averaging about three-hundredths of an inch, while temperature had risen over the greater part of the province. On the 14th southerly winds were reported over a considerable part of the province, pressure again fell rapidly, the fall exceeding a twentieth of an inch at many stations, and thus became from about a twentieth to nearly a tenth of an inch below the normal over a considerable part of the province; temperature also again rose and became from about 2° to 7° in excess of the normal for the day, the excess at such stations as Arrah, Buxar, and Dehree averaging more than six degrees.

It will thus be seen that though there have been no very large changes in the meteorological conditions from day to day during the week, yet there has been a slow but steady tendency towards the disappearance of the north-east monsoon or cold weather conditions, and to the gradual establishment of the conditions which accompany or immediately precede the transition conditions which obtain between the hot and cold seasons. Throughout the week, therefore, the general tendency has been towards increasing temperature accompanied by rather high humidity at the southern stations and for the gradual establishment of southerly winds over the same area.

Pressure.—Nothwithstanding the low pressures recorded at the close of the week, the mean pressure for the period has been in excess of the normal by amounts which average between two and four-hundredths of an inch, this excess pressure being fairly equally distributed over the whole province.

Temperature.—Has on the average of the whole week been about 3° in excess of the normal in South Behar and Chutia Nagpur, about a degree above the normal in North Behar, and about 2° above it in North Bengal; while in East and South-West Bengal and in Orissa the average mean temperature for the week has been nearly normal.

The actual temperatures during the week, the range from day to night, and their variations from their normal values are best seen in the following table, where the average maximum, minimum and mean temperatures at nine typical stations in different districts of the province are given, together with their normal values. It will be seen that the day temperatures for the week have been generally rather largely in excess of the normal, while the night temperatures have been more nearly normal, and in some cases even below it:—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 14th February 1890.

	Normal mean maximum temperature for the week ending 14th February.	Actual mean maximum temperature for the week ending 14th February 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 14th February.	Actual mean minimum temperature for the week ending 14th February 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 14th February.	Actual mean daily temperature for the week ending 14th February 1890.	Variation of actual mean from the normal.
Cuttack	88·6	89·2	+0·6	64·5	64·7	+0·2	76·5	77·0	+0·5
Calcutta	80·3	81·6	+1·3	59·2	55·6	−3·6	69·7	68·6	−1·1
Dacca	80·8	82·0	+1·2	56·9	54·7	−2·2	68·8	68·4	−0·4
Burdwan	81·7	84·4	+2·7	57·4	53·4	−4·0	69·5	68·9	−0·6
Patna	76·0	80·2	+4·2	51·3	51·8	+0·5	63·6	66·0	+2·4
Gya	79·8	83·1	+3·3	55·4	55·7	+0·3	67·6	69·4	+1·8
Purneah	76·7	79·1	+2·4	49·5	47·6	−1·9	63·1	63·4	+0·3
Hazaribagh	76·0	79·8	+3·8	52·7	55·0	+2·3	64·3	67·4	+3·1
Darjeeling	43·9	50·7	+6·8	31·6	38·4	+6·8	37·7	44·5	+6·8

Rainfall.—Except for a few drops of rain at Darjeeling on the 8th, the whole province has been rainless throughout the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 14th of February 1890 :—

Meteorological Divisions.	Temperature						Rainfall									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 15th May 1889.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average	Normal average.
Orissa	89·4	53·5	84·2	62·6	73·6	– 0·4	Nil	0·24	–0·24	0·0	0·6	–0·6	Nil	0·48	62·10	53·94
South-West Bengal ...	90·3	47·8	83·5	55·2	69·4	+0·2	Nil	0·26	–0·26	0·0	0·5	–0·5	Nil	0·65	52·8(	52·59
East Bengal	84·6	49·0	80·8	53·8	67·3	–0·4	Nil	0·34	–0·34	0·0	0·6	–0·6	Nil	0·62	76·56	74·90
North Bengal*	83 9	46·2	80·9	50·2	65·6	+1·8	Nil	0·21	–0·21	0·0	0·5	–0·5	Nil	0·33	73·54	70 76
North Behar*	87·4	44·9	79·0	47·7	63·3	+1·1	Nil	0·20	–0·20	0·0	0·5	–0 5	Nil	0 31	57·89	49·10
South Behar	86·3	46·9	82·1	52·6	67·3	+ 3·0	Nil	0·12	–0·12	0·0	0·4	–0·4	Nil	0·29	44·16	44·15
Chutia Nagpur	83·5*	47·5*	80·4*	54·3*	67 4*	+2·8*	Nil	0·24	–0·24	0·0	0·6	–0·6	Nil	0·47	48·08	50·04

* Julpiguri, Chupra and Chyebassa not included.

Meteorological Office, Bengal; *The 18th February* 1890.

A. Pedler,
Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 9th to 15th February 1890.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature.						Hygrometry.			Rainfall past 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Feb. 1890 ...	9th ...	30·090	70·0	83·1	26 2	56·9	74·6	63·5	·440	55·4	52	Nil
,, ,, ...	10th ...	·140	69·9	82·5	25·2	57·3	74·6	64·6	·477	57·6	56	.....
,, ,, ...	11th ...	·144	68 6	82·1	27·1	55·0	73·6	60·7	·360	49·9	43	.....
,, ,, ...	12th ...	·097	67·4	81·9	29·0	52·9	70·8	60·2	·382	51·5	51	.....
,, ,, ...	13th ...	·058	70·0	84 0	28·1	55·9	74·6	63·5	·440	55·4	52	.....
,, ,, ...	14th ...	29·964	73·4	85·9	25·0	60·9	75·4	67·6	·573	62 8	65	.....
,, ,, ...	15th ...	·926	74·8	84·7	19·8	64·9	72·6	67·6	·510	59 5	76	.....

		Inches.
The mean 10 A.M. pressure of the seven days		30·060
		°
The mean temperature of the seven days		70·6
The extreme variation of temperature		33·0
The maximum temperature		85·9
		%
The mean 10 A.M. relative humidity of the seven days		56
		Inches.
The total fall of rain from 9th to 15th February 1890		Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. Little,
For Meteorological Reporter to the Govt. of India.

Meteorological Office, India;
The 17th February 1890.

MEMORANDUM.

THE birth and death returns from the principal Municipalities in Bengal afford the following results for the week ending 1st February 1890 :—

1. Births and deaths were registered in the proportions, respectively, of 21·7 and 23·7 per 1,000 of population, against 22·8 and 18·5 per 1,000, respectively, during the preceding week ending 25th January, indicating a falling off in the registration of births and a large increase in that of deaths.

2. The highest proportions of births and deaths were returned from the following Municipalities :—

Births.	Ratio per *mille.*	*Deaths.*	Ratio per *mille.*
Arrah	41·9	Poori	100·7
Naraingan j	37·3	Serampore	58·9
Darjiling	37·0	Jessore	55·1
Serampore	35·3	Hughli and Chinsurah ...	44·3
Bhagulpore	35·3	Naraingan j	41·4
Comillah	34·7	Comillah	38·5
Chupra	34·2	Utterpara	37·7
Monghyr	33·4	Howrah	33·8
		Burdwan	33·6
		Midnapore	31·0
		Gya	30·7

3. The following table shows that, as compared with the results of the preceding week, there was a noticeable increase in the death-rates from fever and the maladies classed under the head of "Other causes," but only fractional differences in the case of the other diseases :—

	Ratio per *mille* during the weeks ending—	
	1st February 1890.	25th January 1890.
Cholera	2·2	1·8
Small-pox	·6	·3
Fever	9·3	7·9
Bowel-complaints	3·9	3·3
Injury	·4	·5
Other causes	7·3	4·7

4. Of the diseases above named, cholera, fever, bowel-complaints and "other causes" proved conspicuously fatal in the following Municipalities :—

Cholera.	Ratio per *mille.*	*Fever.*	Ratio per *mille.*	*Bowel-complaints.*	Ratio per *mille.*	*Other causes.*	Ratio per *mille.*
Poori	39·8	Jessore ...	49·0	Naraingan j ...	16·5	Serampore ...	27·5
Naraingan j ...	16·6	Comillah ...	30·8	Serampore ...	13·7	Midnapore ...	17·0
Serampore ...	9·8	Poori ...	21·0	Hughli and Chinsurah ...	13·1	Gya ...	13·7
Howrah ...	3·4			Burdwan ...	10·7	Chittagong ...	11·7
Gya ...	2·7					Poori ...	10·5

Small-pox continued to rage with virulence in the Poori Municipality, yielding a death-rate of as much as 21 per 1,000 of population.

5. The death-rates under the heads of *Sex*, *Class* and *Age* stood as follows :—

According to Sex.	Ratio per *mille.*	*According to Class.*	Ratio per *mille.*	*According to Age.*	Ratio per *mille.*
Males	26·4	Christians ...	22·4	Under 1 year	147·5
Females	20·8	Hindus ...	24·9	1 and under 5 years	26·3
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population ...	130	Mahomedans ...	20·8	5 „ 10 „	10·8
				10 „ 15 „	9·2
				15 „ 20 „	18·0
				20 „ 30 „	12·6
				30 „ 40 „	16·3
				40 „ 50 „	23·3
				50 „ 60 „	23·5
				60 years and upwards	79·1

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

The 17th February 1890.

Statement showing the Results of the Registration of Births and Deaths in the principal Municipalities in Bengal during the week ending 1st February 1890.

1	2	3			4			5			6	7							8						9	10		11		12
		POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—																		
												Disease.																		
					NUMBER OF—			RATIO PER 1,000 OF POPULATION PER ANNUM.				DEATHS FROM—							RATIO PER 1,000 OF POPULATION PER ANNUM.											
DISTRICTS.	NAMES OF MUNICIPALITIES.	Males.	Females.	Total.	Males.	Females	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	Sex. DEATHS. Males.	Females.	RATIO PER 1,000 OF POPULATION PER ANNUM. Males.	Females.	Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population.
Burdwan ...	Burdwan	19,063	16,017	34,080	6	7	13	9·1	10·7	19·8	85	...	...	9	7	.	6	22	...	...	13·7	10·7	..	9·1	33·6	22·9	9	13	25·9	42·2	59
Midnapore ...	Midnapore ...	16,927	16,633	33,560	7	4	11	10·8	6·2	17·0	175	...	...	4	5	...	11	20	...	...	6·2	7·7	...	17·0	31·0	12·4	11	9	33·8	28·1	118
Hughli ...	Hughli and Chinsurah.	15,858	15,829	31,687	7	5	12	11·5	8·2	19·7	140	2	...	11	8	1	5	27	3·3	...	18·1	13·1	1·6	8·2	44·3	36·1	16	11	52·5	36·1	144
Serampore ...	Serampore ...	13,559	12,937	26,496	9	9	18	17·6	17·6	35·3	100	5	1	3	7	...	14	30	9·8	2·0	5·9	13·7	...	27·5	58·9	25·5	21	9	80·5	36·2	223
	Utterpara	3,046	2,464	5,510	1		1	9·4	..	9·4	No female birth.	...	...	...	2	...	2	4	...	...	...	18·8	...	18·8	37·7	18·9	2	2	34·1	42·2	81
Howrah ...	Howrah	53,153	37,660	90,813	24	16	40	13·7	9·2	22·9	150	6	...	19	17	1	16	59	3·4	..	10·9	9·7	·6	9·2	33·8	18·9	41	18	40·1	24·9	166
	Bali	7,836	6,979	14,815	2	3	5	7·0	10·3	17·5	66	...	...	5	..	..	2	7	...	...	17·5	..	...	7·0	24·6	14·0	6	1	39·9	7·5	557
Nuddea ...	Kishnaghur ...	13,263	14,214	27,477	6	5	11	11·3	9·5	20·8	120	1	...	8	1	...	2	12	1·9	...	15·1	1·9	...	3·8	22·7	13·2	8	4	31·4	14·6	221
	Ranaghat	4,028	4,655	8,683	2	.	2	12·0	..	12·0	No female birth.	...	.	1	..	...	.	1	..	...	6·0	.	...	..	6·0	18·0	1	...	12·9	...	No female death.
	Santipore	13,708	15,979	29,687	2	1	3	3·5	1·7	5·2	200	...	..	1	..	...	..	1	...	...	1·7	...	..	...	1·7	17·5	.	1	...	3·3	No male death.
Jessore ...	Jessore	4,830	3,665	8,495	...	1	1		6·1	6·1	No male birth.	1	..	8	..	..	...	9	6·1	...	49·0	...		...	55·1	49·0	4	5	43·1	70·9	61
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	2	5	7	5·3	13·1	18·4	40	...	...	6	1	1	2	10	...	..	15·8	2·6	2·6	5·3	26·3	10·5	6	4	29·0	23·0	126
Darjiling ...	Darjiling	4,579	2,479	7,018	2	3	5	14·8	22·2	37·0	66	..	..	2	...	...	1	3	...	..	14·8	...	...	7·4	22·2	22·2	2	1	22·7	21·3	105
Dacca ...	Dacca	42,782	37,379	80,161	15	10	25	9·7	8·5	16·2	150	2		8	3	...	11	24	1·3	..	5·2	1·9	...	7·1	15·6	16·2	15	9	18·2	13·5	150
	Naraingani ...	7,605	4,956	12,561	4	5	9	16·6	20·7	37·3	80	4	...	1	4	1	...	10	16·6	...	4·1	16·5	4·1	...	41·4	29·0	6	4	41·0	42·0	97
Chittagong ...	Chittagong ...	13,340	8,790	22,130	3	2	5	7 0	4·7	11·7	150	...	.	3	1	..	5	9	...	...	7 0	2·3	...	11·7	21·1	30·5	6	3	23·4	17·7	135
Tipperah ...	Comillah	8,153	5,353	13,506	5	4	9	19·3	15·4	34·7	125	...	...	8	2	...		10	...	...	30 8	7·7	...	...	38·5	42·4	6	4	38·3	38·9	100
Patna	Patna City ...	76,762	81,475	160,237	18	25	43	5·8	8·1	14 0	72	...	1	9	4	1	6	21	...	·3	2·9	1·3	·3	1·9	6·8	6·2	9	12	5·9	7·7	72
Gya	Gya	38,290	37,831	76,121	13	11	24	8·9	7·5	16·4	118	4	...	21	...	...	20	45	2·7	..	14·3	...	...	13·7	30·7	24·6	24	21	32·6	28·9	114
Shahabad ...	Arrah	20,960	22,505	43,465	20	15	35	23·9	17 9	41·9	133	...	...	4	2	..		6	...	...	4·8	2·4	...	...	7·2	9·6	4	2	9·9	4·6	225
Mozufferpore .	Mozufferpore ...	23,084	19,658	42,742	6	10	16	7·3	12·2	19·5	60	..	...	2	1	4	5	12	...	..	2·4	1·2	4·9	6·1	14·6	29·1	6	6	13·5	15·9	86
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	10	20	30	7·9	15·7	23·6	50	..	..	15	...	...	11	26	...	...	11·8	...	...	8·7	20·5	20·4	12	14	18·5	22·5	82
Sarun	Chupra	25,116	26,554	51,670	11	23	34	11·1	23·1	34·2	47	...	.	2	2	...	8	12	...	...	2·0	2·0	..	8·1	12·1	19·1	6	6	12·4	11·7	108
Bhagulpore ...	Bhagulpore ...	29,640	27,813	57,453	17	22	39	15·4	19 9	35·3	77	...	...	10	5	...	19	25	...	...	9·0	4·5	..	9·0	22·6	14·5	13	12	22·8	22·4	100
Monghyr ..	Monghyr	28,154	29,366	57,520	19	18	37	17·2	16·3	33·4	105	...	...	16	2	...	8	26	...	...	14·5	1·8	...	7·2	23·5	16·3	16	10	29·6	17·7	170
Purneah ...	Purneah	8,463	6,553	15,016	1	1	2	3·4	3·4	6·9	100	...	...	4	1	..	...	5	...	..	13·9	3·4	...	...	17·3	24·2	2	1	24·6	7·9	340
Poori	Poori	13,247	11,537	24,784	1	4	5	2·1	8·4	10 5	25	19	10	10	4	...	5	48	39·8	21·0	21·0	8·4	...	10·5	100·7	62·9	26	22	102·1	99·2	103
	Total ...	550,986	510,588	1,061,574	213	229	442	10·4	11·2	21·7	93	44	12	190	79	9	150	484	2·2	·6	9·3	3·9	·4	7·3	23·7	13·5	280	204	26·4	20·8	130

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Class. Deaths among—					Ratio per 1,000 of Population per annum.				
		Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan	Burdwan	...	14	8	...	...	...	30·7	40·5	...	...
Midnapore	Midnapore	..	13	7	...	...	...	26·1	50·4	...	...
Hughli	Hughli and Chinsurah	...	22	5	...	...	...	45·3	42·2	...	...
Serampore	Serampore	...	29	1	...	...	..	59·8	55·4	...	...
	Utterpara	..	4	...	...	...	...	39·1	...	...	...
Howrah	Howrah	1	43	15	...	...	27·5	32·8	38·0	..	...
	Bali	...	6	1	...	...	...	23·3	39·7	...	...
Nuddea	Kishnaghur	...	8	4	...	...	...	22·3	25·1	...	...
	Ranaghat	...	1	...	...	...	...	7·1	...	...	...
	Santipore	..	1	...	...	...	...	2·5	...	...	...
Jessore	Jessore	1	1	7	...	...	321·0	11·5	95·2	...	...
Rajshahye	Rampore Beauleah	...	7	3	...	...	...	36·7	15·9	...	...
Darjiling	Darjiling	...	3	...	...	...	...	34·0	...	...	...
Dacca	Dacca	...	14	10	...	...	..	18·1	13·2	...	...
	Naraingunj	..	8	2	...	...	...	65·8	16·9	...	...
Chittagong	Chittagong	..	1	8	...	...	...	9·0	27·2	...	...
Tipperah	Comillah	..	4	6	...	...	...	35·0	42·2	...	...
Patna	Patna City	...	15	6	...	...	...	6·6	7·6	...	...
Gya	Gya	..	36	9	...	...	...	31·2	29·1	..	..
Shahabad	Arrah	...	5	1	...	...	...	8·4	4·2	...	...
Mozufferpore	Mozufferpore	...	6	4	...	...	...	13·9	16·7	...	...
Durbhanga	Durbhanga	...	21	5	...	...	...	22·6	14·8	...	...
Saruf	Chupra	...	7	5	...	...	...	9·2	21·8	...	...
Bhagulpore	Bhagulpore	1	20	4	...	...	134·7	26·2	12·1	...	...
Monghyr	Monghyr	...	22	4	...	...	...	25·6	16·5	...	...
Purneah	Purneah	...	2	3	...	...	...	11·3	27·6	..	...
Poori	Poori	..	48	...	...	...	...	101·7	...	..	...
	TOTAL	3	363	118	...	...	22·4	24·9	20·8	...	

DISTRICTS.	NAMES OF MUNICIPALITIES.	MORTALITY ACCORDING TO— Age. Deaths.										Ratio per 1,000 of Population per annum.								
		Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan	Burdwan	4	1	1	2	1	2	4	1	2	4	315·2	23·0	22·3	41·3	16·6	13·1	30·2	11·8	42·4	140·4
Midnapore	Midnapore	1	...	...	..	..	1	1	5	3	9	70·0	...	...	...	...	7·1	9·4	69·8	75·6	255·7
Hughli	Hughli and Chinsurah	2	3	2	..	..	4	...	8	4	3	120·5	76·3	36·0	.	20·7	33·5	...	99·7	80·0	75·3
Serampore	Serampore	6	5	1	..	...	4	2	5	2	5	439·4	144·0	26·7	...	...	38·6	20·9	77·1	54·3	186·9
	Utterpara	1	.	..	...	...	1	...		...	2	323·0	...	...	...	...	45·2	...	...	.	400·0
Howrah	Howrah	9	7	2	.	9	11	11	9	3	5	226·9	65·7	16·5	...	14·2	25·3	29·7	39·8	28·4	69·3
	Bali	1	1	1	...	...	1	...	...	2	1	143·6	52·1	48·8	...	...	15·5	...	...	99·2	71·0
Nuddea	Kishnaghur	1	...	1	...	1	...	6	1	...	2	104·8	...	15·1	...	25·3	...	72·9	15·9	...	60·2
	Ranaghat	...	...	...	...	..	.	1	...	.	...	...	...	...	...	...	...	41·7	...	...	...
	Santipore	..	...	..	...	...	...	...	..	1	...	...	...	...	.	...	...	...	...	22·6	...
Jessore	Jessore	1	3	...	...	1	...		1	2	1	268·9	315·8	...	...	71·0	...	...	49·5	184·7	113·5
Rajshahye	Rampore Beauleah	1	3	2	...	...	...	1	2	...	1	128·1	110·0	50·0	...	...	...	25·9	42·4	...	54·0
Darjiling	Darjiling	...	1	...	...	...	...	...	..	...	2	...	80·9	...	...	...	...	..	...	...	615·4
Dacca	Dacca	5	1	1	3	6	3	2	2	..	1	137·0	7·1	5·2	19·6	42·7	10·2	8·9	12·4	...	9·3
	Naraingunj	2	...	...	1	1	1		2	...	3	372·8	..	...	45·8	49·8	19·5	...	74·7	...	239·3
Chittagong	Chittagong	2	..	..	...	...	1	2	...	1	3	184·7	...	...	...	...	11·2	31·2	...	47·9	196·0
Tipperah	Comillah	1	...	...	..	1	2	1	...	1	4	175·1	...	...	...	41·3	37·7	26·1	...	64·9	506·8
Patna	Patna City	3	2	1	1	1		2	1	5	5	36·2	7·1	3·1	3·6	4·7	...	4·5	2·8	15·4	18·8
Gya	Gya	7	7	3	1	...	3	4	4		16	208·4	57·3	22·3	7·7	...	10·6	16·3	21·3	...	161·6
Shahabad	Arrah	2	.	1	1	...	1	.	...	...	1	80·7	...	10·1	11·5	...	6·6	.	...	...	15·0
Mozufferpore	Mozufferpore	4	1	2	...	...	..	...	2	1	2	217·8	13·9	23·1	...	...	..	..	29·8	16·0	42·7
Durbhanga	Durbhanga	4	1	1	3	1	2	3	...	1	10	133·6	6·8	6·6	28·1	12·9	7·8	14·0		11·9	162·8
Saruf	Chupra	2	2	...	...	...	1		2	1	4	73·7	20·1	...	...	..	5·6	...	17·1	12·6	61·1
Bhagulpore	Bhagulpore	3	2	...	..	5	1	5	2	1	6	138·7	19·2	...		62·2	4·8	28·0	16·5	12·2	86·6
Monghyr	Monghyr	6	3	1	1	2	2	3	2	1	5	210·1	25·1	7·4	9·1	27·5	10·1	17·5	16·3	13·1	72·5
Purneah	Purneah	2	...	..	...	...	.	1	2	.	...	367·5	...	...	..	...	...	18·2	56·1	...	..
Poori	Poori	2	4	3	4	5	10	6	5	4	5	343·2	115·7	69·6	110·9	139·9	98·4	77·0	75·2	93·2	144·0
	TOTAL	72	47	23	17	28	51	55	56	35	100	147·5	26·3	10·8	9·2	18·0	12·6	16·3	23·3	23·5	79·1

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,

W. H. GREGG, *Dip. Publ. Health, Camb.*,

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

Statements showing Quantities of Goods carried during the month of November 1889.

ORISSA CIRCLE.

TALDUNDA CANAL SYSTEM.

LENGTH OF CANAL OPEN { TALDUNDA CANAL, 27 MILES. / MACHGONG ,, 4 ,,

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
...	1. Grain ...	.....	.....	... ..	.....	.....	.....	
...	2. Cotton ...	... ..	.....	.....	.....	.....	... ..	
1	3. Oilseeds ...	...	8	8	630	8	630	
2	4. Salt ...	... .	20	20	1,938	20	1,938	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	...	.....	... ..	
2	7. Building materials	.....	25	25	60	25	60	
...	8. Miscellaneous ...	.....	... ..	.....	...	... ..	.. ...	
...	9. Fuel ...	.....	.....	.....	.....	.....	.....	
3 rafts	10. Timber No.	.....	43	43	70	43	70	
2 ,,	11. Bamboos ,,	.....	2,300	2,300	30	2,300	30	
5 boats 5 rafts.	12. Total ...	....	53 & 2,343 No.	53 & 2,343 No.	2,728	53 & 2,343 No.	2,728	
10 boats 5 rafts.	13. Total of same month last year.	6	52 & 65 No.	58 & 65 No.	4,009	58 & 65 No.	4,009	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	.....	5	5
15. Total number of boats plying passenger No.	5	.....	5
15½. Total empty boats	8	9	17
16. Total registered tonnage, cargo, private Tons	.....	87	87
16½. Ditto ditto, Government Tons	.....	.....	.. ...
17. Total registered tonnage, passenger Tons	107	.....	107
17½. Ditto ditto, empty Tons	51	140	191
18. Ton-mileage ...	2,279	3,382	5,661
19. Estimated value of cargo Rs.	.....	2,628	2,628
20. Number of passengers ...	127	.....	127
21. Rafts, bamboos No.	.....	2,300	2,300
22. Do., bullahs ,,	.....	43	43
23. Estimated value of rafts Rs.	.....	100	100
24. Tollage on boats ,,	21-2-0	29-10-0	50-12-0
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts ,,	.....	5-0-6	5-0-6
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-2·88
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	.....

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	55 12 6
Total tollage of same month last year ...	133 14 0

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ..	.....
2. Tollage per month ...	55 12 6
3. Total ...	55 12 6
4. Amount credited in the accounts of the month ...	43 4 6
5. Balance due at the end of the month ...	12 8 0

KENDRAPARA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 75 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
78	1. Grain ...	213	553	766	39,460	766	39,460	
7	2. Cotton ...	51	19	70	19,650	70	19,650	
4	3. Oilseeds ...	9	19	28	2,210	28	2,210	
13	4. Salt ...	6	30	36	2,870	36	2,870	
2	5. Piece-goods ...	.....	46	46	2,800	46	2,800	
...	6. Metal ...	.....	...	.....	.....	.....	.....	
37	7. Building materials	.....	1,028	1,028	14,130	471	12,160	
98	8. Miscellaneous ...	440	308	748	43,570	748	43,570	
8	9. Fuel ...	19	5	24	160	24	160	
3 rafts	10. Timber ...	.....	1,056 c. ft.	1,056 c. ft.	450	1,056 c. ft.	450	
3 „	11. Bamboos ...	.....	3,550 „	3,550 „	160	3,550 „	160	
247 & 6 rafts.	12. Total ...	738	2,008 & 4,606 c. ft.	2,746 & 4,606 c. ft.	1,25,460	2,189 & 4,606 c. ft.	1,23,490	
345 & 16 rafts.	13. Total of same month last year.	1,083	1,475 & 77,289 No.	2,558 & 77,289 c. ft	3,04,430	2,278 & 77,289 c. ft.	3,01,910	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	114	133	247
15. Total number of boats plying passenger No.	52	57	109
15½. Ditto empty boats „	191	130	321
16. Total registered tonnage, cargo, private Tons	1,402	2,540	3,942
16½. Ditto ditto, Government „	.....	826	826
17. Total registered tonnage, passenger Tons	2,331	1,971	4,302
17½. Ditto ditto empty boats „	1,361	569	1,930
18. Ton-mileage ...	225,132	255,152	480,284
19. Estimated value of cargo Rs.	53,260	71,590	1,24,850
20. Number of passengers ...	1,943	1,736	3,679
21. Rafts, bamboos C. ft.	.....	3,550	3,550
22. Do., timber „	... ..	1,056	1,056
23. Estimated value of rafts Rs.	.....	610	610
24. Tollage on boats „	1,874-7-10	2,875-10-9	4,750-2-7
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	.....	34-2-8	34-2-8
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-1·9
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-11-10

	Rs.	A.	P.
Total tollage of month—24 + 25 + 26 ...	4,784	5	3
Total tollage of same month last year ...	4,657	12	8

Memorandum of Tollage.

	Rs.	A	P.
1. Balance not recovered on the 1st of the month ...	4,319	0	11
2. Tollage per month ...	4,784	5	3
Amount erroneously charged now written back	2	7	0
3. Total ...	9,100	15	2
4. Amount credited in the accounts of the month ...	5,057	1	5
5. Balance due at the end of the month ...	4,043	13	9

HIGH LEVEL CANAL, RANGE I.

LENGTH OF CANAL OPEN, 33 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
45	1. Grain ...	118	.....	118	10,130	118	10,130	
4	2. Cotton ...	8	2	10	3,000	10	3,000	
11	3. Oilseeds ..	51	.....	51	4,150	51	4,150	
46	4. Salt ...	.....	136	136	11,400	136	11,400	
...	5. Piece-goods .	...	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
49	7. Building materials	39	387	426	1,750	73	1,470	
38	8. Miscellaneous ...	70	35	105	9,690	105	9,690	
14	9. Fuel ...	110	.....	110	310	110	310	
...	10. Timber ...	.....	.....	.....	.....	.....	.....	
...	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
207	12. Total ...	396	560	956	40,430	603	40,150	
175 & 4 rafts.	13. Total of same month last year ...	494 & 638 No.	113	607 & 638 No.	42,340	607 & 638 No.	42,340	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	106	101	207
15. Total number of boats plying passenger No.	7	6	13
15½. Ditto empty boats „	37	84	121
16. Total registered tonnage, cargo, private Tons	731	469	1,200
16½. Ditto ditto, Government „	.....	499	499
17. Total registered tonnage, passenger Tons	79	76	155
17½. Ditto empty boats „	122	377	499
18. Ton-mileage ...	26,900	29,014	55,914
19. Estimated value of cargo Rs.	22,760	17,670	40,430
20. Number of passengers ...	39	35	74
21. Rafts, bamboos C. ft	.....	.....	.....
22. Do., timber „	.....	.....	.....
23. Estimated value of rafts Rs.	.....	.....	.....
24. Tollage on boats „	303-0-7	254-14-9	557-15-4
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	.....	...	.....
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-1·9
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	.....

	Rs.	A.	P.
Total tollage of month—24 + 25 + 26 ...	557	15	4
Total tollage of same month last year	451	1	9

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month	72	14	
2. Tollage per month ...	557	15	
3. Total ...	628	13	1
4. Amount credited in the accounts of the month	327	7	
5. Balance due at the end of the month ...	301	6	

HIGH LEVEL CANAL, RANGE II.

LENGTH OF CANAL OPEN, 12½ MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
10	1. Grain ...	17	4	21	895	21	895	
2	2. Cotton ...	6	5	11	1,037	11	1,037	
1	3. Oilseeds ..	.....	1	1	14	1	14	
2	4. Salt ...	.....	6	6	770	6	770	
12	5. Piece-goods ...	.....	15	15	4,060	15	4,060	
1	6. Metal ...	3	.....	3	260	3	260	
49	7. Building materials		434	434	297	4	79	
4.	8. Miscellaneous ...	6	9	15	2,345	15	2,345	
1	9. Fuel ...	.....	3	3	9	3	9	
rafts	10. Timber ...	.....	1,374 c. ft.	1,374 c. ft.	687	1,374 c. ft.	687	
...	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
32 & rafts.	12. Total ...	32	477 & 1,374 c. ft.	509 & 1,374 c ft.	10,374	79 & 1,374 c. ft.	10,156	
30 & rafts.	13. Total of same month last year.	122	159 & 28 No.	281 & 28 No.	15,767	173½ & 28 No.	15,517	

	Up.	Down.	Total.
. Total number of boats plying cargo ... No.	10	72	82
. Total number of boats plying passenger No.	3	3	6
½. Ditto empty boats „	64	10	74
. Total registered tonnage, cargo and boat Tons	64	954	1,018
½. Ditto Govt. boat „	.....	860	860
. Total registered tonnage, passenger Tons	18	8	26
½. Ditto ditto empty „	383	31	414
. Ton-mileage	5,261	11,124	16,385
. Estimated value of cargo Rs.	1,496	8,191	9,687
. Number of passengers ...	101	265	366
. Rafts, bamboos C. ft.	... ..	.....	.....
. Do., bullahs „	.....	1,374	1,374
. Estimated value of rafts Rs.	... ..	687	687
. Tollage on boats „	43-12-3	171-8-9	215-5-0
. Compounded tollage on boats Rs.	.....	... ..	.....
. Tollage on rafts „	.....	11-0-9	11-0-9
. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-2·52
. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-12-9

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	226 5 9
Total tollage of same month last year ...	140 12 3

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	.....
2. Tollage per month ...	226 5 9
3. Total ...	226 5 9
4. Amount credited in the accounts of the month ...	202 2 3
5. Balance due at the end of the month ...	24 3 6

HIGH LEVEL CANAL, RANGE III.

LENGTH OF CANAL OPEN, 19 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
1	1. Grain ...	3½	.....	3½	96	3½	96	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
...	3. Oilseeds ...	.....	.....	.....	.....	.....	.....	
1	4. Salt ...	.....	8½	8½	948	8½	948	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
22	7. Building materials	.....	218	218	74	.....	.....	
...	8. Miscellaneous ...	.....	.....	.....	.....	.....	.....	
...	9. Fuel ...	.....	.....	.....	.....	.....	.....	
14 rafts	10. Timber ...	.....	2,064 c. ft.	2,064 c. ft.	691	2,064 c. ft.	691	
2 „	11. Bamboos ...	.....	125 No.	125 No.	3	125 No.	3	
24 & 16 rafts.	12. Total ...	3½	226½ & 2,064 c. ft. 125 No.	230 & 2,064 c. ft. 125 No.	1,812	12 & 2,064 c. ft. 125 No.	1,738	
32 & 7 rafts.	13. Total of same month last year.	62	24 & 159 No.	86 & 159 No.	6,115	86 & 159 No.	6,115	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	1	23	24
15. Total number of boats plying passenger No.	.....	.....	.....
15½. Ditto empty ditto „	24	2	26
16. Total registered tonnage, cargo, including boat Tons	7	453	460
16½. Ditto Govt. ditto „	.....	436	436
17. Total registered tonnage, passenger Tons	.....	.....	.....
17½. Ditto empty ditto „	172	2	174
18. Ton-mileage ...	879	632	1,011
19. Estimated value of cargo Rs.	96	1,022	1,118
20. Number of passengers ...	207	220	427
21. Rafts, bamboos No	.....	125	125
22. Do., bullahs C. ft.	.....	2,064	2,064
23. Estimated value of rafts Rs.	.....	694	694
24. Tollage on boats „	15-4-6	77-11-6	93-0-0
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	.....	16-0-9	16-0-9
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-1-5·66
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-12-4

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	109 0 9
Total tollage of same month last year	49 8 6

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	.....
2. Tollage per month ...	109 0 9
3. Total ...	109 0 9
4. Amount credited in the accounts of the month ...	95 1 6
5. Balance due at the end of the month ...	13 15 3

JAJEPORE CANAL.

LENGTH OF CANAL OPEN, 6½ MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
2	1. Grain ...	.....	7	7	297	7	297	
1	2. Cotton ...	.....	2½	2½	700	2½	700	
...	3. Oilseeds ...	.....	.....	.....	.....	.....	.....	
...	4. Salt ...	.....	.....	.....	.....	.....	.....	
1	5. Piece-goods ...	.....	1	1	500	1	500	
...	6. Metal ...	.....	.....	.....	.....	.....	.....	
...	7. Building materials	.....	.....	.....	.....	.....	.....	
33	8. Miscellaneous ...	.....	16	16	1,769	16	1,769	
1	9. Fuel ...	4	.....	4	28	4	28	
7 rafts.	10. Timber ...	.....	708 c. ft.	708 c. ft.	111	708 c. ft.	111	
...	11. Bamboos ...	.....	.....	.....	.....	.....	.....	
38 & 7 rafts.	12. Total ...	4	26½ & 708 c. ft.	30½ & 708 c. ft.	3,405	30½ & 708 c. ft.	3,405	
7 & 4 rafts.	13. Total of same month last year.	29 & 48 No.	3	32 & 48 No.	1,081	8 & 48 No.	1,039	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	1	37	38
15. Total number of boats plying passenger No.	1	2	3
15½. Ditto empty boats „	30	5	35
16. Total registered tonnage, cargo and boat Tons	8	53	61
16½. Ditto Govt. boat „	4	4	8
17. Total registered tonnage, passenger Tons	5	10	15
17½. Ditto, empty boats „	39	25	64
18. Ton-mileage ...	172	511	683
19. Estimated value of cargo Rs.	28	3,266	3,294
20. Number of passengers ...	30	20	50
21. Rafts, bamboos C. ft.	.....	.....	.....
22. Do., bullahs „	.....	708	708
23. Estimated value of rafts Rs.	.....	111	111
24. Tollage on boats „	3-15-0	9-12-6	13-11-6
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	.....	2-2-6	2-2-6
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3·85
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	1-1-3

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	15 14 0
Total tollage of same month last year ...	9 1 4

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	.....
2. Tollage per month ..	15 14 0
3. Total ...	15 14 0
4. Amount credited in the accounts of the month ...	0 6 0
5. Balance due at the end of the month ...	15 8 0

SOUTH-WESTERN CIRCLE.

MIDNAPORE CANAL.

LENGTH OF CANAL OPEN, 53 MILES

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE. Quantity—Tons. Up.	Down.	Total.	Value. Rupees	PRIVATE. Quantity. Tons.	Value. Rupees.	REMARKS.
711	1. Grain ...	3,957	376	4,333	2,42,149	4,333	2,42,149	
2	2. Cotton ...	.....	4	4	1,800	4	1,800	
16	3. Oilseeds ...	90	72	162	15,234	162	15,234	
91	4. Salt ...	.....	437	437	83,845	437	83,845	
9	5. Piece-goods ...	8	106	114	3,10,770	114	3,10,770	
17	6. Metal	102	85	187	1,51,986	187	1,51,986	
20	7. Building materials	120	8	128	904	128	904	
299	8. Miscellaneous ...	877	667	1,544	2,80,994	1,544	2,80,994	
29	9. Fuel ...	54	355	409	4,890	409	4,890	
0 rafts	10. Timber ...	19,520 c. ft.	40 c. ft.	19,560 c. ft.	10,668	19,560 c. ft	10,668	
6 „	11. Bamboos ...	1,798 „	100 „	1,898 „	182	1,898 „	182	
194 & 3 rafts.	12. Total ...	5,208 & 21,318 c. ft.	2,110 & 140 c. ft.	7,318 & 21,458 c. ft.	11,03,422	7,318 & 21,458 c. ft.	11,03,422	
317 & 1 rafts.	13. Total of same month last year.	6,317 & 33,598 c. ft.	2,132 & 106 c. ft	8,449 & 33,704 c. ft.	10,66,455	8,449 & 33,704 c. ft.	10,66,455	

	Up.	Down.	Total.
. Total number of boats plying cargo No.	895	299	1,194
. Total number of boats plying passenger No.	538	605	1,143
½. Ditto empty „	439	649	1,088
. Total registered tonnage, cargo Tons	11,518	4,567	16,085
. Total registered tonnage, passenger Tons	3,812	3,730	7,542
½. Ditto empty „	1,898	3,138	5,036
. Ton-mileage ..	358,930	207,163	566,093
. Estimated value of cargo Rs.	4,56,942	6,35,630	10,92,572
. Number of passengers ...	4,957	10,478	15,435
. Rafts, bamboos C. ft.	1,798	100	1,898
2. Do., bullahs „	19,520	40	19,560
3. Estimated value of rafts Rs.	10,738	112	10,850
4. Tollage on boats „	5,948-5-3	3,084-3-0	9,032-8-3
5. Compounded tollage on boats Rs.	.....	.....	.....
6. Tollage on rafts „	323	1	324
7. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3
8. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	1-8-2

	Rs.	A.	P.
Total tollage of month—24+25+26 ...	9,356	8	3
Total tollage of same month last year ...	10,992	15	9

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month	2,907	14	1
2. Tollage per month ...	9,356	8	3
3. Total ...	12,264	6	4
4. Amount paid into Treasury during the month ...	6,953	10	6
5. Balance due at the end of the month ...	5,310	11	10

HIDGELLEE TIDAL CANAL.

LENGTH OF CANAL OPEN, 29 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
107	1. Grain ...	618	390	1,008	1,08,979	1,008	1,08,979	
...	2. Cotton ...	.....	.....	.....	.....	.....	...	
5	3. Oilseeds ...	7	7	14	1,100	14	1,100	
22	4. Salt ...	.....	156	156	17,540	156	17,540	
4	5. Piece-goods ...	.....	7	7	9,600	7	9,600	
1	6. Metal ...	.....	3	3	200	3	200	
9	7. Building materials	11	37	48	392	48	392	
599	8. Miscellaneous ...	628	260	888	82,621	888	82,621	
9	9. Fuel ...	3	74	77	960	44	530	
27 rafts	10. Timber ...	592 c. ft.	3,469 c. ft.	4,061 c ft.	4,130	4,061 c. ft	4,130	
...	11. Bamboos ...	.....	.....	.....	.....	.....	... ..	
6 & afts.	12. Total ..	1,267 & 592 c. ft.	934 & 3,469 c. ft.	2,201 & 4,061 c. ft.	2,25,522	2,168 & 4,061 c. ft	2,25,092	
07 & afts.	13. Total of same month last year.	2,431 & 977 c. ft.	488 & 11,932 c. ft	2,919 & 12,909 c. ft.	1,90,994	2,919 & 12,909 c. ft.	1,90,994	

	Up.	Down.	Total.
Total number of boats plying cargo No.	341	415	756
Total number of boats plying passenger No.	57	59	116
Total registered tonnage, cargo Tons	3,125	3,074	6,199
Total registered tonnage, passenger Tons	436	551	987
Ton-mileage	58,218	65,642	123,860
Estimated value of cargo Rs.	86,259	135.133	2,21,392
Number of passengers ...	896	1,527	2,423
Rafts, bamboos C. ft.	.....	.....	.....
Do., bullahs „	592	3,469	4,061
Estimated value of rafts Rs.	610	3,520	4,130
Tollage on boats „	1,018-11-3	1,147-6-9	2,166-2-0
Compounded tollage on boats Rs.	.....	0-5-6	0-5-6
Tollage on rafts „	9-5-3	82-5-0	91-10-3
Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3·3
Total tollage on rafts per 100 cubic feet Rs.	.....	.....	2-4-1

	Rs.	A.	P.
Total tollage of month—24 + 25 + 26 ...	2,258	1	9
Total tollage of same month last year	2,529	2	3

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month ...	1,743	4	9
2. Tollage per month ...	2,258	1	9
3. Total ...	4,001	6	6
4. Amount paid into Treasury during the month ...	2,364	9	9
5. Balance due at the end of the month	1,636	12	9

SONE CIRCLE.

PATNA CANAL SYSTEM.

LENGTH OF CANAL OPEN, 86¼ MILES.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
7	1. Grain ..	1	79	80	4,812	80	4,812	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
1	3. Oilseeds ...	.....	17	17	1,812	17	1,812	
4	4. Salt ...	71	.....	71	5,666	71	5,666	
28	5. Piece-goods ...	192	11	203	36,324	203	36,324	
3	6. Metal ...	33	.....	33	2,456	33	2,456	
10	7. Building materials	7	67	74	440	45	200	
42	8. Miscellaneous ...	99	253	352	59,346	260	58,992	
...	9. Fuel .	.....	.....	.....	.....	.....	.....	
...	Do. ...	.....	33	33	295	33	295	
6	10. Timber ...	99	.....	99	3,520	.....	.....	
...	Do. ...	.....	52	52	553	52	553	
..	11. Bamboos ...	.....	84	84	1,294	84	1,294	
101	12. Total ...	502	596	1,098	1,16,518	878	1,12,404	
176	13. Total of same month last year ...	474	1,312	1,786	1,85,469	1,403	1,84,333	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	54	47	101
15. Total number of boats plying passenger No.	9	15	24
15½. Ditto empty „	46	38	84
16. Total registered tonnage, cargo Tons	838	664	1,502
17. Total registered tonnage, passenger Tons	140	189	329
17½. Ditto empty „	217	166	383
18. Ton-mileage ...	68,310	61,990	130,300
19. Estimated value of cargo Rs.	55,738	58,638	1,14,376
20. Number of passengers ...	386½	599	985½
21. Rafts, bamboos C. ft.	.....	12,610	12,610
22. Do., bullahs „	.....	6,372	6,372
23. Estimated value of rafts Rs.	.....	2,142	2,142
24. Tollage on boats „	564-0-9	333-6-6	897-7-3
25. Compounded tollage on boats Rs.	75-0-0	75-0-0	150-0-0
26. Tollage on rafts „	.....	83-14-3	83-14-3
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-1·56
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-7-0

	Rs.	A.
Total tollage of month—24 + 25 + 26 ...	1,131	5
Total tollage of same month last year ...	1,760	2

Memorandum of Tollage.

	Rs.	A.
1. Balance not recovered on the 1st of the month ...	135	11
2. Tollage per month ...	1,131	5
3. Total ...	1,267	1
4. Amount credited in the accounts of the month	949	4
5. Balance due at the end of the month ...	317	13

ARRAH CANAL SYSTEM.

LENGTH OF CANAL OPEN, 65 MILES.

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
11	1. Grain ...	... ..	149	149	11,789	149	11,789	
...	2. Cotton ...	... ..	.....	.....	.....	.. ...	.....	
...	3. Oilseeds ...	1	1	2	492	2	492	
27	4. Salt ...	377	.. ...	377	44,886	377	44,886	
...	5. Piece-goods .	24	4	28	39,650	28	39,650	
1	6. Metal ..	5	.....	5	20,640	5	20,640	
7	7. Building materials	.....	84	84	348	77	328	
119	8. Miscellaneous ...	22	889	911	36,787	153	35,560	
8	9. Fuel ...	57	54	111	1,300	54	750	
...	10. Timber ...	2	2	4	435	4	435	
...	Do. ..	... ..	2	2	415	2	415	
...	11. Bamboos ..	.....	23	23	377	23	377	
...	Bullahs ..	.....	8	8	125	8	125	
...	Firewood ...	.....	680	680	4 918	680	4,918	
173	12. Total ...	488	1,896	2,384	1,61,962	1,562	1,60,365	
148	13. Total of same month last year.	590	1,373	1,963	1,92,312	1,547	1,87,489	

	Up.	Down.	Total.
4. Total number of boats plying cargo No.	36	137	173
5. Total number of boats plying passenger No.	...	2	2
5½. Total number of empty boats No.	87	7	94
6. Total registered tonnage, cargo Tons	830	2,134	2,964
7. Total registered tonnage, passengers Tons	65	67	132
7½. Total registered tonnage, empty Tons	400	26	426
8. Ton-mileage ...	49,226	79,516	128,742
9 Estimated value of cargo Rs.	1,01,355	54,772	156,127
10. Number of passengers ...	911	856	1,767
11. Rafts, bamboos C.ft.	.....	3,510	3,510
11½. Do, timber „	.....	164	164
12. Do., bullahs „	.....	650	650
12½. Do., firewood „	.....	51,015	51,015
13. Estimated value of rafts Rs.	.....	5,835	5,835
14. Tollage on boats „	273-12-9	370-12-3	644-9-0
15. Compounded tollage on boats Rs.	228-0-0	228-0-0	456-0-0
16. Tollage on rafts „	.....	85-4-6	85-4-6
17. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-1·64
18. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-2-5

	Rs. A. P.
Total tollage of month—24 + 25 + 26 ...	1,185 13 6
Total tollage of same month last year ...	1,502 4 11

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month	296 10 9
2. Tollage per month ...	1,185 13 6
3. Total ...	1,482 8 3
4. Amount credited in the accounts of the month	1,246 3 6
5. Balance due at the end of the month ...	236 4 9

BUXAR CANAL SYSTEM.

LENGTH OF CANAL OPEN, 67 MILES

Number of boats or rafts.	DESCRIPTION.	TOTAL GOVERNMENT AND PRIVATE.				PRIVATE.		REMARKS.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
12	1. Grain ...	66	178	244	15,168	244	15,168	
...	2. Cotton ...	2	1	3	4,350	3	4,350	
1	3. Oilseeds ...	.....	6	6	400	6	400	
...	4. Salt ...	1	.....	1	340	1	340	
...	5. Piece-goods ...	1	1	2	2,900	2	2,900	
...	6. Metals ...	3	1	4	10,310	4	10,310	
1	7. Building materials	1	7	8	274	8	274	
22	8. Miscellaneous ...	9	191	200	13,968	200	13,968	
...	9. Fuel ...	.....	.....	.....	.....	.....	.....	
...	10. Timber ...	...	94	94	1,102	94	1,102	
...	11. Bamboos ...	... ..	299	299	7,077	299	7,077	
36	12. Total ..	83	778	86	55,889	861	55,889	
54	13. Total of same month last year.	39	847	886	1,08,234	879	1,07,984	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	3	33	36
15. Total number of boats plying passenger No.	7	9	16
15½. Ditto empty „	25	4	29
16. Total registered tonnage, cargo Tons	104	896	1,000
17. Total registered tonnage, passenger Tons	189	206	395
17½. Ditto empty „	115	10	125
18. Ton-mileage ...	9,828	9,244	19,072
19 Estimated value of cargo Rs.	19,225	28,485	47,710
20. Number of passengers ...	460	670	1,130
21. Rafts, bamboos C. ft.	.....	44,887	44,887
22. Do., bullahs „	.....	7,049	7,049
23. Estimated value of rafts Rs.	.....	8,179	8,179
24. Tollage on boats „	82-0-3	135 8-6	217-8 9
25. Compounded tollage on boats Rs	107-0-0	107-0-0	214-0-0
26. Tollage on rafts „	.....	204-11-3	204-11-3
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-4·34
28. Total tollage on rafts per 100 cubic feet Rs.	.....	.....	0-6-3

	Rs.	A.
Total tollage of month—24 + 25 + 26 ..	636	4
Total tollage of same month last year ...	601	13

Memorandum of Tollage.

	Rs.	A.
1. Balance not recovered on the 1st of the month ...	21	9
2. Tollage per month ...	636	4
3. Total ...	657	13
4. Amount credited in the accounts of the month ...	656	1
5. Balance due at the end of the month ...	1	11

ABSTRACT, FOR THE MONTH OF NOVEMBER 1889 AS COMPARED WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR.

Canal.	Traffic, 1889-90.		Traffic, 1888-89.		Remarks.
	During the month.	To end of the month.	During the month.	To end of the month.	
Orissa Circle.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Taldunda Canal System ...	55 12 6	2,690 14 7	133 14 0	1,408 0 9	
Kendrapara Canal System	4,784 5 3	30,500 13 7	4,657 12 8	29,426 3 1	
High Level, Range I ...	557 15 4	4,525 0 7	451 1 9	3,824 15 6	
Ditto, „ II ...	226 5 9	1,928 7 3	140 12 3	1,605 1 6	
Ditto, „ III ...	109 0 9	922 9 3	49 8 6	765 3 6	
Jajepore Canal ...	15 14 0	66 3 8	9 1 4	48 6 10	
Total Orissa Circle ...	5,749 5 7	40,634 0 11	5,442 2 6	37,077 15 2	
South-Western Circle.					
Midnapore Canal ..	9,356 8 3	95,279 12 6	10,992 15 9	88,077 7 6	
Hidgellee Tidal Canal ...	2,258 1 9	33,420 11 6	2,529 2 3	42,330 1 6	
Total South-Western Circle	11,614 10 0	1,28,700 8 0	13,522 2 0	1,30,407 9 0	
Sone Circle.					
Patna Canal System ..	1,131 5 6	16,732 15 0	1,760 2 6	18,049 1 6	
Arrah ditto ...	1,185 13 6	12,452 15 2	1,502 4 11	13,676 15 5	
Buxar ditto ...	636 4 0	4,734 0 5	601 13 6	6,256 15 6	
Total Sone Circle ...	2,953 7 0	33,919 14 7	3,864 4 11	37,983 0 5	
Grand Total ...	20,317 6 7	2,03,254 7 6	22,828 9 5	2,05,468 8 7	

GOVERNMENT TRANSPORT SERVICE.

Canal.	Traffic, 1889-90.						Traffic, 1888-89.					
	During the month.			To end of the month.			During the month.			To end of the month.		
	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.	Passengers.	Goods.	Total receipts.
Orissa Circle.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.	No.	Mds.	Rs. A. P.
High Level	700	538	1,940 12 4	4,621	4,806	6,105 10 3	733	694	873 0 10	3,194	1,963	3,601 12 4
Total Orissa Circle ...	700	538	1,940 12 4	4,621	4,806	6,105 10 3	733	694	873 0 10	3,194	1,963	3,601 12 4

TOTAL NAVIGATION RECEIPTS.

Canal.	Earnings, 1889-90.		Earnings, 1888-89.		Remarks.
	During the month.	To end of the month.	During the month.	To end of the month.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Orissa Canals ...	7,690 1 11	46,739 10 14	6,315 3 4	40,679 11 6	
Midnapore Canal ...	9,356 8 3	95,279 12 6	10,992 15 9	88,077 7 6	
Hidgellee Tidal Canal ...	2,258 1 9	33,420 11 6	2,529 2 3	42,330 1 6	
Sone Canals ...	2,953 7 0	33,919 14 7	3,864 4 11	37,983 0 5	
Total ...	22,258 2 11	2,09,360 1 9	23,701 10 3	2,09,070 4 11	

Calcutta,
The 18th February 1890.

G. A. G. Shawe,
Under-Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

NUDDEA RIVERS.

Statement showing quantities of Goods carried during the month of December 1889.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
486	1. Grain ...	833·50	3,417·00	4,250·50	2,67,739	4,250·50	2,67,739	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
66	3. Oilseeds ...	5 00	844·50	849·50	94,900	849·50	94,900	
318	4. Salt ...	2,921 00	.....	2,921·00	2,49,056	2,921·00	2,49,056	
...	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
19	6. Metal	119·75	21·00	140·75	71,575	140·75	71,575	
21	7. Building materials	6·00	39·00	107·00	1,069	107 00	1,069	
1,050	8. Miscellaneous ...	2,326·37	7 978·63	10 305·00	17,37,375	10,305·00	17,37,375	
74	9. Fuel ...	833·00	133·37	966·37	12,633	966·37	12,633	
33 rafts	10. Timber ...	445 c.ft.	10,845 c. ft.	11,290 c. ft.	32,962	11,290·00 c.ft.	32,962	
2 „	11. Bamboos ...	10 „	2·0 „	210 „	17	210·00 „	17	
2,034 & 35 rafts.	12. Total ...	7,106·62 & 455 c. ft	12,433·50 & 11,945 c. ft.	19,540·12 & 11,500 c. ft.	24,67,326	19,540·12 & 11,500 c.ft	24,67,326	25 maunds passed up on Matabhanga river.
2,113 & 43 rafts.	13. Total of same month last year	7,448 & 432 c. ft.	13,138 & 9,141 c. ft.	20,586 & 9,573 c. ft.	30,42,721	20,586 & 9,573 c. ft.	30,42,721	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	906	1,128	2,034
14*a*. Ditto empty boats, steamers &c. No.	355	190	545
15. Total number of boats plying passenger No.	488	750	1,238
15*a*. Ditto empty boats „	32	28	60
16. Total registered tonnage, cargo Tons	17,636	26,440	44,076
17. Total registered tonnage, passenger Tons	241	371	612
18. Ton-mileage	.....	.....	.....
19. Estimated value of cargo Rs	8,39,783	15,94 582	24,34,347
20. Number of passengers No.	1,153	1,435	2,588
21. Rafts, bamboos C. ft.	10	200	210
22. Do., bullahs „	445	10,845	11,290
23. Estimated value of rafts Rs.	758	32,221	32,979
24 Tollage on boats „	4,258-10-0	6,849-2-6	11,107-12-6
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	3-9-0	200-2-6	203-11-6
27. Total tollage on boats per ton mile* ...	.....	.....	.....
28. Ditto on rafts per 100 cubic feet ... Rs.	.....	.....	1-12-4

	Rs. A. P.
Total tollage of month—24+25+26 ...	11,311 8 0
Total tollage of same month last year ...	11,481 7 0

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month ...	368 15 0
2. Tollage per month ...	11,311 8 0
3. Total ...	11,680 7 0
4. Amount paid into Treasury during the month ...	11,223 5 6
5. Balance due at the end of the month ...	457 1 6

* Boats in these rivers do not pay per mile.

Abstract for the month of December 1889 *as compared with the corresponding month of the previous year.*

	1889-90. During the month.	1889-90. To end of the month.	1888-89. During the month.	1888-89. To end of the month.
	Rs. A. P.	Rs. A P.	Rs. A. P.	Rs. A. P.
Tollage	11,311 8 0	1,57,412 11 9	11,481 7 0	1,65,633 12 2

CALCUTTA,
The 18*th February* 1890.

G. A. G. SHAWE,
Under-Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

ORISSA COAST CANAL SYSTEM.

LENGTH OF CANAL OPEN, 97½ MILES.

Statement showing quantities of Goods carried during the month of December 1889.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value. Rupees.	Remarks.
156	1. Grain ...	1,190	440	1,630	64,422	1,630	64,422	
...	2. Cotton ...	.....	.....	.....	.....	.....	.....	
8	3. Oilseeds ...	55	.....	55	4,940	55	4,940	
23	4. Salt ...	.....	209	209	24,525	209	24,525	
6	5. Piece-goods ...	.....	36	36	6,300	36	6,300	
2	6. Metal ...	1	.....	1	115	.....	.....	
8	7. Building materials	16	5	21	163	15	143	
634	8. Miscellaneous	658	511	1,169	1,29,151	1,168	1,29,056	
16	9. Fuel ...	20	91	111	858	93	733	
9 rafts.	10. Timber ...	1,118 c. ft.	.....	1,118 c. ft.	1,094	1,118 c. ft.	1,094	
2 „	11. Bamboos ...	.....	250 c. ft.	250 „	24	250 „	24	
853 11 rafts	12. Total ...	1,940 & 1,118 c. ft.	1,292 & 250 c. ft	3,232 & 1,368 c. ft.	2,31,592	3,206 & 1,368 c.ft.	2,31,237	
1,043 7	13. Total of same month last year	2,014 & 303 c. ft.	575 & 43 c. ft.	2,589 & 346 c. ft.	1,61,741	2,589 & 346 c.ft.	1,61,741	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	452	401	853
15. Total number of boats plying passenger No.	71	68	139
16. Total registered tonnage, cargo Tons	4,322	3,660	7,982
17. Total registered tonnage, passenger Tons	816	788	1,604
18. Ton-mileage ...	152,315	151,863	3,04,178
19. Estimated value of cargo Rs.	98,773	1,31,701	2,30,474
20. Number of passengers No.	1,579	2,024	3,603
21. Rafts, bamboos C. ft.	.....	250	250
22. Do., bullahs „	1,118	.....	1,118
23. Estimated value of rafts Rs.	1,094	24	1,118
24. Tollage on boats „	2,690-1-3	2,672-15-3	5,363-0-6
25. Compounded tollage on boats Rs.	3-2-0	3-12-0	6-14-0
26. Tollage on rafts „	32-12-0	1-14-0	34-10-0
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3·3
28. Ditto. on rafts per 100 cubic feet Rs.	.....	.....	2-8-5

	Rs. A. P.
Total tollage of month—24+25+26 ...	5,404 8 6
Total tollage of same month last year ...	3,876 8 0

Memorandum of Tollage.

	Rs. A. P.
1. Balance not recovered on the 1st of the month	4,402 10 0
2. Tollage per month ...	5,404 8 6
3. Total ...	9,807 2 6
4. Amount paid into Treasury during the month ...	3,295 9 3
5. Balance due at the end of the month ...	6,511 9 3

Abstract for the month of December 1889 *as compared with the corresponding month of the previous year.*

	1889-90. During the month.	1889-90. To end of the month.	1888-89. During the month.	1888-89. To end of the month.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Tollage	5,404 8 6	43,233 9 0	3,876 8 0	46,019 12 0

CALCUTTA,
The 18th February 1890.

G. A. G. SHAWE,
Under-Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

CALCUTTA AND EASTERN CANALS.

Statement showing quantities of Goods carried during the month of December 1889.

Number of boats or rafts.	Description.	Total Government and Private.				Private.		Remarks.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
473	1. Grain ...	6,366	.....	6,366	6,21,880	6,366	6,21,880	
1	2. Cotton ...	1	.....	1	450	1	450	
20	3. Oilseeds ..	330	3	333	37,537	333	37,537	
360	4. Salt ...	436	6,293	6,729	6,35,850	6,729	6,35,850	
.....	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
10	6. Metal ...	10	50	60	13,850	60	13,850	
171	7. Building materials	5,600	91	5,691	88,187	5,691	88,187	
3,690	8. Miscellaneous*...	39,010	2,204	41,214	52,45,120	41,214	52,45,120	
512	9. Fuel ...	9,456	3,910	13,366	1,02,774	13,366	1,02,774	
... ..	10. Timber ...	.....	.....	.. ...	.....	.....	.....	
2 rafts	11. Bamboos ...	64 c. ft.	.....	64 c. ft.	10	64 c. ft.	10	
5,237 & 2 rafts.	12. Total ...	61,209 & 64 c. ft.	12,551	73,760 & 64 c. ft.	67,45,658	73,760 & 64 c. ft.	67,45,658	* For details, see next page.
5,876 & 1 raft.	13. Total of same month last year.	61,033	12,976 & 40 c. ft	74,009 & 40 c. ft.	62,41,524	74,009 & 40 c. ft.	62,41,524	

	Up.	Down.	Total.
14. Total number of boats plying cargo No.	4,614	623	5,237
14a. Ditto empty boats „	2,054	1,336	3,390
15. Total number of boats plying passenger No.	367	8	375
16. Total registered tonnage, cargo Tons	149,965	38,700	188,665
17. Total registered tonnage, passenger Tons	669	31	700
18. Ton-mileage ...	1,391,880	387,000	1,778,880
19. Estimated value of cargo Rs.	58,18,485	9,27,163	67,45,648
20. Number of passengers No.	1,273	39	1,312
21. Rafts, bamboos C. ft.	64	.....	64
22. Do., bullahs „	.....	.....	.....
23. Estimated value of rafts Rs.	10	... ..	10
24. Tollage on boats „	34,641-12-3	9,489-9-0	44,131-5-3
25. Compounded tollage on boats Rs.	.....	.....	.....
26. Tollage on rafts „	0-8-0	.....	0-8-0
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-4·76
28. Ditto on rafts per 100 cubic feet Rs.	.....	.....	0-12-6

	Rs.	A.	P.
Total tollage of month—24+25+26 ...	44,131	13	3
Total tollage of same month last year ...	45,276	6	0

Memorandum of Tollage.

	Rs.	A.	P.
1. Balance not recovered on the 1st of the month ...	1,295	11	9
2. Tollage per month ...	44,131	13	3
3. Total	45,427	9	0
4. Amount paid into Treasury during the month ...	44,299	1	3
5. Balance due at the end of the month ...	1,128	7	9

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).

CALCUTTA AND EASTERN CANALS.

Number of Boats or rafts.	Description.	Total Government and Private.				Private.		Remarks.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
1,558	(a) Jute ...	33,332	77	33,409	42,09,525	33,409	42,09,525	
76	(b) Jaggery ...	548	41	589	57,750	589	57,750	
3	(c) Sugar ...	36	.....	36	9,000	36	9,000	
2	(d) Tobacco ...	.....	8	8	1,575	8	1,575	
1,230	(e) Fish ...	185	2	187	52,361	187	52,361	
22	(f) Hides ...	28	.....	28	6,388	28	6,388	
50	(g) Poultry ...	5	.....	5	4,392	5	4,392	
87	(h) Hay and straw ...	487	.....	487	11,935	487	11,935	
111	(j) Oil ...	.....	1,769	1,769	2,47,625	1,769	2,47,625	
41	(k) Earthenware ...	90	7	97	1,359	97	1,359	
510	(m) Other miscellaneous ...	4,299	300	4,599	6,43,210	4,599	6,43,210	
3,690	Total Miscellaneous...	39,010	2,204	41,214	52,45,120	41,214	52,45,120	

PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH, BENGAL.

SOUTH-WESTERN CIRCLE.

TOLLY'S NULLAH.

Statement showing quantities of Goods carried during the month of December 1889.

Number of boats or rafts.	Description.	Total Government and Private.				Private.		Remarks.
		Quantity—Tons.			Value.	Quantity.	Value.	
		Up.	Down.	Total.	Rupees.	Tons.	Rupees.	
5,709	1. Grain ...	11,687	.....	11,687	10,82,967	11,687	10,82,967	
15	2. Cotton ...	117	.....	117	58,950	117	58,950	
11	3. Oilseeds ...	163	.....	163	18,650	163	18,650	
65	4. Salt ...	541	353	894	84,459	894	84,459	
.....	5. Piece-goods ...	.....	.....	.....	.....	.....	.....	
.....	6. Metal ...	.....	.....	.....	.....	.....	.....	
291	7. Building materials	2,846	.....	2,846	14,359	2,846	14,359	
985	8. Miscellaneous* ...	5,923	97	6,020	5,15,068	6,020	5,15,068	
160	9. Fuel ...	1,943	18	1,961	15,524	1,961	15,524	
2 rafts	10. Timber ...	7,732 c. ft.	.....	7,732 c. ft.	19,330	7,732 c. ft.	19,330	
3 „	11. Bamboos ...	213 „	.....	213 „	35	213 „	35	
7,236 & 5 rafts.	12. Total ...	23,220 & 7,945 c. ft	468	23,688 & 7,945 c. ft.	18,09,342	23,688 & 7,945 c. ft.	18,09,342	
5,788 & 3 rafts.	13. Total of same month last year ...	19,296 & 2,150 c. ft.	563	19,859 & 2,150 c. ft.	14,52,588	19,859 & 2,150 c. ft.	14,52,588	

* For details, see next page.

	Up.	Down.	Total.
14. Total number of boats plying cargo ... No.	7,162	74	7,236
14*a*. Ditto empty boats „	1,125	289	1,414
15. Total number of boats plying passenger ... No.	398	6	404
16. Total registered tonnage, cargo ... Tons	64,306	3,633	67,939
17. Total registered tonnage, passenger ... Tons	850	15	865
18. Ton-mileage	596,365	58,128	654,493
19. Estimated value of cargo Rs.	17,43,629	46,348	17,89,977
20. Number of passengers No.	2,411	17	2,428
21. Rafts, bamboos C. ft.	213	.....	213
22. Do., bullahs „	7,732	.....	7,732
23. Estimated value of rafts Rs.	19,365	.....	19,365
24. Tollage on boats „	10,384-15-9	876-12-6	11,261-12-3
25. Compounded tollage on boats ... Rs.	.....	.....	.....
26. Tollage on rafts „	38-4-0	.....	38-4-0
27. Total tollage on boats per ton-mile Rs.	.....	.....	0-0-3·30
28. Ditto on rafts per 100 cubic feet ... Rs.	.....	.....	0-7-8

	Rs.	A.
Total tollage of month—24+25+26 ...	11,300	0
Total tollage of same month last year ..	11,477	9

Memorandum of Tollage.

	Rs.	A.
1. Balance not recovered on the 1st of the month ...	233	11
2. Tollage per month ...	11,300	0
3. Total	11,533	11
4. Amount paid into Treasury during the month ...	11,140	13
5. Balance due at the end of the month ...	392	13

ARTICLES OF TRAFFIC INCLUDED IN ITEM 8 (MISCELLANEOUS).
TOLLY'S NULLAH.

Number of boats or rafts.	Description.	Total Government and Private. Quantity—Tons. Up.	Down.	Total.	Value. Rupees.	Private. Quantity. Tons.	Value Rupees.	Remarks.
24	(*a*) Jute ...	186	12	198	24,975	198	24,975	
99	(*b*) Jaggery ...	618	.....	618	60,602	618	60,602	
1	(*c*) Sugar ...	.....	1	1	180	1	180	
18	(*d*) Tobacco ...	152	20	172	33,600	172	33,600	
211	(*e*) Fish ...	16	1	17	4,649	17	4,649	
1	(*f*) Hides ...	4	.....	4	1,000	4	1,000	
4	(*g*) Poultry ...	1	.....	1	368	1	368	
266	(*h*) Hay and straw...	3,071	.....	3,071	13,086	3,071	13,086	
47	(*j*) Oil ...	459	5	464	65,000	464	65,000	
102	(*k*) Earthenware ...	97	3	100	1,398	100	1,398	
212	(*m*) Other miscellaneous.	1,319	55	1,374	3,10,210	1,374	3,10,210	
985	Total Miscellaneous...	5,923	97	6,020	5,15,068	6,020	5,15,068	

ABSTRACT FOR THE MONTH OF DECEMBER 1889, AS COMPARED WITH THE CORRESPONDING MONTH OF THE PREVIOUS YEAR.

	Traffic, 1889-90. During the month.	To end of the month.	Traffic, 1888-89. During the month.	To end of the month.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Calcutta and Eastern Canals ...	44,131 13 3	2,35,334 1 6	45,276 6 0	2,80,654 3 6
Tolly's Nullah	11,300 0 3	67,373 4 9	11,477 9 6	92,840 3 6
Total ...	55,431 13 6	3,02,707 6 3	56,753 15 6	3,73,494 7 0

Calcutta,
The 18th February 1890.

G. A. G. Shawe,
Under-Secretary to the Govt. of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 15th February 1890, *as compared with the corresponding week of the previous year.*

Nature of Cargo.	Week ending Saturday, the 15th February 1890. Number of boats.	Weight of cargo.	Tollage.	Week ending Saturday, the 16th February 1889. Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,850	3,71,195	6,429	1,556	4,39,270	7,869
Jute	199	1,33,325	2,401	133	93,725	1,738
Firewood	153	1,04,250	1,468	194	1,26,125	1,851
Other articles	1,038	2,47,710	3,669	1,115	2,30,470	3,653
Total ...	3,240	8,56,480	13,957	2,998	8,88,590	15,111

EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the five weeks and three days ending 31st December 1889, as compared with the same period of 1888.

Staples.	1889.		1888.		Increase.		Decrease.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Animals, living — Horses, ponies, and mules	No. 213	8,714	No. 872	18,592	No.	.....	No. 659	9,878
Animals, living — Cattle	,, 366	1,764	,, 352	3,042	,, 14	.....	,, ...	1,278
Animals, living — Sheep and goats	,, 6,648	5,304	,, 4,207	2,976	,, 2,341	2,328	,, ...	.....
Animals, living — Other kinds	,, ...	.....	,, ...	.....	,, ...	.....	,, ...	.....
Borax	1,680	1,030	620	248	1,060	782	.....	.....
Canes and rattans	.....	.....	.....	.....	.....	.....	.....	.....
Caoutchouc (Indian-rubber)	11	10	9	17	2	.....	.....	7
Chinese and Japanese wares	22	14	46	60	.....	.....	24	46
Coal and coke, up	7,82,277	1,03,726	9,84,837	3,30,666	.....	.....	2,02,560	1,26,940
Coal and coke, Ditto, down	29,84,961	3,97,539	35,72,461	4,91,369	.....	.....	5,87,500	93,830
Cotton, raw	3,98,077	2,26,535	2,04,689	2,21,063	1,54,288	5,472	.....	.....
Cotton, manufactured — Twist and yarn (European)	11,134	13,309	11,036	13,423	98	.....	.....	114
Cotton, manufactured — Ditto (Indian)	17,328	11,549	20,499	13,779	.....	.....	3,171	2,230
Cotton, manufactured — Piece-goods (European)	1,02,448	1,73,378	1,89,325	2,10,858	.....	.....	26,877	37,480
Cotton, manufactured — Ditto (Indian)	34,119	19,105	33,968	20,466	151	.....	.....	1,361
Drugs and medicines — Asafœtida	316	196	1,389	963	.....	.....	1,073	767
Drugs and medicines — Other sorts, not intoxicating	2,185	2,925	2,838	3,146	.....	.....	653	223
Drugs and medicines — Intoxicating drugs (other than opium, i.e., arsenic, bhang, ganja, and charas, &c.)	932	682	771	833	161	.....	.....	151
Dyeing materials — Indigo	88,355	1,05,019	1,08,706	1,35,508	.....	.....	20,351	30,489
Dyeing materials — Madder or manjit	3	1	24	4	.....	.....	21	3
Dyeing materials — Safflower	87	151	87	121	.....	30	.....	.....
Dyeing materials — Turmeric	11,410	6,529	10,031	5,649	1,379	880	.....	.....
Dyeing materials — Other kinds	8,009	5,340	12,509	7,839	.....	.....	4,500	2,490
Earthenware and porcelain	985	1,938	1,075	2,088	.....	.....	90	150
Fibrous products — Jute, raw	88,183	17,044	1,46,682	28,996	.....	.....	58,499	11,952
Fibrous products — Do., manufactured (gunny bags and cloths).	1,01,347	55,990	85,351	45,410	15,996	10,580	.....	.....
Fibrous products — Other fibres, raw	43,051	13,596	41,758	9,992	1,293	3,604	.....	.....
Fibrous products — Ditto, manufactured	2,851	1,249	3,481	1,520	.....	.....	630	271
Fruits & Nuts — Cocoanuts	9,213	4,512	8,842	4,324	371	188	.....	.....
Fruits & Nuts — All other kinds	71,147	52,921	64,343	54,679	6,794	.....	.....	1,758
Grain & Pulses — Wheat	3,15,870	1,07,457	2,72,790	62,657	43,080	44,780	.....	.....
Grain & Pulses — Gram and pulses	4,54,720	1,20,785	2,50,950	65,295	2,03,770	55,490	.....	.....
Grain & Pulses — Rice, husked	10,62,656	1,68,608	10,00,026	2,20,328	62,610	.....	.....	51,720
Grain & Pulses — Do., unhusked	6,175	2,402	36,755	4,702	.....	.....	30,580	2,300
Grain & Pulses — Other rain and spring crops	1,97,424	34,642	1,27,494	18,332	69,930	16,310	.....	.....
Gums and resins	5,806	4,675	6,514	3,685	.....	990	708	.....
Hides & Skins — Hides of cattle	67,828	36,443	94,403	56,173	.....	.....	26,575	19,730
Hides & Skins — Skins of sheep, goats, and small animals.	18,424	8,725	19,442	10,378	.....	.....	1,018	1,653
Horns	623	175	902	454	.....	.....	339	279
Lac — Lac, dye	804	242	592	216	262	26	.....	.....
Lac — Do., shell	18,855	12,782	21,472	15,573	.....	.....	2,617	2,791
Lac — Do., stick and other kinds	23,156	7,103	31,274	9,897	.....	.....	8,118	2,794
Leather — Leather, unmanufactured	2,227	4,632	2,502	5,202	.....	.....	275	570
Leather — Ditto, manufactured	3,083	5,004	3,749	6,145	.....	.....	666	1,142
Liquors	20,138	21,820	23,966	20,072	.....	1,757	3,828	.....
Mats	576	349	693	366	.....	.....	117	17
Metals and Manufactures of — Brass and copper	34,426	23,557	23,094	13,127	11,332	10,430	.....	.....
Metals and Manufactures of — Iron	1,56,801	98,729	1,51,824	89,608	4,977	9,121	.....	.....
Metals and Manufactures of — Other metals	8,807	7,707	7,537	6,432	1,270	1,275	.....	.....
Oils	1,46,062	81,341	97,000	51,540	49,062	29,801	.....	.....
Opium	88,528	90,925	68,202	70,775	20,326	20,150	.....	.....
Paints and colours	10,679	2,337	2,779	2,296	8,100	41	.....	.....
Provisions — Ghee	44,568	28,768	40,507	24,909	3,951	3,859	.....	.....
Provisions — Other kinds	8,8.3	9,094	9,491	9,638	.....	.....	638	544
Railway materials, Construction Account	46,342	2,151	1,04,387	5,072	.....	.....	58,045	2,921
Railway materials, Ditto ditto, Foreign	1,14,642	60,216	1,77,455	69,470	.....	.....	62,913	9,254
Salt	6,26,802	1,18,039	6,08,074	1,13,063	18,728	4,976	.....	.....
Saltpetre, &c. — Saltpetre	85,100	35,455	1,00,824	40,200	.....	.....	15,724	4,765
Saltpetre, &c. — Other saline substances	12,387	4,170	14,769	4,312	.....	.....	2,382	142
Seeds — Oil-seeds — Linseed	2,38,771	70,994	5,27,151	1,55,233	.....	.....	2,88,380	84,249
Seeds — Oil-seeds — Mustard and rape	2,47,489	49,776	1,57,740	30,846	1,09,740	18,930	.....	.....
Seeds — Oil-seeds — Til or ginjelly	56,138	11,204	28,048	5 134	27,590	6,070	.....	.....
Seeds — Oil-seeds — Other oilseeds	77,7 0	23,444	96,620	28,764	.....	.....	18,920	5,320
Seeds — Other seeds — Indigo seed	53,075	11,714	28,125	6,294	25,550	5,420	.....	.....
Seeds — Other seeds — Tea seed	60	44	77	47	.....	.....	17	3
Seeds — Other seeds — Other kinds	1,04,507	25,318	59,167	17,568	45,340	7,750	.....	.....
Silk — Silk, raw	2,174	1,285	1,672	983	502	302	.....	.....
Silk — Do., manufactured (European)	.....	.....	.....	.....	.....	.....	.....	.....
Silk — Do., ditto (Indian)	140	34	563	471	.....	.....	423	437
Spices	14,373	10,305	11,928	8,299	2,445	2,006	.....	.....
Stone and marble	2,09,974	24,129	1,32,491	19,954	77,483	4,195	.....	.....
Sugar — Sugar, refined	99,340	16,031	1,25,454	24,207	.....	.....	26,114	8,176
Sugar — Do., unrefined	5,56,603	99,779	3,29,698	66,204	2,26,905	33,515	.....	.....
Tea — Tea, Indian	5,580	4,966	6,742	7,639	.....	.....	1,162	2,673
Tea — Do., Foreign	6	1	.....	.....	6	1	.....	.....
Tobacco	42,962	22,587	39,407	21,283	3,555	1,304	.....	.....
Wood — Timber	65,420	11,694	29,190	5,837	36,230	5,857	.....	.....
Wood — Firewood	42,756	3,378	27,661	2,079	15,095	1,299	.....	.....
Wool — Wool, raw	4,275	4,091	1,643	1,250	2,633	2,841	.....	.....
Wool — Do., manufactured (European).	1,995	2,460	2,063	2,602	.....	.....	68	142
Wool — Wool, manufactured (Indian)	2,842	3,192	3,644	4,372	.....	.....	802	1,182
Wool — Shawls	8	41	10	49	.....	.....	2	8
All other articles of merchandise	3,38,823	1,94,513	4,55,038	1,85,430	.....	9,083	1,16,215	.....
Bones	47,214	12,893	25,777	6,266	21,437	6,627	.....	.....
Potatoes	1,11,260	56,378	90,572	50,322	14,697	6,051	.....	.....
Minerals	1,92,310	31,489	1,24 796	23,630	67,523	7,859	.....	.....
Government stores	32,457	58,378	30,497	50,950	1,960	7,448	.....	.....
Total	1,09,53,123	31,68,580	1,13,18,246	33,53,223	13,07,512	3,49,428	15,72,635	5,34,071

General remarks on the fluctuation of principal staples carried over the East Indian Railway during month ended 31st December 1889.

INCREASES.

Cotton.—The increase under this head was due to increased despatches to Bombay and to Calcutta.

Gunny.—This increase was due to an improved market for gunny for bagging rice and baling cotton, and was principally in despatches from Howrah to Sahebgunge, Cawnpore, and the Great Indian Peninsula and North-Western Railways.

Government stores.—Due to fluctuations in Government requirements; the increased despatches were principally from Howrah and Chitpore.

Minerals.—Principally in kunkur from Rajbandh to Burdwan and other stations, and in lime from Raneegunge to the jetties for the Kidderpore Docks.

Brass and copper.—The increase was chiefly in the unmanufactured articles from Howrah, owing to cheaper prices than in 1888.

Iron.—The increase was principally due to the carriage at a specially reduced rate of a large quantity of old iron rails sold for delivery in Howrah, and also to increased despatches from Howrah to Agra and Allahabad for the new Water Works.

Oil.—This increase was entirely in kerosine oil from Howrah.

Opium.—Due to despatches of opium from the Government factories having been kept back during the previous month owing to unsettled weather.

Ghee.—Principally in despatches from stations in the North-Western Provinces to Howrah

Salt.—The principal fluctuations were in country salt crossing this Railway at Cawnpore, Agra, and Delhi.

Stone.—Principally in short distance despatches from Asansol, Durgapur, Pakur, Bindhachal, Agra.

Sugar and jaggree.—Chiefly in despatches from stations on the Gya line.

Timber.—Principally in sleepers from Howrah to Mokameh.

Bones.—Principally in bones from stations in the North-Western Provinces to Bally for the crushing mills.

Potatoes.—The increase was chiefly in hill potatoes from the Rohilkhund-Kumaon Railway, and in despatches from Dinapore and Digha Ghât.

Wheat.—Due to a slight demand for export to Europe during the early part of the month.

Grain and pulses.—The increase was due to considerable despatches from stations on the loop line and on the Dinapore district; also from the Oudh and Rohilkhund Railway *viâ* Mogul Serai; and from stations between Allahabad and Agra to Howrah and Bombay.

Other rain and spring crops.—Due partly to a good demand in Calcutta supplied from stations on the Dinapore district and the Oudh and Rohilkhund Railway; but the principal increase was in despatches from Cawnpore and Mankar to Agra for local consumption.

DECREASES.

Coal and coke.—There was a decrease both in the upward and downward despatches. In downwards traffic the decrease was principally in coal for export.

Horses.—Due to an exceptional horse traffic having been carried last year.

Piece-goods.—The decrease was principally in despatches from Howrah to Cawnpore, Delhi, and other stations in the North-Western Provinces and the Punjab.

Indigo.—The decline follows a large increase in November 1889.

Jute.—The decrease was principally from the Purneah district *viâ* Sahebgunge owing to poor crops.

Hides.—Supplies are reported to be scarce, and there is little demand from Europe.

Lac.—The traffic in shed and stick lac has shown a decline throughout the half year.

Railway material, Foreign.—Due to limited despatches for the Bengal-Nagpore and Delhi-Umballa-Kalka Railways.

Saltpetre.—The falling off was in despatches from the Tirhoot State Railway.

Seeds.—The decrease was entirely in linseed owing to exhaustion of stocks.

Rice (husked and unhusked).—There was an increase in the weight carried attended with a decrease in the freight earned, and this was due to short lead traffic.

N. ST. L. CARTER, *Traffic Manager.*

TRAFFIC MANAGER'S OFFICE, CALCUTTA, 12*th February* 1890.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 8th February 1890, on 1,525¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	269,943	3,01,366 2 0	26,08,851 0	6,30,700 2 6	20,261 15 0	9,52,328 3 6	66,100	95,401½	161,501½
Or per mile of railway ...	.....	197 8 10	.....	413 7 0	13 4 6	624 4 4	.....	.....	... ...
For previous 5 weeks of half-year	1,200,108	13,66,340 4 0	1,16,33,098 20	26,63,892 14 6	91,361 14 0	41,21,795 0 6	301,058	413,576	715,234
Total for 6 weeks ...	1,470,051	16,67,706 6 0	1,42,01,949 20	32,94,593 1 0	1,11,723 13 0	50,74,123 4 0	367,848	508,977½	876,825½
COMPARISON.									
Total for corresponding week of previous year	277,103	3,17,571 15 4	29,03,918 0	6,03,029 15 6	15,849 7 3	9,36,451 6 1	68,771	97,635	166,406
Per mile of railway corresponding week of previous year ...	.....	208 2 10	.....	395 4 9	10 6 3	613 13 10	.....	.....	.....
Total to corresponding date of previous year	1,427,207	16,94,044 13 5	1,62,45,787 30	35,55,699 7 3	86,919 0 5	53,37,263 5 1	379,803	569,099	948,902

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI. Railway, dated 23rd July 1883.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 9th February 1889.			Total receipts from 1st April 1889 to 8th February 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,396½	9,36,451	614	1,525½	9,52,328	624	1,525½	3,78,76,988	552	1,525½	3,76,35,190	548	.....	2,41,798

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 8th February 1890, on 57½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	12,081	6 993 2 0	37,864 30	2,301 14 0	52 0 0	9,427 0 0	1,807	603	2,410
Or per mile of railway	211	122 1 4	662 0	41 13 1	0 14 6	164 12 11	.....	.....	.....
For previous 5 weeks of half-year	59,120	30,584 6 0	1,61,080 20	10,933 11 0	232 8 0	41,750 9 0	8,061	3,449	11,510
Total for 6 weeks ...	71,201	37,567 8 0	1,98,945 10	13,325 9 0	284 8 0	51,177 9 0	9,868	4,052	13,920
Comparison									
Total for corresponding week of previous year	12,453½	6,591 1 6	22,192 10	1,634 8 0	39 5 3	8,264 14 9	1,031	463	2,394
Per mile of railway corresponding week of previous year ...	218	115 3 8	388 0	28 9 2	0 11 0	144 7 10	.....	.....	.....
Total to corresponding date of previous year	70,292	37,154 5 6	1,77,389 20	10,176 4 0	200 6 9	47,531 0 3	11,018	3,350	14,368

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 9th February 1889.			Total receipts from 1st April 1889 to 8th February 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	8,265	144	57½	9,427	165	57½	4,16,289	102	57½	4,33,609	108	17,320	.....

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 8th February 1890, on 22¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	24,561	5,274 6 0	19,605 20	503 0 0	7 11 0	5,845 1 0	890	78	968
Or per mile of railway ...	.....	237 0 10	.....	25 4 10	0 5 6	262 11 2	.....	.....	.....
For previous 5 weeks of half-year	88,641	22,305 1 0	53,403 20	2,096 8 0	33 15 0	24,345 8 0	4,119	319	4,438
Total for 6 weeks ...	113,202	27,579 7 0	73,128 0	2,599 8 0	41 10 0	30,190 9 0	5,009	397	5,406
Comparison.									
Total for corresponding week of previous year	20,748	5,410 0 0	7,878 30	270 11 0	10 12 0	5,700 7 9	925	43	968
Per mile of railway corresponding week of previous year ...	... ...	243 8 10	.....	12 2 8	0 7 9	256 3 3	.....	.....	.....
Total to corresponding date of previous year	111,516	28,213 2 4	52,470 10	1,521 1 0	41 15 9	30,076 3 1	5,159	363	5,522

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 9th February 1889.			Total receipts from 1st April 1889 to 8th February 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
22½	5,700	256	22½	5,845	263	22½	2,36,958	237	22½	2,34,187	234	.....	2,771

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 1st February 1890, on 747 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	147,780	80,670 0 0	6,83,760 0	1,29,910 0 0	20,820 0 0	2,37,430 0 0	22,981	33,487	56,468
Or per mile of railway ...	198	108 0 0	915 0	174 0 0	*13 0 0	295 0 0	... ..	.....	.....
For previous 4 weeks of half-year	556,510	2,74,260 0 0	23,12,320 0	5,37,600 0 0	57,190 0 0	8,69,050 0 0	82,113	132,118	214,261
Total for 5 weeks ...	704,290	3,54,930 0 0	29,96,080 0	6,67,510 0 0	84,010 0 0	11,06,480 0 0	105,124	165,605	270,729
COMPARISON.									
Total for corresponding week of previous year	129,664	70,325 0 0	5,40,724 0	87,188 0 0	25,200 0 0	1,91,803 0 0	22,385	24,430	46,815
Per mile of railway corresponding period of previous year ..	193	118 0 0	803 0	130 0 0	*12 0 0	260 0 0	.....	.....	.....
Total to corresponding date of previous year	654,769	3,38,364 0 0	24,26,800 0	5,22,488 0 0	78,157 0 0	9,39,009 0 0	103,018	135,537	238,555

* Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR WEEK ENDING 2ND FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 1ST FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 2ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 1ST FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
673	1,91,803	285	747	2,37,130	318	673	91,81,398	310	725	*97,32,715	305	5,51,317	.....

* Audited up to week ending 14th December 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 1st February 1890, on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	24,840	11,850 0 0	58,140 0	2,830 0 0	90 0 0	14,770 0 0	3,736	1,936	5,672
Or per mile of railway	198	95 0 0	465 0	22 0 0	1 0 0	118 0 0	...	.....	.....
For previous 4 weeks of half-year	98,490	37,080 0 0	1,48,100 0	9,470 0 0	270 0 0	46,820 0 0	13,342	6,916	20,258
Total for 5 weeks ...	123,330	48,930 0 0	2,01,240 0	12,300 0 0	360 0 0	61,590 0 0	17,078	8,852	25,930
COMPARISON.									
Total for corresponding week of previous year	24,856	9,113 0 0	55,623 0	2,454 0 0	76 0 0	11,643 0 0	3,739	1,941	5,680
Per mile of railway corresponding period of previous year ...	199	73 0 0	444 0	19 0 0	1 0 0	93 0 0	....	.....	.....
Total to corresponding date of previous year	122,906	44,005 0 0	2,20,033 0	10,968 0 0	3,075 0 0	58,348 0 0	17,635	9,138	26,773

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

RECEIPTS FOR WEEK ENDING 2ND FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 1ST FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 2ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 1ST FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	11,643	93	125	14,770	118	125	6,04,503	110	125	*6,31,795	115	27,292	.....

* Audited up to week ending 14th December 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 1st February 1890, on 86 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	16,930	5,490 0 0	30,850 0	2,870 0 0	250 0 0	8,610 0 0	2,482	622	3,104
Or per mile of railway	197	64 0 0	359 0	33 0 0	3 0 0	100 0 0	.....	.....	.....
For previous 4 weeks of half-year	61,300	22,880 0 0	1,31,100 0	13,470 0 0	700 0 0	37,050 0 0	8,854	3,498	12,352
Total for 5 weeks ...	78,230	28,370 0 0	1,61,950 0	16,340 0 0	950 0 0	45,660 0 0	11,336	4,120	15,456
Comparison.									
Total for corresponding period of previous year			15,567 0	1,515 0 0	227 0 0	6,550 0 0	2,482	622	3,104
Per mile of railway corresponding period of previous year	16,745	4,778 0 0	181 0	18 0 0	3 0 0	76 0 0	.....	.....	.....
Total to corresponding date of previous year	195	55 0 0	59,642 0	6,336 0 0	690 0 0	29,118 0 0	11,727	2,039	14,066
	73,704	22,092 0 0							

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for week ending 2nd February 1889.			Receipts for week ending 1st February 1890.			Total receipts from 1st April 1888 to 2nd February 1889.			Total receipts from 1st April 1889 to 1st February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	6,550	76	86	8,610	100	86	2,52,592	67	86	*3,30,582	87	77,990	.....

* Audited up to week ending 14th December 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 8th February 1890, on 27¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs A. P.			
Total traffic for the week ...	3,160	1,132 0 0	10,972 0	641 0 0	15 0 0	1,788 0 0	509	254	763
Or per mile of railway	123	42 0 0	403 0	23 0 0	1 0 0	66 0 0	.....	.....	.....
For previous 4 weeks of half-year	13,804	4,839 0 0	65,437 0	4,036 0 0	65 0 0	8,940 0 0	2,327	1,161	3,488
Total for 5 weeks ...	17,164	5,971 0 0	76,409 0	4,677 0 0	80 0 0	10,728 0 0	2,836	1,415	4,251
Comparison.									
Total for corresponding week of previous year	3,400	1,431 0 0	18,155 0	1,035 0 0	12 0 0	2,478 0 0	509	636	1,145
Per mile of railway corresponding week of previous year ...	125	53 0 0	666 0	38 0 0	.....	91 0 0	.....	.....	.....
Total to corresponding date of previous year	18,354	6,913 0 0	92,864 0	4,917 0 0	97 0 0	11,927 0 0	2,908	3,274	6,182

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 9th February 1889.			Total receipts from 1st April 1889 to 8th February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27¼	2,478	91	27¼	1,788	66	27¼	87,168	74	27¼	86,536	74	.....	632

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 8th February 1890, on 273 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	77,541	a36,163 0 0	2,41,587 0	28,645 0 0	4,898 0 0	69,706 0 0	7,302	8,328	15,630
Or per mile of railway	284	133 0 0	885 0	105 0 0	3 0 0	241 0 0*	.....	.....	.....
For previous 4 weeks of half-year	206,211	91,397 0 0	11,30,650 0	1,26,813 0 0	23,878 0 0	2,41,788 0 0	28,066	39,750	67,816
Total for 5 weeks ...	283,752	127,560 0 0	13,72,237 0	1,55,458 0 0	28,476 0 0	3,11,494 0 0	35,368	48,078	83,446
COMPARISON.									
Total for corresponding week of previous year	40,973	16,777 0 0	1,51,932 0	14,391 0 0	3,319 0 0	34,467 0 0	5,973	5,497	11,470
Per mile of railway corresponding week of previous year ...	150	61 0 0	557 0	53 0 0	1 0 0	115 0 0*	.....	.....	.....
Total to corresponding date of previous year	*218,457	81,718 0 0	7,81,278 0	72,173 0 0	17,720 0 0	1,71,611 0 0	31,906	31,203	63,109

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."
a Increase is due to *Maghi Purnamashi* Mela.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 9th February 1889.			Total receipts from 1st April 1889 to 8th February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
273	34,467	126	273	69,706	255	264·87	14,21,114	125	273	17,98,430	163	3,77,316	.....

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APPENDIX TO

The Calcutta Gazette

WEDNESDAY, FEBRUARY 19, 1890.

[Third Publication.]

PUBLIC WORKS DEPARTMENT,—MARINE.

NOTIFICATION.

No. 23 Marine, dated Calcutta, the 30th January 1890.

UNDER the powers conferred upon him by section 36 of the Indian Steam-ships Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to Engineers of sea-going steam-ships.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates of competency granted to persons who pass requisite examinations.

1. Certificates of competency will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose Examiners have been appointed, and arrangements have been made for holding the examinations periodically at the Port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint

Examinations continued till all the candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the candidates who have then presented themselves and whose names appear upon the Port Officer's list on the day of examination are examined.

Application how to be made.

3. The application for examination is to be made on Form Exn. 3, which must be filled up at the Port Office. The Form Exn. 3 properly filled in, together with the Candidate's Indentures of Apprenticeship, testimonials, and discharges, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials required.

4. Applicants will be required to produce, in addition to the usual Forms of Discharge, satisfactory testimonials as to sobriety, experience, ability, and general good conduct for at least the 12 months immediately preceding the date of application to be examined, and without producing them no person will be examined. If the service has been on shore, the testimonial must be signed by an Employer; if at sea, by the Master and Chief Engineer.

5. In cases where a testimonial from the Chief Engineer, or from the Master, is for any sufficient reason not obtainable, one may be submitted from the Superintending Engineer in place of that of the Chief Engineer, and one from the Managing Owner or Secretary or Chairman of a large Company in place of that of the Master, but in every such instance the testimonial must declare that the facts stated are in accordance with the reports made by the Chief Engineer or the Master, as the case may be, or else that the facts are within the writer's personal knowledge.

6. As such testimonials may have to be verified before the Candidate can be examined, it is desirable that they should be handed in, together with the Form Exn. 3, as early as possible.

Testimonials of Foreigners.

7. The testimonials of servitude of Foreigners and of British Seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificate as to age.

8. Should any doubt exist as to the age of a Candidate, he will be required to produce a Certificate of Birth or Baptism.

Foreigners to know English.

9. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel.

Verification of services, &c., by Articles.

10. Services which cannot be verified by proper entries in the Articles of the Ships in which the Candidates have served cannot be counted.

Service on a lake or river.

11. In addition to the required workshop time, service on a lake or river, in a steamer in which the aggregate piston area of the propelling engines proper amounts to at least 2,000 (two thousand) circular inches will be accepted towards qualifying a candidate to be examined for a certificate of competency as follows:—

Two months of river or lake service, in a capacity not lower than that of Third Engineer, may be deemed equivalent to one month of sea service, provided that,

For a Second Class Certificate, not less than three months of the qualifying service must be actual sea service, and that,

For a First Class Certificate, at least six months of the qualifying service must have been at sea in a grade not below that of Third Engineer, where an engineer of a lower grade is carried. During the last 18 months of this service the candidate must have been in possession of a Second Class Engineer's Certificate of competency.

Assistant Engineer.

12. Service entered upon a ship's Articles as having been performed in the capacity of Assistant Engineer must be supported by proof of the Candidate having acted as Second, Third, or Fourth Engineer, as the case may be.

Service in home or coasting trade.

13 The service required by the Regulations to qualify a candidate for examination is to be regarded as referring to service in the Foreign Trade only. Service in the Home or Coasting Trade must amount to at least half as much again as that required by the Regulations to make up for the time spent in Port, *e g.*, for every twelve months' service under the Regulations, eighteen months' service in the Home or Coasting Trade will be required. In all cases the length of service is deemed to commence on the date of signing of the articles of agreement, and to end on the date of discharge.

Service as Engineer only accepted as qualifying service.

14. Service in the engine-room (afterwards referred to) for qualifying a candidate to be examined for a Second-class Engineer's Certificate must be only in those capacities which afford opportunities of obtaining practical experience as an engineer; and service in the capacity of fireman, stoker, donkeyman, greaser, winchman, labourer, engineer's steward, or any other capacity than that of engineer taking watch on engines and boilers for propelling will not be accepted

Service as Third and Fourth Engineer.

15. Service as Third and Fourth Engineer in Foreign-going steamers, where more than three or four engineers, as the case may be, are carried, their names being all entered on the Articles in their respective ratings, may be accepted equally with service as Second Engineer to qualify a Candidate for examination for a First-class Engineer's Certificate, provided he has, during the whole of such service, been in possession of a Second-class Engineer's Certificate (Imperial, or under Order in Council), and provided also that he was regularly in charge of a watch. In the case of Fourth Engineers, however, eighteen months of such service must be proved for every twelve months required by the Regulations.

16. Service in a capacity below that of Fourth Engineer cannot be accepted as qualifying for any class of certificate unless the testimonials of the candidate explicitly certify that during such service he has been taking regular watch in the engine-room, and that the Chief Engineer or Superintending Engineer considers him properly qualified by that experience to act as Chief Engineer of a Foreign-going steamer of 99 horse-power nominal. *In any case the applicant must prove that he has had the responsible charge of the engines or boilers on regular watch for at least twelve months of sea service, of which for not less than six months he must have been in charge of the propelling engines and rated on the articles not lower than Fourth Engineer.* Service below the grade of Fourth Engineer.

17. Having "responsible charge" will be understood to imply, in regard to the engines, that the applicant, for the time specified, was, on regular watch, the person responsible for carrying out the orders of the engine-room telegraph, and, in regard to the boilers, that he was, similarly for the period specified, the person responsible for regulating the feeds.

18. When the workshop service has been performed in a place *where steam-engines are not made*, and the class of work done is similar to that required in engine-making, the service may be accepted with an additional year in the engine-room; that is, three years' workshop service and two years in the engine-room, of which one year must have been at sea. The approval of the Government must be obtained in every such case before the authority to receive a certificate is issued by the Examiners. Workshop service.

19. When the workshop service has been performed in a place *where engines are made*, and the department in which the applicant has been principally engaged is not "*fitting*" or "*erecting*," if the nature of the service be such as is useful training for an Engineer, the Government may, on proper representation of the circumstances, see fit to accept the service as qualifying along with subsequent experience, but in every such case the applicant must prove additional engine-room service as required above. The approval of the Government must likewise be obtained.

20. If a candidate has served in the Engine Room with a Second class Certificate in the capacity of a Second Engineer in Foreign-going Steam-Ships under 100 horse-power, or in Home-Trade Passenger Steam-Ships, which are not required by law to carry a certificated Second Engineer, his service may be accepted without reference to the vessel's horse-power, provided he has been on the ship's articles as Second Engineer, and produces certificates of discharge as Second Engineer, for the required period. Service as Second Engineer where certificate not required

21. The Government may see fit to allow an applicant who, in consequence of service abroad, has been unable to obtain a Second-class Certificate, to be examined for a First-class Certificate, although he has not obtained a Certificate of the lower grade, provided he is able to satisfy them as to the satisfactory character of his services. First-class certificates without second.

22. In such cases (para. 21) or in cases where the candidate is already in possession of a Certificate of Service, should he fail to pass the examination for the higher grade, but passes the examination for the lower grade, he may receive a Certificate accordingly, but no part of the fee will be returned. Unsuccessful candidates may in certain cases receive certificates for inferior grade.

23. A candidate who under the above regulation (para. 21) has been permitted to be examined for a First-class Certificate without first obtaining a Second-class Certificate of Competency, and who fails in his examination in practical knowledge, may not be re-examined for a Certificate of the higher grade until he has served 12 months as Second Engineer with a Second-class Engineer's certificate of competency as required by the Regulations. Consequence of failure in such cases.

24. If the candidate fails altogether, *i.e.*, both in the examination for the lower as well as for the higher grade of Certificate (para. 21), he may be re-examined for a *Second-class Certificate only*, subject to the usual regulations relating to failure.

If after passing examination services are found to have been insufficient.

25. If after a Candidate has passed his Examination it is discovered on further investigation, *e.g.*, by verification on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for which he has passed, it will not be granted to him; but if the Government are satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, the Certificate may be issued to him, or he may be allowed to go up for re-examination without payment of further fee, when he has performed the amount of service in which he was deficient as the Government may direct.

Certificate of lower grade may be granted on certain conditions.

26. If, in such a case, the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate may be placed to his credit.

May have to be re-examined for certificate of higher grade.

27. In such a case when the applicant has 'by further service made up the time in which he was found to be short,' he may be required, before he can receive the higher certificate, to be re-examined in all the subjects.

Qualifications for Certificates of Competency.

Qualification of candidate for Second-class Engineer's Certificate.

28. SECOND-CLASS ENGINEER.—A candidate for a Second-class Engineer's certificate must be not less than 21 years of age;

(*a*) He must have served an apprenticeship to an Engineer for three years in England or five in India at least, and prove that during the period of his apprenticeship he has been employed on the making and repairing of engines:—Or if he has not served an apprenticeship, he must prove that for not less than three years in England or five in India he has been employed as a journeyman mechanic in some factory or workshop* on the making or repairing of engines.† In either case he must also have served one year at sea in the Engine Room as an Engineer on regular Watch in the Foreign, Home or Coasting Trade‡; or

(*b*) He must have served at least four years at sea in the Engine Room as an Engineer on regular Watch in the Foreign, Home or Coasting Trade.

(*c*) He must be able to give a description of boilers, and the methods of staying them, together with the use and management of the different valves, cocks, pipes, and connections.

(*d*) He must understand how to correct defects from accident, decay, &c., and the means of repairing such defects.

(*e*) He must understand the use of the barometer, thermometer, and salinometer, and the principles on which they are constructed.

(*f*) He must state the causes, effects, and usual remedies for incrustation and corrosion.

(*g*) He must be able to state how a temporary or permanent repair could be effected in case of derangement of a part of the machinery, or total break-down.

(*h*) He must write a legible hand, and understand the first five rules of arithmetic, and decimals, and their application to questions about consumption of stores, and full capacities of tanks and bunkers, the duty of pumps, and the direct strains in engines and boilers.

(*i*) He must be able to pass a creditable examination as to the various constructions of paddle and screw engines in general use; as to the details of the different working parts, external and internal, and the use of each part.

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* No period of service in a drawing office can be allowed to count for more than six months workshop time.

† These may be either land or marine engines.

‡ *See* paragraph 13 as to service in Home or Coasting Trade.

29. FIRST-CLASS ENGINEER.—A candidate for a First-class Engineer's Certificate must be not less than 22 years of age. Qualification of candidate for First-class Engineer's certificate.

30. In addition to the qualification required for a Second-class Engineer—

(*a*) He must either possess, or be entitled to, a First-class Engineer's certificate of service; or, in the event of his not being so possessed or entitled, he must have served for one year at sea as Second Engineer with a Second-class Engineer's Certificate of Competency, or for two years at sea as Second Engineer with a Second-class Engineer's Certificate of Service: or having served one year at sea as Second Engineer with a Second-class Engineer's certificate of Service, he must show, in addition, at least six months' service as Chief Engineer in a vessel required by law to carry at least one Engineer holding a certificate. (*See also paragraph* 15 *as regards service as Third and Fourth Engineer.*)

The Examiner should therefore be satisfied that an applicant for a First-class Engineer's Certificate has not only been *in possession* of a Second-class Certificate for the periods above stated, but that he has actually *served* for such periods in the Engine Room at sea with a Second-class Certificate in the capacities referred to, and that his name has been entered in the articles of agreement accordingly. (*See also para.* 21.)

(*b*) He will be required to make an intelligible hand sketch, or a working drawing of some one or more of the principal parts of a steam-engine; and to mark in, without a copy, all the necessary dimensions in figures, so that the sketch or drawing could be worked from.*

(*c*) He must also be able to take off and calculate indicator diagrams.

(*d*) He must be able to calculate safety-valve pressures and the strength of the boiler shell, stays, and riveting.

(*e*) He must be able to state the general proportions borne by the principal parts of the machinery to each other, and to calculate the direct stress, the torsional stress, and the bending stress in round bars, and the direct stress and the bending stress in rectangular bars with given loads.

(*f*) He must be able to explain the method of testing and altering the setting of the slide valves, and to sketch about what difference any alteration in the slide valve will make in the indicator diagram, and also the method of testing the fairness of shafts and of adjusting them.

(*g*) He must be conversant with surface condensation, superheating, and the working of steam expansively.

(*h*) His knowledge of arithmetic must include the mensuration of superficies and solids and the extraction of the square root, and the application of these rules to questions relating to the power, duty, and economy of engines and boilers, and to the stresses in rods, shafts, and levers of the engine.

Service in the Royal Navy.

31. Engineers and Assistant Engineers of the Royal Navy are at liberty to apply for Certificates of Service, and to be examined for Certificates of Competency in the Mercantile Marine; but they must submit their applications in the manner directed by the Lords Commissioners of the Admiralty. Engineers.

32. As regards the grades of Certificates of Competency for which Officers of the Royal Navy can be examined, the rule is—"First-class Assistant," or "Assistant Engineers" of the Royal Navy may be examined for Second-class Engineers' Certificates of "Competency"; "Engineers" of the Royal Navy for First-class Certificates of Competency. Grades.

* *See* Appendix B.

Temporary service in the Royal Navy.

33. Temporary active service as Engineer in the Royal Navy counts in applications for Certificates of Competency in the same way and to the same extent only as in the case of the service of Mercantile Marine Engineers, that is to say, so much of the applicant's time as is spent in active service at sea, or in a ship commissioned for sea service, counts as "sea service;" and so much of the applicant's time as is spent in active service on boardship in harbour, and not commissioned for sea, counts as workshop time—*See* paragraph 28, sub-section (*a*).

Engineer Artificer.

34 Service performed in the capacity of Engineer Artificer may count to qualify a Candidate for examination for a Second-class Engineer's Certificate of Competency in the Mercantile Marine. If the service has been on shore, it will count only as workshop time. If in the Engine Room at sea, the Candidate must prove that during such service he had charge of an Engine Room watch.

Fees.

Fees to be paid by applicants for examination. (Exn. 17.)

35. Candidates for examination, in making their Application on Form Exn. 3, will be required to pay the Examination fees before any step is taken, whether by inquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them, but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be.

36. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

37. If a candidate fails in his examination, *no part of the fee he has paid will be returned to him.*

38. The fees are as follow:—

Second-class Engineer's Certificate ...	Rs.	12
First-class Engineer's Certificate ...	„	24
First-class Engineer's Certificate if candidate is already in possession of a Second-class Certificate of competency granted by the Board of Trade, or by the Government of a British possession under Section 8 of the Merchant Shipping (Colonial) Act, 1869 ...	Rs.	12
Renewal of any certificate	„	5

General Rules as to Examinations.

Candidates not to take books, &c., into examination room.

39. All books necessary for the use of candidates under examination will be provided by the Government, and applicants are not permitted to take into the examination room any book, paper, document, or memoranda of any description whatever.

40. Candidates will be allowed in the time allotted to cancel any part of their work, and when required additional papers will be supplied by the Examiners, but they will not be allowed to work out the problems on a slate or on waste paper. The additional sheets must be attached to, and form part of, the examination papers.

41. Candidates for First-class Certificates have to pass an examination in Rough Working Drawing, which may, at the candidates' option, be either hand sketches clearly dimensioned and complete in the necessary *views* and *sections*, or drawings to a scale. Drawing boards and T squares will be provided by the Government, but the applicants will have to bring with them any drawing instruments they may require.*

* *See* Appendix B.

42. In the event of any candidate being discovered copying from another, or affording any assistance or giving any information to another, or communicating in any way with another during the time of examination, he will be regarded as having failed in his examination, and will be turned back for three months, in the same manner as if he had failed in the practical part of the examination; and no part of the fees he may have paid for examination will be returned to him. This penalty also applies to any breach of paragraph 34. Punishment for breaking rules.

43. If a candidate leaves the room before answering any question which has been given to him, he cannot afterwards be permitted to answer it, but the Examiners may substitute other data or another question. Leaving examination room.

44. All applicants presenting themselves for examination will be required to give written answers to ten questions selected from Form Exn. 15*a*.,* "Elementary Questions for the first examinations of Engineers for certificates of competency, and of Masters and Mates for certificates in steam." These questions are intended to furnish a record to some extent of the candidate's knowledge at the time of his examination, and also to induce the candidates to pay more attention to their handwriting and spelling. Questions from Form Exn. 15*a*.

45. The Form Exn. 15*b*., on which these answers will be written, contains also some questions as to the experience of the applicant, to be answered by him in writing.

46. Examiners may add to their *viva voce* questions on the practical management of steam-engines and boilers any of those contained in Exn. 15*a*.

47. If at the expiration of the time allowed the candidate has worked out and answered correctly the whole of the questions set to him, and given satisfactory answers in the *viva voce* examination, he will be declared to have passed.

48. If at the expiration of the time allowed he has not worked out the whole of the questions set to him, but if the result of the *viva voce* examination taken in connection with the answers to such of the questions as he has worked out is sufficient to satisfy the Examiners that the applicant is competent to take charge of engines of 100 nominal horse power or upwards, he will be declared to have passed.

49. In other cases he will be declared to have failed.

50. A report of the examination, and the examination papers, will be forwarded to the Port Officer on the Form (Exn. 15). Exn. 15.)

51. If the candidate passes, he will receive the Form Exn. 16, upon which the Government will issue the certificate to the candidate, whose testimonials, &c., will be returned at the same time. Notification of having passed will be given to successful candidates. (Exn. 16.)

Failure.

52. If the applicant fails in practical knowledge, he may not present himself for re-examination until he can produce proofs of THREE MONTHS' further service at sea as Engineer from the date of failure. If he fails in arithmetic or drawing only, he may come up again at any time.

General.

53. Certificates of Competency shall be made and issued by the Government in the forms hereunto annexed.

54. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

55. No application from the holder of a certificate granted by the Government of any other British Possession or by the Board of Trade to be examined for a certificate of the same legal value shall be entertained.

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* *See* Appendix A.

APPENDIX A.

Form **Exn. 15a.**

Elementary Questions for the First Examinations of Engineers for Certificates of Competency and of Master and Mates for certificates in steam.

TO ENGINEER EXAMINERS.

EXAMINERS will require all candidates to fill up a form, Exn. 15*b*., of which a copy is enclosed, and they will forward the same to the Port Officer for transmission to the Government along with the report of the examination.

It is intended to issue questions of a more advanced character for first-class candidates, but in the meantime the questions for both classes of Engineers and also for Masters and Mates passing a Voluntary Examination in steam will be taken from the same book of "Elementary Questions," and candidates for first-class certificates are expected to show their superiority by giving answers more complete than those of the other candidates.

The arithmetical questions for Engineers and the *viva voce* examinations for all candidates will be continued as heretofore, and failure in the elementary questions will be treated as failure in arithmetic.

The numbers of the questions for each examination will be selected by the examiners, and they are not to be communicated to the candidate until his examination commences.

Masters and Mates may cancel questions A, B, and C, but they should fill up the form for questions D, E, F, and G, as evidence of their practical knowledge.

Exn. 15b.

Port . Class for which examined

Date Candidate's name

A. Where and how long did you serve in works at the making or at the repairing of Engines, and in what capacities?

B. How long have you served as fireman or trimmer?

C. How long have you served in the engine-room at sea, and in what capacities?

D. With what descriptions of Engines have you served at sea—Paddle or Screw or both, Jet Condensing, Surface Condensing, or Non-condensing Engines, Compounds, Trunks, Inverted Cylinders, or Horizontal Engines? What size were the engines?

E. With what descriptions of Boilers have you served at sea—Rectangular or Cylindrical, Wet-bottomed or Dry-bottomed, Multitubular, Sectional or Flue Boilers?

F. What Engine defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

G. What Boiler defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

For the questions to be answered on the following pages, *see* the book of Elementary Questions. The questions need not be written; only the answers to them.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

ELEMENTARY QUESTIONS.

1.

What parts of an engine are generally made of wrought-iron?

2.

What parts of an engine are generally made of cast-iron?

3.

For what parts of an engine is steel sometimes used?

4.

What parts of an engine are generally made of brass or gun-metal?

5.

Where is "white metal" sometimes used? On account of what property possessed by it is it adopted? What objection is there to its more general use?

6.

For what parts is Muntz metal sometimes used? Is it malleable? For what properties is it valued?

7.

What difference is there in the composition of cast-iron, of wrought-iron, and of steel?

8.

How can cast-iron, wrought-iron, and steel be distinguished from each other?

9.

What are the different properties of cast-iron, of wrought-iron and of steel?

10.

What is meant by the terms "breaking stress," "proof stress," "safe working stress"?

11.

What is the cohesive strength or breaking stress of good ordinary wrought-iron?

12.

Tempering steel: how is it done, and in what order do the colours come?

13.

What is case-hardening?

14.

Which of the common metals or alloys can be forged, and which of them are brittle or "short"?

15.

What is meant by "welding"? Which of the common metals can be welded?

16.

The expansion of metals by heat: give examples of this in the engine and in the boiler.

17.

In the construction of cylindrical marine boilers, for what parts have the plates to be worked hot? When the material is steel, what precautionary treatment of these plates is afterwards necessary?

18.

What is double riveting? In what parts of cylindrical marine boilers is double riveting employed? In which of the shell seams is it most necessary?

19.

What is "caulking," and how are seams prepared for caulking?

20.

Describe the different ways of fastening the ends of the main stays of a boiler. What are the merits of, or objections to, the different plans?

21.

What strain per square inch is allowed on boiler stays?

22.

Describe a riveted stay, and state where such stays are commonly used.

23.

Where are thin plates to be looked for in a boiler as it wears, and how is the thinness to be detected?

24.

How are boiler tubes fixed? What are "stay tubes," and how are they secured?

25.

Where is it generally that boiler tubes leak? How is this defect raired? What are the causes of this leaking?

26.

What are the causes of cracked tube plates? Where are the cracks situated? How are they repaired?

27.

What is the difference between a "dry uptake" and a "wet uptake"? Which requires most ropair? Why? Where have you seen a wet uptake?

28.

What is a superheater? What is its construction? What valves are on it? There is sometimes a gauge glass on it; what is that for?

29.

What parts of a marine tubular boiler are first injured by shortness of water?

30.

Where are angle irons sometimes used in the construction of a boiler, and where are flanged plates used?

31.

Priming: to what causes is it attributed? What means are applied to prevent it? What evils may be produced by it?

32.

Funnel draught: what makes it? What checks it?

33.

Flame is sometimes seen at the top of the funnel: what causes this appearance? Is it beneficial or is it detrimental? Why so?

34.

A blast pipe: what is its construction? Where is it placed? For what is it used?

35.

How many bottom blow-off cocks are generally fitted to each boiler, and why are they so fitted?

36.

Blow-off cocks are sometimes fitted with a spanner guard: for what purpose is this? Describe how the guard is formed?

37.

Test cocks or water-gauge cocks: where are they placed? At what heights? Must the cocks themselves be at those heights? What provision is made for cleaning these cocks should they ever become choked? When there are no test cocks how is the height of the water ascertained?

38.

What is a dead-weight safety valve? Of what are the rubbing surfaces formed? How is a lock-up valve arranged to admit of lifting it or of turning it round, and to prevent adding to the weight?

39.

About what area of safety valve is now required by the Board of Trade? What area was formerly required, and on what ground has that been altered? What is the effect of suddenly opening a safety valve when steam is up? To about what extent do safety valves rise when blowing off without being eased by hand?

40.

Spring-loaded safety valves: what advantages have they that are not possessed by dead-weight valves? What are the disadvantages as compared with dead-weight valves?

41.

Of what pieces does a glass water gauge mounting consist? How does it act? Where is it placed? At what height? Is it liable to derangement? How is its working tested?

42.

Glass water gauges have sometimes pipe connections top and bottom: what is the object of this arrangement? Should there be cocks at the extremities of these pipes?

43.

Describe a Bourdon's steam gauge. Some gauges have an inverted syphon pipe below them: what is its use?

44.

Why is a small cock sometimes put on the pipe leading to a steam gauge? Where should it be placed, and what error might be made by omitting to use it?

45.

Do steam gauges indicate the total pressure of the steam, or only a portion of that pressure? What is the pressure measured from?

46.

What is meant by the salting of the boiler? How is this prevented? What is the density of ordinary sea water? How is the density ascertained? What is the difference between the formation of scale and the salting of the boiler? What is the maximum density at which boilers should be worked at sea?

47.

Scum cocks and pipes: how are they arranged? Where are they placed? At what height in the boiler? When are they used? When must they be shut? Neglect of these cocks lead to what dangers?

48.

Scale: of what does it consist? Where is it most objectionable? How is it removed? How is its formation prevented? What evil effects are produced by it?

49.

What is a salinometer? Of what does it consist? How does it act? How is it graduated? Can it be used at any temperature indiscriminately?

50.

What harm may be done through the check valve of one of a set of boilers being defective while under way? How would you work to avoid this harm?

51.

How is the leak from a split tube stopped in a boiler at sea? Describe the operation?

52.

What is the use of dampers? Where are they fitted? When should they be used?

53.

When there are no dampers fitted, what is used instead? What evil to the boiler is sometimes attributed to this? When the heating surfaces are clean does this occur?

54.

Describe the piston of a steam cylinder, with its different rings and their uses? There are generally round pieces let in flush on one side of a piston: what are they? How are these pieces fixed?

55.

Cylinder drain cocks: what is their use? There is sometimes a valve upon each cock: what purpose does it serve?

56.

Cylinder escape valves: of what do they consist? How protected? How regulated? When are they most needed? To what danger do they expose the Engineer? What precaution is sometimes used to obviate this danger?

57.

What is a compound engine? What different kinds are there for screw steamers, in respect to the number and arrangement of their cranks and cylinders? What is a triple expansion engine?

58.

What is link motion? What are some of its advantages? In modern engines for the screw propeller when there is no link motion, what takes its place?

59.

What is a separate expansion valve? Why is it not fitted to all engines? What effect has an expansion valve upon the starting and upon the reversing of the engine?

60.

What arrangement is applied to reduce the friction of a slide valve? To what is the friction due?

61.

Describe a loose eccentric; how does it act? In what engines is the loose eccentric still employed?

62.

What is the travel of the eccentric rod? How is it measured on the eccentric? What is the travel of the slide valve when the link motion is in mid gear, and the engine still moving?

63.

What are "double beat valves"? Why are they not generally used for safety valves? Are they ever used instead of the slide valve? What objections are there to their use?

64

What is a circulating pump? Is it always worked by the main engine? Give an example from your last steamer of the three water temperatures generally noted by careful engineers?

65.

An air valve is sometimes fitted to a circulating reciprocating pump: what purpose does it serve?

66.

What is the difference between a bucket air-pump, a piston air-pump, and a plunger air-pump?

67.

Whether are double-acting air-pumps made with plungers, with pistons, or with buckets?

68.

What is an air-pump trunk? When is it necessary? How is it attached to the bucket?

69.

What class of air-pump requires both foot and delivery valves, and in what other class can either of these valves be in some cases dispensed with?

70.

When under way, when the air-pump bucket is at the top of its stroke, at what height is the water in the condenser?

71.

With a surface condenser and a single acting air-pump, what is the effect of a leaky foot valve, and what is the effect of a leaky bucket when there is also a foot valve?

72.

Air-pump pet cock or valve: where is it placed? How does it act? What is its object? Does it in every case reduce the effective capacity of the pump? Is it equally applicable to double-acting pumps?

73.

At what temperature is the hot well worked? What is the effect of higher temperatures? What is the effect of lower temperatures? What limits the lowness of temperature? Has a very low temperature any disadvantages?

74.

Bilge injection with common condensers: what are the fittings required? When is it used? What precautions are necessary in using it?

75.

When surface condensers are used, what takes the place of the bilge injection? To what is the connection made? How is its valve formed? Why is this necessary?

76.

What are the practical guides to the proper amount of opening of the inlet valve for the circulating pump?

77.

Feed-pump pet cock or valve: where is it placed? What is its use? How does it act? Is it always a necessary fitting?

78.

What are some of the ways of fastening the ends of surface condenser tubes? About what size and about what thickness are condenser tubes? What parts of a surface condenser are made of brass?

79.

What is a blow-through valve or cock? To what is it attached? There is sometimes a valve that, when opened, admits steam from the slide valve casing to the exhaust port; what is its use? To which cylinder is it fitted?

80.

What is a snifting valve? What is its use? Where is it placed? Can it be placed too high? Can it be placed too low? At what height should it be placed? Was there one in your last steamer; if so, where was it? Why are snifting valves generally omitted now?

81.

What connections are generally fitted to the donkey-pump, and to what services can it be applied?

82.

When the engines are stopped with steam up, what are to be shut and what are to be opened?

83.

How is an engine heated up before starting? What precautionary examinations are made before starting?

84.

What is an interceptor or catch-water? Where is it fixed; what is its construction; how does it act; and what attention does it require?

85.

Describe an air-pump bucket, with its valve or valves and its packing? Of what are the valves generally made?

86.

Of what materials are air-pump rods made? Why so?

87.

What is the racing of the engine? When does it occur? What danger attaches to it? What is done to prevent it?

88.

What are marine governors? What is their general construction? How do they act?

89.

What is meant by the "pitch" of a screw propeller? How is it measured?

90.

Explain the difference between a "right hand" and a "left hand" propeller, and state how each of them revolves.

91.

What is the slip of a screw propeller? How is its amount expressed in figures?

92.

Which of the valves about engines and boilers have to be worked by hand, which of them work self-actingly, and which are worked by the motion of the engine?

93.

Why is soda sometimes put into a boiler, and how is it put in when under way? What is the kind of soda used?

94.

Tallow cups for cylinders were sometimes made with two small cocks, or with only one small cock, or with one large hollow plug cock, or with one small cock and a valve; which of these is suitable for a high-pressure cylinder, and which for the cylinder of a condensing engine? Describe how the cup with only one small cock is used? What is now generally used instead of these? How has this change come about?

95.

Does a cylinder escape valve, self-acting, allow all the water to escape; if not, how much is left in the cylinder?

96.

What is a "Steam Lubricator" (sometimes called an Impermeator)? Explain its action? To what part of the engine is it connected? Whether will throwing cold water over it make it work faster or slower? Describe the one used in your last steamer?

97.

A common paddle wheel: of what is the centre made? Of what are the arms formed? What is the form of the bolts which attach the floats to the arms? How are the arms attached to the centres?

98.

Why have some paddle wheels one or more cast-iron floats in each wheel? With what engines are these most required? At what part of the circumference are they placed?

99.

Why are paddle wheel floats sometimes made of different breadths in the same wheel? With what description of engine is this most needed? Where are the broad floats placed, and where are the narrow floats placed in the circumference of the wheel?

100.

What difference is there between a radial paddle wheel and one with feathering floats? What is the object of feathering floats? Are all the eccentric rods attached in the same way, and are they all of the same form?

101.

Whereabout is the centre of the eccentric of a paddle wheel with feathering floats placed? In that case are the feathering levers on the striking face or on the back of the float? When the paddle shaft has an outer bearing, how is the eccentric made?

102.

Of what materials are the working surfaces of a paddle wheel with feathering floats? Are they all lubricated? With what?

103.

What is a "Disconnecting Paddle Engine"? At what place is the disconnecting effected? How is it accomplished? In which of the cranks of a disconnecting engine are the crank pins fixed?

104.

Whether is link motion valve gear or the loose eccentric generally used for disconnecting paddle engines? For what steamers are disconnecting paddle engines frequently employed?

105.

What are expansion joints? Where are they necessary? What attention do they require? Of what should the working surfaces be made?

106.

What omission in the construction of expansion joints may lead to a serious accident when steam is first applied? How is this prevented in the construction of a steam trunion pipe for an oscillating engine?

107.

Describe an oil cup with a syphon worsted? How is the worsted arranged? How is it cleaned? How far down the tube does it extend?

108.

Describe a thrust bearing; which of the surfaces wears? Why are there sometimes a number of oil tubes for one thrust bearing?

109.

What parts of a screw shaft are generally covered with brass? Why is this necessary? About what thickness is the brass?

110.

What is the stern tube or screw shaft pipe? Why is a pipe of such a length required? Of what is it made? How is it fixed at each end?

111.

What is a lignum vitæ bearing? How is the wood fitted? Where is such a bearing generally used?

112.

How is a screw propeller fixed on the shaft? What means are used to prevent its getting loose at sea?

113.

Where are sluice valves placed? What large sluice valve is there in almost all screw steamers? From what position should this valve be worked? Why so? What attention should it receive?

114.

With a condensing engine, what valves or cocks are on the skin of the ship in the engine-room and in the stokehole?

115.

What are the necessary fittings of a marine boiler?

116.

With a surface condensing engine, what cocks or valves are open some time before the engine is started so as to be ready for starting whenever the order is given?

117.

What is a steam jacket? What cocks are on it? In what engines are jackets most generally used? Do they require to be felted?

118.

What parts of an engine or its fittings should be felted or otherwise protected from radiation?

119.

What are the small cylinders sometimes fitted on the slide valve casing cover of vertical engines? Explain their action? To what are they connected by a pipe? Why so?

120.

Name the principal pipes in connection with the engines and boilers of a steamer, and state to what the ends of these pipes are connected?

121.

Through what cocks or valves, pipes and chambers does the water pass on its way from the sea inlet rose plate to the water space of the boiler, with a jet condenser?

122.

Through what cocks or valves, pipes and chambers does the circulating water of a surface condenser pass?

123.

Through what cocks or valves, pipes and chambers does the steam pass from the boiler until it is in the form of water in the hot well?

124.

Name the pieces of the engine through which the pressure of the steam is transmitted from the piston to the screw propeller. Name them in the order in which they act.

125.

What is an air vessel? How does it act? At what parts of an engine or of its fittings are air vessels generally applied?

126.

What is the construction of a mud box? Where should mud boxes be placed? Why are they necessary? How should the space be divided by the rose plate, and why?

127.

What is a trunk engine? When used in a horizontal engine for a right-hand screw propeller, at which side of the vessel should the cylinders be placed? Why so?

128.

What is an oscillating engine? For what steamers are oscillating engines generally adopted? Why? How is the steam conveyed to and from the slide valve casing?

129.

Of what parts does the valve motion gear of an oscillating engine consist?

130.

For what have geared engines sometimes been used? Of what were the cogs of the large wheel made?

131.

At what part of a screw steamer is the pressure that propels it applied to the hull?

132.

At what part of a paddle steamer is the pressure that propels it applied to the hull?

133.

About how much fuel per indicated horse power per hour is required by modern steam engines, common, compound and triple expansion ?

134.

What is the explanation of the economy of the surface condenser ?

135.

What is the construction of a surface condenser ? Of what are its tubes made ? How are they fixed ? How are they kept tight ? What is done with a split tube ?

136.

Where do surface condensers foul ? How are they cleaned ?

137.

What non-conducting substances are employed to prevent radiation, and how are they applied ?

138.

In the construction of smoke-box doors and of dry uptakes, what provision is made to lessen the amount of radiation ?

139.

How can the formation of black smoke be prevented ? Describe smoke preventing apparatus ?

140.

What is meant by "circulation" in a boiler, and what are the results of defective circulation ?

141.

What means are sometimes adopted to improve the circulation in a boiler ?

142.

By what arrangement is the circulation promoted in a "hay-stack" boiler ?

143.

Describe a ship's side air-pump discharge valve ? In what respects does it sometimes differ from a common stop valve, and what attention does it require ?

144.

What is the construction of a feed escape valve, to what is its discharge connected, and how is its loading regulated ?

145.

When there is no feed escape valve, what is the arrangement of the feed valves or cocks ?

146.

What is the measure of a horse power ? How is indicated horse power ascertained ?

147.

Has "nominal horse power" a fixed meaning ? What is the use of this expression ? What is generally taken as the measure of one horse-power nominal ?

148.

What is "back pressure" in a cylinder ? About how much is it in each of the cylinders in your last steamer ? Is excessive cushioning ever a trouble under certain conditions in modern engines ? Say when and why and in which cylinder this occurs ?

149.

What is meant by "speed of piston" ? About how much is the speed of piston in modern marine engines ?

150.

What is "atmospheric pressure" ? What is its average amount ? What instrument tells this amount ?

151.

What is "gross pressure" or "absolute pressure"? What pressure is it that is shown by the steam gauge?

152.

What is meant by "cutting off" steam? How is it done? What part of the valve regulates the cut off?

153.

What is a piston slide valve? Describe its construction? Why are such frequently employed in place of the common slide valve? What is a great drawback to the use of these valves?

154.

What fixes the time of closing the exhaust? After the exhaust is closed and before the port opens for steam, what becomes of the steam that is in the cylinder?

155.

What is the "lead" of the valve? What is its object? About what amount is it?

156.

What is the "cover" or "lap" of the valve? What is its object? About what proportion of the stroke of the valve is it made?

157.

What is the "exhaust cover" of a slide valve? What is its effect upon cushioning and upon exhaust?

158.

What is "minus cover" or "minus lap" on the exhaust? What is its effect upon the exhaust and upon cushioning?

159.

What is "cushioning" or "compression" in a steam cylinder? How is it affected by the amount of cover or of minus cover there may be upon the exhaust? How is it affected by the exhaust pressure?

160.

What is "mean effective pressure"? How is its amount ascertained?

161.

What is a dial vacuum gauge? What is its construction? For what is it used? About what amount should it show when the engine is working all right? What effect has the variations it indicates on the performance of the engine?

162.

Does the vacuum gauge enable you to tell what pressure there is in the condenser, or must you have recourse also to the barometer to arrive at that? How would you ascertain the actual amount of back pressure there is in the condenser?

163.

What is a barometer? What is its construction? Is a barometer sometimes used instead of a vacuum gauge? In what respect does the weather barometer differ from the vacuum gauge barometer?

164.

The common vacuum gauge and the common steam gauge: in which of them are the graduations marked from atmospheric pressure? Does either of them tell what is the true actual pressure in the boiler or in the condenser?

165.

Do steam and vacuum gauges vary with the variations of the weather barometer? When the weather barometer varies from 29 to 31, how much will the vacuum gauge vary, and how will that affect the working of the engine? Why so?

166.

Vacuum is generally stated as so many inches. What is meant by, say, 20 inches vacuum? What does that tell us about the absolute pressure of the vapour then in the condenser?

167.

From what depth will a pump draw water? Is there any limit? Why?

168.

What is vacuum? Can vacuum move a piston? When the temperature of the water in the condenser is 212°, what is the greatest degree of vacuum there can then be in the condenser?

169.

What is a thermometer; its construction? What is the property of matter that is the principle of its construction? What temperatures are regularly noted by careful engineers?

170.

What is the temperature of (1) melting ice, (2) of boiling water, (3) of steam about 60 lbs. pressure by the steam gauge, (4) of steam about 100 lbs., and (5) of strain about 150 lbs.; also (6) of smoke in the funnel, and (7) of water in the hot well?

171.

What is meant by the "conduction" of heat? Give examples of it in the boiler and in the engine.

172.

What is meant by the "convection" of heat? Give examples of it in the boiler and in the engine.

173.

What is meant by "radiation" of heat? Give examples of it in the boiler and in the engine.

174.

Which is convection, which is radiation, and which is conduction in the following cases: (1) Heat from the glowing fuel to the furnace crown. (2) Heat passing from one side of the furnace crown plate to the other. (3) Heat passing from the steam pipes in the engine-room. (4) The heat of evaporation?

175.

What are the effective heating surfaces of a marine boiler? What is an objection to vertical heating surfaces?

176.

What parts of a marine engine are exposed to danger when the temperature is below freezing point?

177.

What precautions are necessary in cold climates when the temperature is below freezing point?

178.

State as many ways as you can by which a boiler might not get its full feed; that is, a boiler, or one of a set of boilers, gets short of water although the feed valve is open its proper amount; to what causes might this be due?

179.

Of what are furnace bars generally made? About what thickness are they at top? About what space is between them? Whether are the bars put further apart for Newcastle coal or for Welsh coal?

180.

Which burns faster, Newcastle coal or Welsh coal? Which is the flaming coal? Which makes most smoke?

181.

About how many tons of steam coal will be burnt per day in four furnaces each 8′ 0″ wide, and of about the usual length? On what grounds do you say so?

182.

About how many tons of steam coal will be burnt per day with good compound engines to drive an ordinary steamer of 40 ft. beam 10 knots an hour by steam alone? On what grounds do you say so? What percentage more coal would be required to propel the same steamer one knot faster?

183.

About how many tons of steam coal will be burnt per day with a good compound engine, surface condensers, the low pressure cylinder 70 inches diameter, doing average work? On what grounds do you say so?

184.

A pair of inverted cylinder direct acting engines, there is a liner half an inch thick between the ahead eccentric rod and the eccentric strap, in overhauling the engine this piece is lost and forgotten; what difference will its omission make in the working of the engine, on the admission, on the cut off, and on the exhaust of the steam? Which will take place earlier, and which later distinguishing between the up stroke and the down stroke?

185.

A pair of inverted cylinder direct acting engines driving a right-hand screw; on which of the crosshead guide bars is the pressure greatest in the up stroke, and on which in the down stroke?

186.

A screw propeller is getting loose; it has a little play on the shaft, sideways on the key or feather; how will this show in the engine-room?

187.

How would you prove whether the centre line of the trunions of an oscillating cylinder be fair with the centre line of the main shaft?

188.

How can the fairness of a line of screw shafting be tested without lifting the shafts?

APPENDIX B.

Form Exn. 17.

Examination in Rough Working Drawing for a First-Class Engineer's Certificate of Competency.

1. The regulations in regard to the qualifications of a candidate for a first-class Engineer's Certificate of Competency specify that—

"He must be able to make rough working drawings of the different parts of the engines and boilers."

"He must be able to state the general proportions borne by the principal parts of the machinery to each other."

2. In accordance with these clauses, a candidate for a first-class certificate is required to make a rough working drawing of the parts specified on the other side of this leaf. A mechanic who has been some years in charge of marine engines and boilers ought by this time to have familiarly in his mind the general construction of at least one set of engines and boilers, say that set he was

last with. Fine drawing is not expected, and in the proportions of the parts a wide margin will be allowed; absurd dimensions will be failure in practical knowledge.

3. The drawing must, however, be practically a working drawing, giving a sufficient number of views to show the parts fully—sections, plans, or elevations, just as the candidate would require to be supplied to him if he had to make the parts to the design of another person.

4. A clear hand sketch showing the construction, completely and fully dimensioned, will be accepted if the candidate prefers this alternative.

5. A portion only of the parts specified may be accepted in place of the whole, if that portion is sufficient to show that the candidate has a good practical idea of the construction of the parts, and a fair notion of their general proportions or dimensions.

6. Candidates are hereby cautioned not to put on paper what they have not fully considered, and deliberately intend to be understood, as their statement of what they know about the construction of any part required.

7. The statements given in by a candidate may be in themselves, apparently, of little importance, but as sample material from which the state of the candidate's knowledge of engines and boilers is to be inferred, every detail which is glaringly inconsistent with a sound knowledge of the use of the part, or in which an essential consideration has evidently been overlooked, is an important element in the description which the candidate is giving of his own qualifications.

8. The candidate is advised not to begin more than he can clearly finish in the time allowed. An important object in this part of the examination is to ascertain whether the candidate can be trusted to mark all necessary dimensions upon a sketch or a drawing. The test of this is, practically, the making of the part from the sketch without having to supply additional dimensions, and without measuring the drawing. To prove this ability the candidate must fully dimension the parts shown in his sketch or drawing, notwithstanding that the parts may be correctly drawn to scale. A drawing is fully dimensioned when no part of it is left to the option of the party who is to work to the drawing.

9. To prevent misunderstanding, however, when the candidate has been led into showing more of the details than he has time fully to finish, he should name, in the statement on the other side, the particular parts which he has fully dimensioned.

10. All dimensions should have lines and darts, to indicate distinctly the points between which the dimensions are given.

11. Beware of writing cross dimensions upon centre lines, or upon longitudinal dimension lines. This is not an order but a recommendation.

12. The candidate is not expected to design anything; he has merely to sketch or draw a something with which he is expected to be already familiar.

13. Pencil in nothing after half-past 3; all the dimensions, the figures, and the darts must be inked in; employ the remaining time in examining the drawing and in inking in any figures which may have been before overlooked, and in checking the dimensions.

14. Make sure that you will have sufficient room on the drawing sheet to show all the necessary views. You can have another sheet or drawing paper if necessary. All the paper used must be forwarded with the drawing.

15. Fill in and sign the following statement.

(Specimen.)

Form **Exn. 17a.**

SUBJECT FOR EXAMINATION IN ROUGH WORKING DRAWING.

(Read the foregoing general instructions.)

A common slide valve with its spindle. Show also an outline section of the ports at the cylinder face. Show the provision for connecting the slide valve to the spindle.

The candidate is requested to fill up the following, and to attach this paper to his drawing.

Statement by the Candidate.

The accompanying drawing, made by me this day, without referring to any document, and without the assistance of any person, is intended by me to be sufficient for the new construction of the parts above described to fit the places of similar parts which are to be removed. The construction is similar to what I have been with in the_____steamer_____, but the dimensions may be different.

The diameter of the cylinder is_____

The stroke of the piston is_____

The stroke of the valve is_____

The cover at top end on steam side is_____

The cover at bottom end on steam side is _____

The lead at top is intended to be_____

The lead at bottom is intended to be_____

The inside cover is +_____or_____.

The thickness of the face of valve is_____

The thickness of the body of valve is_____

The greatest opening for steam will be_____

That gives an area equal to one_____

The opening for exhaust when the crank is on the top centre is_____

That gives an area equal to_____th of piston.

The length of the connecting rod is_____

The valve will cut off steam on the down stroke at_____

The valve will cut off steam on the up. stroke at_____

The Candidate may omit this part if he chooses.

The parts fully dimensioned, in ink, are_____

Dated at_____

this_____ day of_____18

_____ Applicant.

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act*, 1869.

Colonial Certificate of Competency

AS

FIRST CLASS ENGINEER.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of FIRST CLASS ENGINEER in the Merchant Service, I do hereby, in pursuance of Act VII of* 1884, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18——.

Under-Secy. to the Govt. of Bengal.

BENGAL.

No. of Certificate [redacted]

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

*This Certificate is given upon an ORDINARY EXAMINATION passed at*_____ *on the*_____ *day of*_____ 18 .

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

*Issued at the Port of Calcutta on the*_____ *day of* _____ 18 .

Registered,

Port Officer of Calcutta.

Government of Bengal.

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issued under section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

AS

SECOND CLASS ENGINEER.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of SECOND CLASS ENGINEER in the Merchant Service, I do hereby, in pursuance of Act VII of* 1884, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

*this*_____ *day of*_____ 18__.

Under-Secy. to the Govt. of Bengal

BENGAL.

No. of Certificate [redacted]

Address of Owner———————————————

Date and Place of Birth———————————————

Signature———————————

This Certificate is given upon an ORDINARY EXAMINATION passed at———————*on the*—— ———

day of———————18—.

Any ENGINEER who fails to deliver up a Certificate which has been cancelled or suspended, is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the—— —— ———*day of*—— —— 18—.

Registered.

Port Officer of Calcutta.

NOTIFICATION.

No. 24 Marine, dated Calcutta, the 30th January 1890.

UNDER the powers conferred upon him by section 36 of Act VII of 1884 (the Indian Steam-ships Act), and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to engine-drivers of sea-going steam-ships having engines of under 50 nominal horse-power.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

1. Certificates of competency will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed and arrangements have been made for holding the examinations periodically at the port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint.

2. The application for examination is to be made in Form Exn. 3*a*, which must be filled up at the Port Office. The Exn. 3*a* properly filled in, together with the candidate's testimonials, must be lodged with the Port Officer not later than the day before the day of examination.

3. A candidate for a certificate of competency under these rules must be not less than 22 years of age.

4. He must have served three years as principal serang or tindal in the engine-room of a sea-going steamer under a certificated Engineer.

5. He must have the testimonial shown in Appendix A filled up by the Engineer with whom he has last served, or his other testimonials must contain all the particulars therein required.

6. He must pass a *viva voce* examination before the Board of Examiners as to the working of an engine and the use of its different parts.

7. He must, if required, be able to show his practical qualifications by one week's trial in a steamer, after fulfilling the other tests to which he will be subjected.

8. He must show a knowledge of the use of brine cocks and blowing off, of the salinometer, and of the care of the boiler in salt-water.

9. Candidates for examination, in making the application on Form Exn. 3*a*, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them; but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service or are able to produce satisfactory testimonials, as the case may be.

10. The fee for examination under these rules is ten rupees, and the amount must be remitted with the application to the Port Officer. In any case in which a candidate offers money to any other officer than the Port Officer, and in any place but the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

11. If a candidate fails in his examination, *no part of the fee he has paid will be returned to him.*

12. In case of failure, candidates may be re-examined *de novo* after a lapse of six months, if the past examination showed that they might reasonably be expected to qualify.

13. Certificates of competency shall be made and issued by the Government in the form hereunto annexed.

14. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

TESTIMONIAL

I hereby certify that has served with me in the engine-room of as principal serang of for a period of , during which time he has discharged his duties to my entire satisfaction.

I consider that he fully understands the working of an engine, and has sufficient tact, presence of mind, and energy to look after and manage the working of the engines of a sea going steamer having engines of under 50 nominal horse-power.

Signed

No. and description of Certificate.

Note.—Any Engineer giving a testimonial in this form should be very careful in doing so, as the document may materially influence the applicant's eligibility as a candidate.

By the Honourable the Lieutenant-Governor of Bengal.

Government of Bengal.

Certificate of Competency

AS

ENGINE-DRIVER OF A SEA-GOING STEAM VESSEL UNDER ACT VII OF 1884.

To_____.

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of Engine-driver on a sea-going Steam-ship having engines of under 50 nominal horse-power, I do hereby, in pursuance of Act VII of 1884, grant you this CERTIFICATE OF COMPETENCY as Engine-driver.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

*The*_____*day of*_____18____. *Under-Secretary to the Govt. of Bengal.*

No. of Certificate

*Bearer*_____ *son of*_____ *by caste*_____

Date and Place of Birth, showing Village, Thana and District*_____

*Residence, showing Village, Thana and District*_____

*Height*_____

*Personal description, stating particularly any permanent marks or scars*_____

*No. of Register Ticket*_____

*Signature*_____

Any Engine-driver who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer of Calcutta.

*Issued at Calcutta on the*_____ *day of*_____ 18____.

Registered.

Port Officer of Calcutta.

* If not known exactly, must be stated on the best information or evidence.

NOTIFICATION.

No. 25 Marine, dated Calcutta, the 30th January 1890.

UNDER section 10 of the Indian Merchant Shipping Act, 1859, the Lieutenant-Governor is pleased, with the sanction of the Governor-General in Council, to make the following rules for the conduct of examinations for Masters and Mates of foreign-going ships and as to the qualifications to be required. These rules are in supersession of the rules issued under the notification dated the 28th of August 1877.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose examiners have been appointed, and arrangements have been made for holding the examinations periodically at the port of Calcutta. The examinations will be held twice a quarter, or at such other times as the Government may appoint.

Examinations continued till all the Candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the Candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Notice of application for examination to be given to the Port Officer.

3. Candidates for examination must make their application upon the appropriate Form (Exn. 2), which must be filled up at the Port Office. The Exn. 2, properly filled in, together with the Candidate's testimonials and discharges, must be lodged with the Port Officer of Calcutta not later than the day before the day of examination, and the Candidate must conform to any regulations in this respect which may be laid down by the Government, as, if this be not done, delay may be occasioned.

Testimonials of character, conduct, and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges may have to be verified before the Candidate can be examined, it is desirable that they should be handed in together with the Form, Exn. 2, as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners, and of British Seamen serving in foreign vessels, which cannot be verified by the Port Officer, must be confirmed either by the Consul of the country to which the ship in which the Candidate served belonged, or by some other recognized official authority of that country, or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case will be decided on its own merits, and if the sufficiency of the proofs given appears to be at all doubtful, it must be referred to the Government.

Certificates as to age.

6. Should any doubt exist as to the age of a Candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British Vessel. In the case of natives of India, who may not be able to speak English, their Certificates will be endorsed to the effect that they are only valid for vessels manned and officered entirely by Asiatics.

8. The time for which length of service as Seaman or Officer in the Mercantile Marine is to be reckoned in all cases referred to in the following paragraphs is to commence at the date when the Articles of Agreement were signed by the Applicant, and to end at the date when he was discharged as shown on the Articles of Agreement. The Certificates of Discharge will generally be sufficient evidence of this, but great care must be exercised by the Port Officer and Examiners to detect any tampering in any way with the information contained in them, and to report to the Government at once any suspicious cases.

Verification of services, &c., by Articles

9. Services, which cannot be verified by proper Entries in the Articles of the Ships in which the Candidates have served, cannot be counted. For instance, a man will state his

service to have been as Second or Only Mate, and to support his assertion will produce a Certificate of Discharge or of employment by the Master, to the effect that he served as Mate, when, on reference to the Articles, it appears that he has actually been rated as Boatswain; the service in such a case will not be regarded as having been in the capacity of Mate.

Promotion during Voyage

10. Whenever a man has, from any cause, been regularly promoted on a vacancy in the course of the Voyage from the rank in which he first shipped, and such promotion, with the ground on which it has been made, is properly entered in the Articles and in the Official Log Book, he will of course receive credit for his service in the higher grade for the period subsequent to his promotion.

Service in the coasting trade

11. Service in the coasting trade may be allowed to count as service, in order to qualify a Candidate for examination for a Certificate of Competency for Foreign-going Ships, it being understood, however, that service in the coasting trade must amount to half as much again as service in the foreign trade, and that service in a lower grade than that of First or Only Mate in the coasting trade will not be recognised as officer's service.

12. Three years' service as Mate in the coasting trade, together with at least nine months' service as Master, may be allowed to count as service for a Master's Certificate, provided the Candidates' entire service at sea calculated as above is sufficient, and that his services as Mate and Master in the coasting trade can be proved by the Articles, and provided he has already passed an examination *for the Foreign Trade*, unless, *under special circumstances*, the Government see fit to dispense with this latter provision.

13. Service in Pleasure Yachts under 80 tons, if performed within Home Trade limits, will not be accepted towards qualifying a Candidate for examination.

14. Service in Pleasure Yachts will not be accepted at all unless verified by satisfactory proofs, and it must be distinctly understood that accepted service is confined to *actual sea service*, service in harbour or port being inadmissible. *See also para.* 21.

Service as an Apprentice.

15. Time for which Indentures of Apprenticeship are in force will be accepted as sea service, provided that the Apprentice has remained by the ship for at least four-fifths of the time covered by the Indentures, and the Indentures of the applicant are endorsed by the Owner or Master to whom he has been bound, to the effect that he has performed his service faithfully for the whole time agreed upon.

Service as 3rd or 4th Mate to qualify for 1st Mate.

16. Service as Third or Fourth Mate may be accepted as equivalent to service as Second Mate to qualify a Candidate for examination for a Certificate of Competency as First Mate, provided he is able to produce a satisfactory testimonial from the Master or owner of the vessel in which the service was performed, showing that he has had charge of a watch while serving as such Third or Fourth Mate, and that during the whole of the time claimed he was in possession of a Second Mate's Certificate of Competency, valid in the United Kingdom.

Service as 3rd or 4th Mate to qualify for Master.

17. Service as Third or Fourth Mate may also be accepted on the same conditions to qualify a Candidate for examination for a Master's Certificate of Competency, provided he can produce satisfactory evidence of his having served at sea 12 months as Second Mate of a Foreign-going Ship while in possession of a First Mate's Certificate of Competency, valid in the United Kingdom. If a Candidate has had no service as First Mate he must have been six and-a-half years at sea, of which two and-a-half years must have been as Mate of a lower grade under the above-named conditions. It will also be noted that occasional service in charge of a watch in the daytime will not be accepted as Mate's service under the Regulations.

Service on board a Training Ship.

18. Part of the time served on board a training ship will be allowed to count as service at sea, provided that the Candidate can produce amongst his testimonials a Certificate from the Committee that he has conducted himself reditably, and passed a good examination in seamanship so

far as practised in the training ship as well as in other matters down to the time of his leaving the ship.

19. No period of service on board a training ship will be allowed to count for more than one year's sea service, nor can it be accepted as equivalent to service in square-rigged vessels.

Service in Auxiliary Screw Whaling ships.

20. Service in Auxiliary Screw Whaling Ships and other Vessels with auxiliary steam power, which use their screws only in calms or during light winds, is considered as service performed in Sailing Vessels. Such service is not to be accepted in cases where service on board Foreign-going Steam-ships is required.

Service in Trawlers, Yachts, &c.

21. Service performed in Trawlers, Yachts, &c., *alone* will not qualify a Candidate for examination for a Foreign-going Certificate. He must show that he has served, in addition thereto, 18 months in an ordinary trading vessel.

Service in capacities other than as Apprentice or Seaman.

22. Candidates whose services have been in capacities other than Apprentice, Ordinary Seaman, or Able Seaman, *e.g.*, Cook, Steward, Carpenter, &c., will be required to satisfy the Port Officer that they have a good knowledge of Seamanship. This may possibly be proved by the production of satisfactory Certificates from Masters with whom the Applicants have served Failing satisfactory evidence, the Applicant may be required to perform additional service, which must be in the capacity of Ordinary Seaman or Able Seaman.

Service on rivers and in smooth-waters.

23. Service performed on rivers, no matter of what size, or in smooth-water or partially smooth-water cannot be accepted.

Loss of sight.

24. A person who has lost the sight of one eye cannot be allowed to be examined for a Certificate of Competency. If he already holds a Certificate, he will not be allowed to be examined for a Certificate of a higher grade.

Service in Light Ships and Engine-room.

25. Service in Light Ships or in an Engine-room will not be accepted as sea service for a Master's or Mate's Certificate of Competency.

26. In the case of service on board Excursion Steamers only such service as has been performed actually at sea can be accepted.

27. A First Class Pilot, with one year's Sea Service since he obtained his Pilot's Certificate, may be examined for a First Mate's Certificate for Foreign-going Ships. A Hooghly Master Pilot is for the purpose of this rule to be considerd a First Class Pilot.

Services as Pilot's Apprentice.

28. Half the amount of service performed as an Apprentice in a Pilot Vessel propelled by sails may count as actual Sea Service to qualify for examination for a Certificate of Competency.

Desertion and gross misconduct.

29. Candidates who have neglected to join their vessels after having signed Articles, or who have deserted their vessels after having joined, or who have been found guilty of gross misconduct on board, will be required to produce satisfactory proofs of two years' subsequent service and good conduct at sea, unless the Local Government after having investigated the matter should see fit to reduce the time.

If after passing examination services are found to have been insufficient.

30. If after a Candidate has passed his Examination it is discovered on further investigation, *e.g.*, by verification on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for which he has passed, it will not be granted to him; but if the Government is satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, he will be allowed to go up for re-examination without payment of further fee when he has performed the amount of service in which he was deficient.

Certificate of a lower grade may be granted in certain conditions.

31. If, in such a case, the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference, if any, between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate, may be placed to his credit.

Must be re-examined for certificate of higher grade.

32. In such a case when the applicant has by further service made up the amount in which he was found to be short, he must, before he can receive the higher Certificate, be re-examined in all the subjects.

Colour Tests.

33. The Government have made the following arrangements for the Examination of persons as to their ability to distinguish Colours:—*

34. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

35. Any person, including the holders of Certificate of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in colours only*, must make application to the Port Officer on Form Exn. 2ª, and pay a fee of one rupee.

36. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a Certificate to that effect.

37. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

38. The application of a *Candidate who is presenting himself for Examination for a Master's or Mate's Certificate* must be made on Form Exn. 2.—Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any one of the colours used in the test, he will not be allowed to proceed with the examination in Navigation and Seamanship.

39. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will, in such event, be returned to him.

40. A Candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If he fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

41. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form 2ª.

42. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination in Navigation and Seamanship for the Certificate of the higher grade.

43. Should he pass this Examination the following statement will be written on the face of the higher Certificate which may be granted to him, viz.: "This officer has failed to pass the 'Examination in Colours.'"

44. Should he ultimately fail to pass the Examination in Navigation and Seamanship a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

45. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency for a "Foreign-going Ship."

Foreign-going Sailing Ships

46. EXAMINATION IN COLOURS.—All Candidates for Certificates of Competency must first be examined in colours.*

47. A SECOND MATE must be not less than seventeen years of age, and must have been four years at sea. He must also prove that he has served at least one year in a square-rigged sailing vessel within the last five years. *See also para.* 11. Second Mate.

On and after the 1st April 1890, no Candidate will be allowed to be examined unless he has served at sea two years

* *See* Appendix L.

within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

48. IN NAVIGATION, &c.—He must write a legible hand, and will be required to give in writing, *vide supplementary viva voce* test, page 37, definitions of various astronomical and other terms used in navigation.* He must have a competent knowledge of the first five rules of arithmetic, and the use of logarithms. He must be able to work a day's work complete, correcting the courses for deviation, lee-way, and variation. He will be required to find the latitude by meridian altitude of the sun, and the difference of longitude from a given departure by parallel sailing; also to find the course and distance from one position to another by Mercator's method. He will be required to find the time of high water at a given port, to observe and calculate the amplitude of the sun, and to find the error of the ship's compass therefrom, and also the deviation, the variation being given. He must be able to find the daily rate of the chronometer from error observed, and to find the longitude from altitude of the sun by the usual methods. He must understand the use of the sextant, with its adjustments, and be able to observe with it, find the index error by the horizon, and *read off* and *on the arc*.† He must also pass a satisfactory examination in the International Code of Signals.‡

49. IN SEAMANSHIP, &c.—He must give satisfactory answers as to the standing and running rigging of ships; as to bending, unbending, setting, reefing, taking in and furling sail; as to sending masts and yards up and down, &c., &c.; as to the management of a ship when under canvas; of a ship's boat in heavy weather, and as to dunnaging and stowing cargo, &c. He must have a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog, and sound signals,§ and be able to describe the signals of distress, and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals ‖ He must be able to mark and use the lead and log lines. He must also understand the use and management of the rocket apparatus in the event of his vessel being stranded, and other questions of a like nature appertaining to the duties of the Second Mate of a ship, which the Examiners may think necessary to put to him. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Second Mates' Certificates of Competency for Foreign-going Steam-ships.

50. AN ONLY AND FIRST MATE.—An Only Mate and a First Mate must be not less than nineteen years of age, and must have served five years at sea, of which in the case of a First Mate, one year must have been as Second or Only Mate. *See* also paras. 11, 16 and 27.

On and after the 1st April 1890, no Candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediataly preceding the date of his application to be examined.

Only and First Mate.

A Candidate for an Ordinary Certificate of *any* grade, who does not already hold an Ordinary Certificate of a lower grade, must prove that he has served 12 months in a square-rigged sailing vessel within the last five years.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined

51. IN NAVIGATION.—In addition to the qualifications required for a Second Mate, an Only and First Mate must be

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* *See* Appendix A.

† *See* Appendix B.
‡ *See* Appendix C.
§ *See* Appendix D.
‖ *See* Appendix E.

able to find the true bearing of the sun and the error of the ship's compass from an observed azimuth of the sun, both from an altitude and also from the "Time Azimuth Tables," and with the variation given compute the deviation; to find the latitude from a single altitude of the sun off the meridian, and be able to use and adjust the sextant,* and to find the index error by the sun; also to ascertain the true bearing of the sun, &c., and the ship's position by Sumner's Method by Projection.† He must also be conversant with the use of Mercator's Chart, and be able to find, on either a "true" or "magnetic" chart,‡ the course to steer and the distance from one given position to another; and find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of ship from the object at the time of taking the second bearing. He must also understand how to keep a ship's Log Book. He will also be required to answer certain questions in writing (*and orally*) relative to cyclones or revolving storms.§

52. In Seamanship, &c.—In addition to the qualifications required for a Second Mate, a more extensive knowledge of seamanship will be required, as to shifting large spars, rigging sheers, taking lower masts in and out, how to moor and unmoor ship, and to keep a clear anchor; to carry out an anchor; how to manage a ship in stormy weather; how to cast a ship on a lee shore; how to secure the masts in the event of accident to the bowsprit; and how to rig purchases for getting heavy weights, anchors, machinery, &c., in and out. He must give satisfactory answers as to the ventilation of holds and the stowage of explosives. He must also know how to rig a sea anchor, and what means to apply to keep a vessel disabled or unmanageable out of the trough of the sea, and lessen her lee drift; how to get a cast of deep sea lead in heavy weather; and answer any other questions appertaining to the duties of an Only and First Mate of a ship which the Examiners may think necessary to put to him. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Only and First Mate's Certificates of Competency for Foreign-going Steam-ships.

53. A MASTER must be twenty-one years of age, and have been six years at sea, of which one year must have been as First or Only Mate in a Foreign-going Ship, and one year as Second or Only Mate; or he must have been six and-a-half years at sea, of which two and-a-half years must have been as Second Mate of a Foreign-going Ship, during the last twelve months of which service as Second Mate he must have been in possession of a First Mate's Certificate. *Vide also paras.* 11, 12 and 17. Master.

On and after the 1st June 1889, no Candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

A Candidate for an Ordinary Certificate of any grade, who does not already hold an Ordinary Certificate of a lower grade, must prove that he has served 12 months in a square-rigged sailing vessel within the last five years.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the Candidate is allowed to be examined.

54. In Navigation.—In addition to the qualifications required for a Second, Only, and First Mate, a Master must be able to compute the latitude from the meridian altitude of a star, &c. He must be able to find the magnetic bearing from

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* *See* Appendix H.

† *See* Appendix I

‡ *See* Appendix F. The terms "true" and "magnetic" are used throughout the Regulations for the sake of brevity and convenience for indicating charts that have compasses engraved upon them showing the "true" or "magnetic" points of the compass respectively.

§ *See* Appendix K.

equidistant compass bearings of any fixed object when at sea, and compute the deviation therefrom. He must construct a deviation curve upon a "Napier's" diagram, which will be furnished by the Examiner, and understand the practical application of the same, and give satisfactory written (*and oral*) answers to certain practical questions on the effect of the ship's iron upon the compasses, the method of determining the deviation, and compensating same by magnets and soft iron.* He will be required to find the course to steer by compass in order to counteract the effect of a given current, and find the distance the ship will make good towards a given point in a certain time and to work out practically the correction to apply to soundings taken at a given time and place to compare with the depth marked on the chart.†

55. In Seamanship, &c.—In addition to the qualifications required of a Second, Only, and First Mate, he must be able to construct jury rudders for both wooden and iron vessels, and also rafts. He will be examined as to his resources for the preservation of the ship's crew in the event of wreck; as to the management of ships in heavy weather; as to rescuing the crew of a disabled ship; as to steps to be taken when a ship is on her beam ends, or in any danger or difficulty; or if disabled or unmanageable and on a lee shore; heaving a keel out, &c. He must explain the mode of procedure when placing ship in dry dock, directing repairs, and if putting in to port in distress with damage to cargo and ship. He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew, and as to penalties, and entries to be made in the official log, and a knowledge of the measures for preventing and checking the outbreak of scurvy on board ship, and the law as to load line marks, and the entries and reports to be made respecting them. He will be questioned as to his knowledge of invoices, charter party, bills of-lading, Lloyd's agent, and as to the nature of bottomry, also bills-of-exchange, surveys, averages, &c., and must answer any other questions of a like nature appertaining to the management of a ship which the Examiners may consider it necessary to touch upon. He will also be required to give satisfactory answers as to his knowledge of the additional subjects (applying more particularly to steam-ships) which are specified in the Rules of Examination for Masters' Certificates of Competency for Foreign going Steam-ships.

Fore and Aft rigged ships.

Certificates for Fore and Aft rigged Vessels.

56. Certificates for the grades of Master, First Mate, Only Mate, and Second Mate, on which the words "for Fore and Aft rigged vessels only" will be written, will be issued to Candidates who have not complied with the regulation which requires them to have served at least one year in square-rigged *sailing* vessels, or who prove in course of examination that they are ignorant of the management of square-rigged ships.

57. A certificate "for Fore and Aft rigged vessels only" will not entitle the possessor to act in a capacity for which a certificate is required in square-rigged vessels, amongst which are classed full-rigged ships, barques, brig, barquentines, brigantines, and steam-ships carrying square sails.

58. A Candidate possessing a certificate "for Fore and Aft rigged vessels only," and desiring to obtain an ordinary certificate of the same grade, must prove that he has served at sea at least one year in a square-rigged *sailing* vessel, and will be re-examined both in navigation and seamanship.

Foreign-going Steam-Ships.

Qualifications for Certificates of Competency for Foreign-going Steam-ships only.

59. Certificates of Competency will be issued, subject to the examinations hereinafter described, for officers who have served in steam-ships, and who, owing to absence of service in square-rigged sailing ships, cannot under the

* *See* Appendices G and M.
† *See* Appendix F.

existing regulations obtain Certificates of Competency to act in the capacity of Masters or Mates of square-rigged ships.

60. These certificates will entitle the holders to go to sea as Masters and Mates of foreign-going steam-ships, but will not entitle the holders to go to sea as Masters or Mates of foreign-going sailing ships.

61. There will be no distinction in respect of "Fore and Aft" and "Square-rigged" steam-ships.

62. EXAMINATION IN COLOURS.—All Candidates for Certificates of Competency must pass the examination in Colours.

63. A SECOND MATE must be not less than seventeen years of age, and must have been four years at sea. *See* also para. 11. Second Mate

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

64. IN NAVIGATION, &c.—He must write a legible hand, and will be required to give in writing (*vide supplementary viva voce test, page* 39) definitions of various astronomical and other terms used in navigation.* He must have a competent knowledge of the first five rules of arithmetic, and the use of logarithms. He must be able to work a day's work complete, correcting the courses for deviation, leeway, and variation. He will be required to find the latitude by meridian altitude of the sun, and the difference of longitude from a given departure by a parallel sailing; also to find the course and distance from one position to another by Mercator's method. He will be required to find the time of high water at a given port, to observe and calculate the amplitude of the sun, and to find the error of the ship's compass therefrom, and also the deviation, the variation being given. He must be able to find the daily rate of the chronometer from error observed, and to find the longitude from altitude of the sun by the usual methods. He must understand the use of the sextant with its adjustments, and be able to observe with it, find the index error by the horizon, and read *off* and *on* the arc.† He must also pass a satisfactory examination in the International Code of Signals.‡

65. IN SEAMANSHIP, &c.—He must give satisfactory answers as to the standing and running rigging of steam-ships; as to bending, unbending, setting, reefing, taking in and furling sail; as to sending masts and yards up and down, &c., &c., as to seeing everything in readiness and clear for getting under way, and as to the precautions to be then observed with regard to engines, propellers, &c.; as to the management of a steam-ship when under canvas; and of a ship's boat in heavy weather, and as to dunnaging and stowing cargo, &c. He must have a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog, and sound signals,§ and be able to describe the signals of distress and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals.‖ He must be able to mark and use the lead and log lines. He must also understand the construction, use, and action of the sluices, and of the water-ballast tanks, engine-room, telegraph, &c.; the use and management of the rocket apparatus in the event of his vessel being stranded, and other questions of a like nature, appertaining to the duties of the Second Mate of a steam-ship, which the Examiners may think necessary to put to him.

66. AN ONLY AND FIRST MATE.—An Only Mate must be not less than nineteen years of age, and must have served five years at sea. A First Mate must be nineteen years of age, and must have served five years at sea, of which Only and First Mate.

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* *See* Appendix A. † *See* Appendix B. ‡ *See* Appendix C.
§ *See* Appendix D. ‖ *See* Appendix E.

one year must have been as Second or Only Mate of a Foreign-going Steam-ship. *See also paras.* 11, 16 *and* 27.

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last three years immediately preceding the date of his application to be examined

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

67. IN NAVIGATION.—In addition to the qualifications required for a Second Mate, an Only or First Mate must be able to find the true bearing of the sun and the error of the ship's compass from an observed azimuth of the sun both from an altitude and also from the "Time Azimuth Tables," and with the variation given compute the deviation; to find the latitude from a single altitude of the sun off the meridian, and to be able to use and adjust the sextant,* and to find the index error by the sun; and also to ascertain the true bearing of the sun, &c., and the ship's position by Sumner's Method by Projection.† He must also be conversant with the use of Mercator's Chart, and be able to find on either a "true" or "magnetic" chart,‡ the course to steer and the distance from one given position to another; and find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of ship from the object at the time of taking the second bearing. He must also understand how to keep a ship's Log Book. He will also be required to answer certain questions in writing (*and orally*) relating to cyclones or revolving storms.

68. IN SEAMANSHIP.—In addition to the qualifications required for a Second Mate, a more extensive knowledge of seamanship will be required, as to shifting large spars, rigging sheers, taking lower masts in and out, how to moor and unmoor ship and to keep a clear anchor, to carry out an anchor; how to manage a steam-ship in stormy weather, and how to rig purchases for getting heavy weights, anchors, machinery, &c., in and out. He must give satisfactory answers as to the ventilation of holds, and the stowage of explosives. He must be able to describe the effects of the screw race upon the rudder; and the effect produced on the direction of the head of the ship by going [ahead] [astern] with a [right] [left] handed screw when the rudder is [ported] [starboarded]. He must also know how to rig a sea anchor, and what means to apply to keep a steamer with machinery disabled out of the trough of the sea, and lessen her lee drift. How to turn a steam-ship short round; how to get cast of deep sea lead in heavy weather, and other questions of a like nature appertaining to the duties of an Only and First Mate of a steam-ship, which the Examiners may think necessary to put to him.

Master.

69. A MASTER—Must be not less than twenty-one years of age, and have been six years at sea, of which one year must have been as First or Only Mate in a Foreign-going Steam-ship, and one year as Second or Only Mate; or he must have been six and-a-half years at sea, of which two and-a-half years must have been as Second or Only Mate in a Foreign-going Steam-ship, during the last twelve months of which he must have been in possession of a First Mate's Certificate. *See also paras.* 11, 12 *and* 17.

On and after the 1st April 1890, no candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

70. IN NAVIGATION.—In addition to the qualification required for a Second, Only, and First Mate, he must be able

* *See* Appendix R. † *See* Appendix I. ‡ *See* Appendix F.
Also page 24 foot-note ‡.

to compute the latitude from the meridian altitude of a star, he must be able to find the magnetic bearing from equidistant compass bearings of any fixed object when at sea, and compute the deviation therefrom. He must construct a deviation curve upon a "Napier's" diagram which will be furnished by the Examiner, and understand the practical application of the same, and give satisfactory written (*and oral*) answers to certain practical questions on the effect of the ship's iron upon the compasses, the method of determining the deviation, and compensating same by magnets and soft iron.* He will be required to find the course to steer by compass in order to counteract the effect of a given current, and find the distance the ship will make good towards a given point in a certain time, and to work out practically the correction to apply to soundings taken at a given time and place, to compare with the depth marked on the chart.†

71. In Seamanship, &c.—In addition to the qualifications required of a Second, Only, and First Mate, he must be able to construct rafts and jury rudders suitable for a screw steam-ship. He will be examined as to his resources for the preservation of the ship's crew in the event of wreck; as to the management of steam-ships in heavy weather; as to rescuing the crew of a disabled ship; as to steps to be taken when a ship is on her beam ends; or if disabled and on a lee shore. How to use steam appliances in the event of fire, and the best arrangement for towing vessels under different circumstances, placing ship in dry dock, directing repairs, and the mode of procedure if putting into port in distress with damage to cargo and ship. He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew, and as to penalties and entries to be made in the official log, and a knowledge of the measures for preventing and checking the outbreak of scurvy on board ship, and the law as to load line marks, and the entries and reports to be made respecting them. He will be questioned as to his knowledge of invoices, charter-party, bills-of-lading, Lloyd's agent, and as to the nature of bottomry; also bills-of-exchange, surveys, averages, &c., and answer any other questions of a like nature, appertaining to the management of a steam-ship, which the Examiners may consider it necessary to touch upon.

Service in Royal Navy.

72. Officers of the Royal Navy are at liberty to apply for Certificates of service and to be examined for Certificates of Competency in the Mercantile Marine, but they must submit their applications in the manner directed by the Lords Commissioners of the Admiralty. *Service in Royal Navy.*

73 Officers of the Royal Navy desirous of being examined for Certificates of Competency in the Mercantile Marine will be required to prove the following service, of which twelve months must have been sea service under sail alone.

74. For Second Mate.—A Candidate must produce satisfactory evidence of four years' service at sea, or that he has attained the rank of acting Sub-Lieutenant.

75. For Only Mate.—A Candidate must prove five years' service at sea.

76. For First Mate or Masters.—A Candidate must show that he has attained the rank of Sub-Lieutenant, or Navigating Sub-Lieutenant.

Voluntary Examination in the Laws of the Deviation of the Compasses of Iron Ships.

77. Any Master or Mate who wishes to pass a *voluntary* examination in the Syllabus* of examination on the Laws of the Deviation of the Compasses of an Iron Ship, &c., can at any time be examined upon filling up the form of application, and the payment to the Port Officer of the prescribed fee. If the candidate passes the examination successfully, an endorsement to that effect will be duly made upon the Master's or Mate's Certificate held by him. *Voluntary Examination of Masters and Mates in the Syllabus.*

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* *See* Appendice G and M. † *See* Appendix F. ‡ *See* Appendix A.

Failure.

Re-examination in case of failure

78. In all cases of failure the Candidate must be examined *de novo*. If a Candidate fails in *Seamanship* he will not be re-examined *until after a lapse* of SIX MONTHS. Whether the whole or part of this period must be served at sea must depend upon the subjects in Seamanship in which the Candidate failed, but what amount (if any) of sea service will be required will be left to the discretion of the Port Officer, subject, however, to revision by the Government, should they see fit.

79. The Examiners in making out their report on Form Exn. 14 should state what amount (if any) of further sea service the Candidate must perform, and they should also insert this information under Division H. in Form Exn. 2.*

80. If he fails three times in *Navigation* he will not be re-examined until after a lapse of THREE MONTHS from the date of the *last failure*.

Certificate of lower grade.

81. If a Candidate has failed in his Examination, but the subjects in which he has failed are not included in the subjects required for a Certificate of a lower grade, he may, if he desires it, receive a Certificate of such lower grade.

82. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled, for re-examination for the higher grade of Certificate he will be required to pay a further full fee.

83. If a Candidate fails for bad spelling or writing, he will not be re-examined until after a lapse of at least three months.

84. If a Candidate fails in his examination for an ordinary Certificate, he may, if qualified, and upon payment of another fee, &c., be examined for a Certificate of Competency for Foreign-going Steam-ships without waiting the usual time after failure.

Fees.

85. Candidates for examination, in making their application on Form Exn. 2, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause, except failure to pass the colour tests, not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be, they will be allowed to again present themselves for examination for a Certificate of the same grade without paying any further fee.

Fees to be paid by applicants for examination, s. 133.

86. The fee for examination must be paid to the Port Officer. In any case in which a Candidate offers money to any other officer, and in any place but in the Port office, the Candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be again examined for twelve months.

87. If a Candidate fail in his examination *no part of the fee will be returned to him.*

88. The fees are as follow:—

FOR "FOREIGN-GOING SAILING AND STEAM SHIPS."

	Rs.
Second Mate	12
First and Only Mate, if previously possessing an inferior certificate, either granted by the Board of Trade, or by the Government of a British Possession *under section* 8 *of the "Merchant Shipping (Colonial) Act*, 1869"	6
If not	12
Master	24
Where a Candidate is in possession of a Certificate for Fore and Aft rigged Vessels, for an Ordinary or Steam-ship Certificate of the same grade	12

* *See* Appendix H.

FOR "VOLUNTARY EXAMINATION IN STEAM."

	Rs.
Mate (Only or First)	12
Master	12

FOR "VOLUNTARY EXAMINATION IN DEVIATION OF THE COMPASS."

	Rs.
Mate (Second, Only or First)... ...	12
Master	12

GENERAL.

89. Certificates of Competency shall be made and issued by the Government in the forms hereunto annexed.

90. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate and the other shall be kept and recorded by the Port Officer of Calcutta.

90A. No application from the holder of a certificate granted by the Government of any other British Possession or by the Board of Trade to be examined for a certificate of the same legal value shall be entertained.

General Instructions to Examiners and Candidates.

Prohibited books and papers.

91. All instruments necessary for use in the examinations are supplied by the Government.

92. Before commencing the examination, the tables or desks must be cleared of all scraps of paper, or books that are not used in the examination, and care should be taken that the candidates do not bring into the examination room any book, paper, document, or memoranda of any description whatever. No person whatever should be allowed in the room during the time of examination, but those whose duties require them to be present.

93. No instructors will be allowed on the premises.

Candidates not to leave premises during examination.

94. Candidates will under no pretence whatever be allowed to leave the premises while the examination is proceeding. If a Candidate has occasion to visit the retiring room he will only be allowed to do so on the completion of the paper on which he may be engaged, when he will be required to enter in a book, kept for the purpose, the exact time of his leaving and returning to the examination room. When only a few Candidates are under examination, two persons will not be allowed to leave the room at the same time.

Position of Candidates at examination.

95. Candidates should be so placed as to prevent one copying from the other, and no communication whatever between the Candidates should be allowed.

Blotting paper.

96. If any blotting paper is allowed it should be black; and when the first examination paper is issued each Candidate should be furnished with a piece which should be returned to the Examiner upon the completion of the last paper.

How examination papers should be issued.

97. The examination papers should be issued to the Candidates in half sheets only, and one at a time. This will prevent a Candidate from spreading out the sheets on the table in an apparently careless manner, but so as to enable his nearest neighbour to look over and copy, or examine the problems. It will also enable the Examiner to look over and report upon the work on one half sheet, while the Candidate is at work upon another, and so on. When the errors are not too numerous, or when they are not from ignorance of the subject, the incorrect problems may be returned to the Candidate for correction, but in no case should the errors be pointed out by the Examiner, neither should any marks be made on the correct work of the problem, which would at once indicate how far or to what extent the work is correct. Should the problems be returned to the Examiner the second time incorrect, this would be a failure; and as the time allowed is considered ample for working out the papers carefully, this rule is expected to be strictly observed.

In certain cases problems may be corrected on morning following examination day.

98. When from the large number of the Candidates, it may be found impossible to look over the work, on the day of examination during the office hours, an hour in the morning of the following day may be allotted for the purpose of correcting the problems, but in no case should a Candidate have his problem returned to him for correction after he has made the second attempt.

Re Exn 4A

99. The paper (Exn. 4A) is only for those Candidates who present themselves for examination for the first time. It is intended not only to ensure on the part of the Candidate a knowledge of the meaning of a variety of terms of great use to the Navigator respecting which much ignorance exists at present, but at the same time to test his handwriting and spelling.

100. In using this paper, the Examiner will place a mark against the numbers of the particular questions which he selects for answers, and not less than ten questions should be selected. The Candidate will then write against the questions so marked his definition of the terms in a clear and legible hand, so as to prevent the possibility of any letter being mistaken. Attention should be paid to the spelling and writing of all grades of Candidates. The *supplementary viva voce* test should also be applied as usual.

Re-questions on Deviation of the Compass. (Exn. 7, Appendix G.)

101. In the questions on Deviation of the Compass (Exn. 7, Appendix G) the Examiner should indicate by a mark against at least twelve of the questions for answers, and those indicated must be correctly answered. The selected questions should be varied frequently, and no two Candidates should have precisely the same questions. The Candidate should be furnished with sheets of blank ruled paper which is supplied for that purpose with instructions that he is to write only on one side of the paper, and to answer each of the questions against which a mark is placed in a clear and legible hand, and to commence each answer by writing down the number of the question to which it relates in the margin left for that purpose. In answering question 19, besides giving a full explanation in writing, of the *tentative* method* of compass adjustment (accompanied by the usual *supplementary viva voce* test), the Candidates should be required to illustrate by diagrams how the poles of the magnets are placed with regard to the compass needle for correcting the semi-circular deviation, as well as the heeling error, and also how the soft iron should be placed for correcting the quadrantal deviation, or the Candidate may be tested by "Beall's Compass Deviascope," in which case it will not be necessary for him to give the written answer and sketches.

Viva voce examination.

102. In the *viva voce* examination a reasonable time should be allowed for the Candidate to give his answers. No assistance should be given or leading question put.

Adjustment of sextant.

103. Particular attention should be paid to the adjustments of the sextant, and the written answers should be given on the ruled paper in the same manner as the answers to the questions on Exn. 7, and the *supplementary viva voce* test applied as usual. Every Candidate should have a practical knowledge of what is known as the first three adjustments, and be able to read correctly *off* the arc, a supposed index error to be given by the Examiner as additive, as well as reading *on* the arc in the usual way.

Minor corrections.

104. All outstanding or minor corrections should appear in the margin of each problem paper; also on the chart papers Exn. 9C and Exn. 9D; and unless all these corrections appear on the papers of the Candidate they will not be considered complete.

Examination to commence with that for Second Mate.

105. In every case the Examination, whether for Only Mate, First Mate, or Master, is to commence with the problems for Second Mate.

Problems required as tests.

106. Examiners should bear in mind that the problems to be performed are required as tests, and for the purposes of an Examination, and not for sea-going or practical purposes alone.

107. The Candidates will be allowed to work out the various problems according to the method and the tables they have been accustomed to use.

Time allowed for Problems and Writings.

Time allowed for working problems.

108. *Candidates for Second Mates' Certificates of Competency* must complete the whole of their Examination in Navigation in *eight hours*, including the time allowed for writing the definitions (Exn. 4*a*), the paper on the adjustment of the sextant, and the correction of *all* errors and oversights; but

* See Appendix M.

the nautical problems on Forms "Exn. 4" and "Exn. 5" must be completed within *six hours*, and without the Candidates leaving the premises during that period.

109. *Candidates for Only and First Mates' Certificates* must complete the whole of their examination in Navigation in *twelve and-a-half hours*,* including the time allowed for the papers on the sextant; the chart; cyclones or revolving storms; and for the correction of *all* errors and oversights; but the nautical problems on Forms "Exn. 4," "Exn. 5," and "Exn. 6" must be completed within *six hours*, and without the Candidates leaving the premises during that period.

110. *Candidates for Certificates as Masters,' Ordinary*, must complete the whole of their examination in Navigation in *fifteen hours*; including the time allowed for the papers on the sextant; the chart; compass deviation; cyclones or revolving storms; and for the correction of *all* errors and oversights; but the problems on Forms "Exn. 4," "Exn. 5," and "Exn. 6," must be completed within *six hours*, and without the Candidates leaving the premises during that period.

111. *Candidates after finishing the problems required of the respective grades* on the first day of examination should proceed, until the end of that day, with such subjects as the definitions, sextant, chart, and Question 19 of Form "Exn. 7."

112. *The Sumner Problem* (*Exn. 6a*) must on no account be given out to any of the grades on the first day of the examination, but should be the commencement of the Candidate's work on the second day, and on completion of this problem the Candidates for Masters' Certificates should proceed with the problems on paper "Exn. 7."

113. *Candidates for Foreign-going Steam-ship Certificates of Competency* will be allowed the same amount of time to perform their navigation, &c., as hereinbefore laid down for the respective grades for the Ordinary Foreign-going Certificates.

114. *Deviation of the Compass.*—A period not exceeding eleven hours will be allowed to Candidates for the completion of the whole of the examination in the Syllabus, including the correction of all errors and oversights in both the problems and writings.

Additional time allowed in special cases.

115. Punctually at the expiration of the prescribed time all the papers should be called up, whether completed or not, and if not completed, the Candidate will be declared to have failed, unless the Port Officer or the Examiner see fit to lengthen the period in any special case. If, however, the period is lengthened in any case, the special circumstances of that case, and the reasons for lenthening the period, together with the time allowed, must be reported to the Government by the Examiners, in the column for "remarks" on the Form Exn. 14. It should be noted that the periods prescribed in the foregoing paragraphs are not intended to include the time occupied by the *viva voce* part of the examination.

116. It is anticipated that but few of the Candidates for Certificates of Competency for any of the foregoing grades will require the whole of the time herein allowed for completing their Examination in Navigation; and ample time has been prescribed, so that Candidates may perform their work in a careful, clear, and legible manner, and to the entire satisfaction of the Examiners.

Degree of Precision required in the Solution of the Problems.

117. In order to prevent any misapprehension as to the degree of precision required by the Regulations in working out the various problems in the Examinations for Masters' and Mates' Certificates, the attention of Examiners and Candidates is particularly directed to the following Instructions:—

(*a.*) Candidates are expected to work out their answers to all problems within or not to exceed a margin of *one mile of position* from a correct result (*e.g.*, in problems where the answer required is a latitude, longitude, or distance), excepting in finding the

* A Candidate other than Second Mate who may not previously have passed an examination may be allowed the time occupied in writing his definitions on Exn. 4*a*, in addition to the above.

ship's position by "Sumner's" method, where a margin of 2½ miles will be allowed.

(*b.*) In such problems as the "Amplitude" and "Alt-Azimuth," where the bearings, deviations, &c, only are required, a margin of 2′, or 3′, from a correct result will be sufficiently accurate.

(*c.*) In no problem is the Candidate for an "ordinary" Certificate required by the Regulations to correct for *second differences* in taking out the quantities from the Nautical Almanac.

(*d.*) In solving the "Time Azimuth" problem, an answer not exceeding half a degree from the exact result will be sufficiently near. But in all cases the actual latitude, declination, and time used, together with the exact bearing (from the North or South) as given in the tables, must be clearly shown by the Candidate on his papers.

(*e.*) In interpolating for the correct deviation to be applied in solving the Chart question, Papers "Exn. 9 C." and "Exn. 9 D," it will usually be sufficiently near if the Candidate works throughout with the nearest degree of deviation taken from the "Deviation Card," and even in cases where the deviations may vary but little, the nearest half degree used throughout will be sufficiently precise, and will at the same time prove whether the Candidate understands the method of arriving at the amount of, and applying, deviations. It is not necessary that the Candidate should waste his time in solving the course to *odd minutes* as is sometimes done.

(*f.*) In calculating the correction to apply to the Soundings, Question 5 of Paper "Exn. 9 D," the Candidate is not required to work out to the exact inch, as is sometimes done. It will be sufficiently near if he brings his answer within half a foot or so of a precise result.

It must be clearly understood in reading the foregoing Instructions that it is always provided the work of the Candidate is correct in principle.

Supplementary vivâ voce *Examination on written Papers.*

118. An impression prevails in regard to the examination of Masters and Mates, that so long as a Candidate can commit to paper correct answers to the various questions requiring written answers (*e.g.*, *Forms Exn. 4a*, *Exn. 7*, *Exn. 9a*, *Exn. 9c*, *Exn.* 32 70, *&c.*), no matter how indicative the answers may be of their having been learnt off by rote *only*, the duty and responsibility of the Examiners are at an end, and that they have no power or authority to reject a Candidate should his written answers be correct.

119. Lest, therefore, such an impression should prevail, Candidates for Certificates of Competency should bear in mind that they are not only expected to give correct written answers, which may merely be learnt off by rote, but they are expected to possess an intelligent knowledge of the various subjects prescribed in the Regulations, particularly as regards the important subject of the Deviation of the Compass.

120. This result may be easily attained by the Examiner putting a few *vivâ voce* questions to the Candidate as the papers are brought up for inspection, or at any subsequent time if more convenient. The oral questions (suggested by the printed questions and the answers given) should be such that the Examiner may satisfy himself that the candidate possesses a real knowledge of what he has written, and should be confined strictly to the subjects of the printed questions. Should the candidate then exhibit ignorance of the subjects, the Examiner (who is in a position to judge of the real knowledge the man before him possesses) should deal with him at his discretion, notwithstanding that the candidate may have written all the answers correctly by rote.

121. When an Examiner finds it necessary to fail a Candidate in this *supplementary vivâ voce* test, a memorandum containing the particulars of the points on which the candidate was ignorant, *i.e.*, *the identical questions and the identical*

answers given, must in each case be attached to his examination papers, when forwarded in the usual course to the Port Officer, or the particulars may be set forth by the Examiner in the margins of the candidate's papers in red ink.

122. If the Candidate passes, he will receive the Form Exn. 16, upon which the Government, will issue the Certificate to the candidate, whose testimonials, &c., will be returned at the same time. Form Exn. 16 Completion of examination

Special Notice to Candidates.

123.. The attention of Candidates is specially called to the following Regulations :—

124. Candidates are required to appear at the examination-room punctually at the time appointed.

125. Candidates are prohibited from bringing into the examination-room books, paper, or memoranda of any kind whatever. The slightest infringement of this regulation will subject the offender to all the penalties of a failure, and he will not be allowed to present himself for re-examination for a period of three months.

126. In the event of any Candidate being detected in defacing, blotting, writing in, or otherwise injuring any book or books belonging to the Government, the papers of such Candidate will be detained until the book or books so defaced be replaced by him. He will not, however, be at liberty to remove the damaged book, which will still remain the property of the Government.

127. In the event of any Candidate being discovered referring to any book or memoranda, copying from another, or affording any assistance or giving any information to another, or communicating in any way with another, during the time of examination or copying any part of the problems for the purpose of taking out of the Examination rooms, he will subject himself to all the penalties of a failure, and he will not be allowed to be examined for a period of six months.

128. No Candidate will be allowed to work out his problems on a slate or on waste paper.

129. No Candidate will be permitted to leave the room until he has given up the paper on which he is engaged.

130. Candidates will find it more convenient both here and at sea, to correct the declination and other elements from the Nautical Almanac by the "hourly differences." which have been given in that work in order to facilitate such calculations ; they will thereby render themselves independent of any proportional or logarithmic table for such purpose.

131. The corrections by inspection from tables given in some of the works on Navigation will not be allowed (*see* Tables IX, XI and XXI in Norie's Epitome, &c.) ; every correction must appear on the papers of the Candidates.

132. Any candidate who may be guilty of insolence to the Examiner or of other misconduct will render himself liable to the postponement of his examination, or, if he has passed, to the detention of his Certificate for such period as the Government may direct

133. For rules as to amount of time allowed to perform the work, *see* page 36.

Masters' and Mates' Voluntary Examinations in Steam.

134. These examinations are limited to Masters and First or Only Mates who are possessed of or entitled to Certificates of Competency, and are provided for the purpose of giving them an opportunity of undergoing a voluntary examination as to their practical knowledge of the use and working of the steam engine. They are conducted under the superintendence of the Port Officer at such times as they may appoint for the purpose ; and the Examiners are selected by the Government from the Engineer-Surveyors appointed under the Indian Steam Ships Act, 1884. *Voluntary Examinations in Steam.*

135. Any Master or Mate desiring to be examined in Steam must deliver to the Port Officer a statement in writing to that effect, upon the Form of Application (Exn. 2), and the applicant's Certificate of Competency must be delivered to the Port Officer along with his statement. If he is about to pass an examination for a Certificate of Competency at the same time, the applications should be sent in together. Application, how to be made. Exn. 2.

136. A fee of Rs. 12 must be paid by the applicant for the examination *in Steam*, and the Port Officer will thereupon inform him of the time and place at which he is to attend to Fee to be paid. Conduct of examination, &c.

be examined, and the examination will then and there proceed in the same manner as the other examinations. If the applicant fails, and has given in his Certificate, it will be at once returned to him.

Record of Certificate. Exn. 14.

137. If the applicant passes, the Report (Exn. 14.) and the Certificate of Competency with the Form (Exn. 2.) will be sent to the Government; the words "*Passed in Steam*," with the date and place of examination, will then be entered on the Certificate and its counterpart, and the Certificate will be sent to the Port Officer to be delivered to the applicant in the usual manner.

Failure.

138. If the applicant fails he may not present himself for re examination until the expiration of three months from the date of failure.

Extent of examination.

139. The examination is for the most part *vivâvoce*, and extends to a general knowledge of the practical use and working of the steam engine, and of the various valves, fittings, and pieces of machinery connected with it. Intricate theoritical questions on calculations of horse power or areas of cylinders and valves, or any of the more difficult questions which appertain to steam engines and boilers, will not be asked. The examination will in fact be confined to what a Master of a steam-vessel may be called upon to perform in the case of the death, incapacity, or delinquency of the engineer.

140. Examiners are to be careful in their examinations to satisfy themselves that applicants really do know the names and uses of the various parts of engines and boilers, and their connecting pipes, valves, cocks, &c. Practical knowledge, as distinguished from theories, abstruse calculations, and book learning, is to be the test of the applicant's fitness to have his Certificate indorsed.

Where examination to be conducted

141. The Examiner should arrange to conduct part of the examination in the engine-room of a Steam-ship, unless from circumstances he finds it impossible to do so; and if an oppportunity offer the applicant should be permitted, under the guidance of the Examiner, to start and stop the engine of some vessel which may have her steam up.

142. The Examiner, in sending in his report of examinations of Masters and Mates in steam, should state where the examination has been held.

Examination in elementary questions.

143. Candidates will be required to give written answers to sixteen out of twenty questions taken from a book of Elementary Questions pulished by the Government.* These questions will be altered from time to time without notice. The twenty questions are not to be difficult, theoretical, or book questions, but are to be such as any man of ordinary capacity ought to answer who has any "*practical knowledge of the use and working of the steam-engine.*"

Answers to be sent to the Board of Trade.

144. These questions, with the Candidate's answers, should be sent to the Government, with the reports, after each examination

145. These answers will also assist in enabling the Government to decide any question that may hereafter arise in cases where it is alleged that applicants have been improperly passed, or improperly rejected.

Candidates referring to books, &c., to be put down as failed.

146. The Examiners will be careful that if any Candidate refers to any book or paper or memorandum, or obtains information from another Candidate during the examination, he will be treated as having failed, will forfeit his fee, and will not be allowed to be re-examined for a period of three months.

In cases of failure Examiner to report questions that decided it.

147. The Examiners will report in the case of failure, the nature of the question or questions that decided the failure, or the point in the management of the engine in which the Candidate was deficient.

Service on board Steam-Ship unnecessary.

148. There is nothing in the Regulations requiring that applicants for the voluntary examination shall have served on board Steam-Ships; all that is required is that they shall have a "practical knowledge." Examiners will, of course, not fail to appreciate the fact, when passing applicants, that practical knowledge is best gained in the engine-room; and the examination of an Officer who does not produce official evidence of service in Steam Ships, and of experience of engines, must necessarily be more searching than in the case of one who produces evidence of such service and experience.

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*See Appendix. Q.

APPENDIX A.

N.B.—*The Candidate is to write a short definition against so many of the following terms as may be marked with a cross by the Examiner. The Examiner will not mark less than* 10. *The writing should be clear, and the spelling should not be disregarded.*

1. The Equator.
2. The Poles.
3. A Meridian.
4. The Ecliptic.
5. The Tropics.
6. Latitude.
7. Parallels of Latitude.
8. Longitude.
9. The Visible Horizon.
10. The Sensible Horizon.
11. The Rational Horizon.
12. Artificial Horizon and its use.
13. True Course of a Ship.
14. Magnetic Course.
15. Compass Course.
16. Variation of the Compass.
17. Deviation of the Compass.
18. The Error of the Compass.
19. Lee Way.
20. Meridian Altitude of a Celestial Object.
21. Azimuth.
22. Amplitude.
23. Declination.
24. Polar Distance.
25. Right Ascension.
26. Dip or Depression of the Horizon.
27. Refraction.
28. Parallax.
29. Semi-diameter.
30. Augmentation of Moon's Semi-diameter.
31. Observed Altitude.
32. Apparent Altitude.
33. True Altitude.
34. Zenith Distance.
35. Vertical Circles.
36. Prime Vertical.
37. Civil Time.
38. Astronomical Time.
39. Sidereal Time.
40. Mean Time.
41. Apparent Time.
42. Equation of Time.
43. Hour Angle of a Celestial Object.
44. Complement of an Arc or Angle.
45. Supplement of ditto.

APPENDIX B.

ADJUSTMENTS OF THE SEXTANT.

The Applicant will answer in writing, on paper which will be given him by the Examiner, all the following questions, numbering his answers with the numbers corresponding to the questions:—

Question.

1. What is the first adjustment of the sextant?
2. How do you make that adjustment?
3. What is the second adjustment?
4. Describe how you make that adjustment?
5. What is the third adjustment?
6. How would you make the third adjustment?
7. In the absence of a screw how would you proceed?
8. How would you find the index error by the horizon?
9. How is it to be applied?
10. Place the index at error of minutes to be added, clamp it, and leave it.

(NOTE.—The Examiner will see that it is correct).

11. The Examiner will then place the zero of the vernier on the arc, not near any of the marked divisions, and the Candidate will read it.

NOTE.—In all cases the applicants will name or otherwise point out the screws used in the various adjustments.

(*The above completes the Examination of Second Mates.*)

Candidates for Only Mates', First Mates', and Masters' Certificates will be required to give, in writing, replies to the following questions, *in addition* to those required of Candidates for Second Mates' Certificates as above.

1. How do you find the index error by the Sun?
2. The readings being { } What is the Index Error, and how do you apply it?
3. What proof have you that those measurements or angles have been taken with tolerable accuracy?

APPENDIX C.

EXAMINATION OF MASTERS AND MATES IN THE INTERNATIONAL CODE OF SIGNALS.

Instructions to Examiners.

The Government desire to direct the attention of the Examiners to the principal points connected with the International Code of Signals (which is to be treated as a subject in Navigation) as to which Candidates for Examination should be questioned in order to qualify for Certificates of Competency.

The Government would recommend to the Examiners a perusal of the *Report of the Signal Committee* of 1855 (which will be found at the commencement of the Signal Book), and also the *first few pages of the Book*. The information therein given will be found sufficient to make the Examiners theoretically acquainted with the characteristics of the Code, and the advantages it claims to possess over other Codes, and will enable them to appreciate and urge upon Candidates for Examination the facilities which this System of Signalling affords for easy and rapid communication.

The "comprehensiveness" and "distinctness" of the International Code are its chief recommendations.

The form of the Hoist generally indicates the nature of the Signal made, so that an observer can at sight understand the character of the Signal he sees flying.

The annexed plate gives examples which illustrate this.

The Examinations should tend to elicit a knowledge of the distinctive features of the Code above alluded to.

With this object the Examiners should make the 2, 3, and 4 Flag Signals on the Frame board which is furnished for the purpose *(always taking care first to show the Ensign and the Code. Pennant at the Gaff)*,* questioning the Candidates as to the distinguishing Forms of the respective Hoists (*See Plate annexed*), which will be indicated according as a Burgee, or a Pennant, or a Square Flag, is uppermost.

The Candidate ought to know how to find in the Signal Book the communication or the inquiry he desires to make, and how to make the Signal. The Signal to be made should *invariably* be sought for by the Candidate in the Vocabulary and Index, Part II, and never in Part I.

The Candidate ought to know how to interpret a Signal.

The Examiner should place a Signal on the Frame board and vary the Signal by showing a 2 or 3 Flag Signal, or a "Geographical" or a "Vocabulary" Signal, or the name of a Merchant Ship or a Ship of War.

The two latter signals would not of course be found in the Signal Book. The Candidate ought to point them out in the *Code List of Ships*.

A Candidate ought to be able to read off a Signal at sight, so far as to name the Flags composing the Hoist.

He ought to know the use of the Code Pennant, and of the Pennants C. and D., "Yes" and "No."

The Candidate should be practised in the use of the Spelling Table, by being made to spell his own name, or some word not in the Vocabulary of the Code.

A knowledge of the Distant Signals should be required of the Candidate, their object and the mode of signalling by the Distant Code, which will be found at the end of the Signal Book.

For this purpose two Black Balls, two Black Square Flags, and two Black Pennants will be furnished with the Frame board, and the Candidate should be required to make one or two Distant Signals, and to read off one or two made by the Examiners.

The Ball being the distinguishing symbol of the Distant Signal, any Pennants or Flags of the Code may be employed in conjunction with it, irrespective of colour. The Black Pennants and Flags are merely sent as showing best in the light background of the Frame board.

The Examiners should be careful to ascertain that the Candidate possesses a knowledge of the Distress Signals which came into operation November 1st, 1873.

Semaphores.

A plate at the end of the Signal Book explains the method by which the arms of the Semaphore are made to represent by their position (up, down, or horizontal,) the three symbols used for Distant Signalling, viz. a Flag, a Ball, or a Pennant. Before making Signals with the Semaphore, the Black Disc with the white rim should be placed on the top of the Semaphore Mast, as it properly forms a part of the Mast itself.

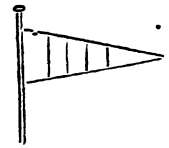
The International Code is used on board Her Majesty's Ships and it has been adopted by all the principal maritime powers for their Imperial as well as for their Mercantile Navies.

Note.—The International Code of Signals, with the Code List, is prepared by the Registrar-General of Shipping and Seamen, and may be had of the Publishers, Messrs. Spottiswood & Co., 54, Gracechurch Street, London, and the principal Booksellers at the various ports.

The Official Mercantile Navy List and Maritime Directory published for the use of Merchants, Shipowners, Shipbrokers, and others, may be obtained in like manner, price 12*s*.

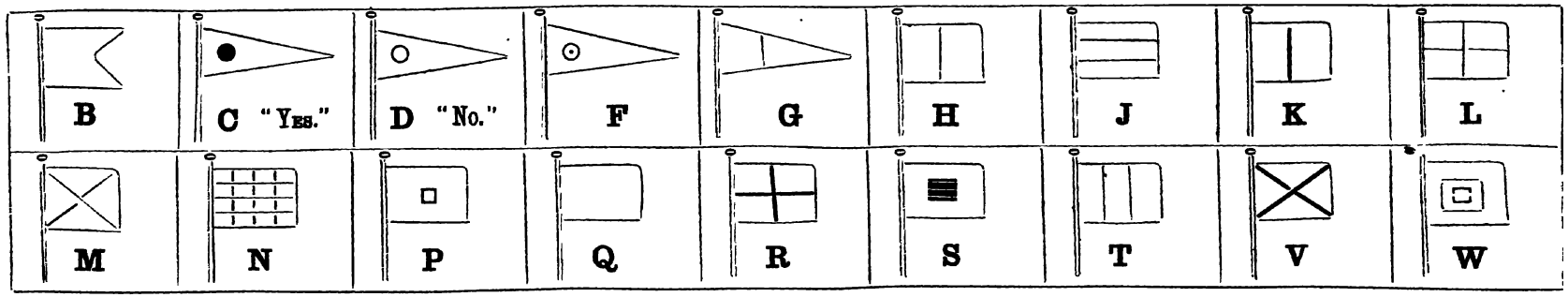
* The object of this is, of course, to distinguish the Signals from those of another Code.

FLAGS OF THE NTERNATIONAL CODE OF SIGNALS.



"CODE SIGNAL" AND "ANSWERING PENNANT."

N.B.—When used as the "Code Signal," this Pennant is to be hoisted under the "Ensign when used as the "Answering Pennant," where best seen.



The following examples will serve to illustrate how the *form of a Hoist* will usually denote the *nature of the Signal* made :—

ONE FLAG.	TWO FLAGS.			THREE FLAGS.		FOUR FLAGS.			
	BURGEE uppermost, "ATTENTION" Signals.	PENNANT uppermost, "COMPASS" Signals.	SQUARE FLAG uppermost, "URGENT" Signals.	General Signals.		BURGEE uppermost, GEOGRAPHICAL Signals.	PENNANTS C,D,F uppermost, NATIONAL VOCABULARY.	PENNANT G uppermost, Names of MEN-OF-WAR.	SQUARE FLAG uppermost, Names of MERCHANT SHIPS.
C "YES."	B D	F T	N C	K G P	P M V	B D T N	D V C H	G S M W	J M C Q
D "NO."	WHAT SHIP IS THAT?	W. BY S.	IN DISTRESS, WANT ASSISTANCE	ENGINE BROKEN DOWN.	CALL FOR ORDERS OFF—.	FALMOUTH.	WHAT SHIPS HAVE YOU SPOKEN?	"MARLBOROUGH" SCREW—131 GUNS.	"MARCO POLO," No. 6025.

APPENDIX D.

Regulations respecting Lights and Fog Signals and Steering and Sailing Rules Issued by the Board of Trade.

NOTICE.

The Board of Trade have had their attention drawn to the necessity of a more strict examination of applicants for Certificates of Competency in their knowledge of the regulations for preventing collisions at sea.

In order that the rule of the road at sea may be better understood, and that a uniform system of examination may prevail, the Board of Trade have issued the following catechism.

This catechism has received the approval of the Trinity House and Admiralty in England, and of the Council of the Admiralty of France.

The Board of Trade attach very great importance to a thorough knowledge of the steering and sailing rules on the part of every applicant for a Certificate of Competency, and a thorough examination on the part of the examiners.

All applicants for examination, whether for certificates as masters or mates, are to be examined as to their knowledge of the steering and sailing rules each time they present themselves for examination.

Questions suggested by the following heads of Examination are to be asked in addition to, and are not to supersede, any other questions proper and necessary to be asked by the Examiner.

The following questions need not be adhered to literally by the Examiner, and are not all to be asked; but the substance of the leading questions should be asked, and all that are asked should be satisfactorily answered, before an applicant is reported to have passed his examination. The Examiner should make such a selection of the questions as each case appears to him to require.

Thomas Gray,
Assistant Secretary.

Board of Trade,
Marine Department.

Heads of Examination in Regulations respecting Lights and Fog Signals and in the Steering and Sailing Rules.

1. What light or lights are required by the regulations to be exhibited by sailing vessels at anchor?

One light only, viz., a white light.

2. What light or lights are required by the regulations to be exhibited by steam-ships at anchor?

The same as for sailing vessels.

3. Where is the anchor light to be exhibited?

Where it can best be seen. It must of course be placed where there is the least possible chance of obstruction from spars, ropes, &c., &c.

4. To what height may the anchor light be hoisted?

It may be exhibited at any height where it can best be seen not exceeding 20 feet above the deck.

5. What is the description of the lantern containing the anchor light required by the regulations?

A globular lantern of not less than eight inches in diameter.

6. In what direction or directions must the anchor light show?

It must show a clear, uniform, and unbroken light, visible all round the horizon.

7. At what distance must it be visible?

At least one mile.

8. What is the number of lights required by the regulations to be carried by sailing ships when under weigh at night?

Two side-lights, and to have in readiness a white light or a flare-up light to show from their stern to any vessel overtaking them.

9. Of what colour are these lights, and how are they to be placed on board the ship?

A green light on the starboard side, and a red light on the port side.

10. What description of light must be shown from the sides of sailing vessels under weigh; and over how many points of the compass, and in what directions, and how far, are they required to show?

Each light must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass; so fixed as to throw the light from right ahead to two points abaft the beam on the starboard and port sides respectively;

and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

11. What lights are they to carry when being towed at night ?

The same.

12. Are the side-lights required to be fitted with screens ; and if so, of what length, and how ?

Yes, on the inboard side ; at least three feet in length, measuring forward from the light. They are to be so fitted as to prevent the coloured lights from being seen across the bows.

13. What is the number of lights required by the regulations to be carried by steam-ships when under steam at night ?

Three lights, and to have in readiness a white light or flare-up light to show from their stern to any vessel overtaking them.

14. Of what colour are these lights, and how are they to be placed on board the ship ?

A white light on or in front of the foremast at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth. A green light on the starboard side, and a red one on the port side.

15. Over how many points of the compass, in what direction, and how far, is the foremast-head light of a steamer required to show ?

Over 20 points, viz., from right ahead to two points abaft the beam on both sides. It must be of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

16. Are the side-lights required to be fitted with screens; and if so, of what length ?

The green and red lights are to be fitted with screens on the inboard side, extending at least three feet forward from the light, as in the case of sailing vessels.

17. Over how many points of the compass, in what directions, and how far, are the coloured side-lights of steamers required to show ?

The side-lights must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, on each side of the ship, *i.e.*, from right ahead to two points abaft the beam on the starboard and port sides respectively, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles.

18. What description of lights are steamers required by the regulations to carry when they are not under steam, but under sail only ?

Side-lights only, the same as sailing vessels.

19. What exceptional lights are to be carried by small sailing vessels in certain cases ?

Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

20. What description of lights are pilot vessels required to carry when on their stations on pilotage duty ?

A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

21. What description of lights are pilot vessels required to carry when not on their station on pilotage duty ?

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

22. What lights are open boats and fishing vessels of less than 20 tons net register required to carry when under way and not actually engaged in fishing.

Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

23. What lights are fishing vessels and fishing boats of 20 tons net register, or upwards, required to carry when under way and not actually engaged in fishing?

They must carry similar lights to those of other ships when under way.

24. What lights are steam trawlers of 20 tons gross register, or upwards, whilst actually engaged in trawling, and not being stationary, required to carry?

All steam-vessels engaged in trawling must carry either one of the two following arrangements of lights, whichever of the two may be the more convenient:—

(*a*) The usual green and red side-lights, and foremast-head light, similar to those carried by other steam-ships; or

(*b*) They must carry on or in front of the foremast-head, and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side; such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: and (2) a white light in a gobular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform, and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet, nor more than 12 feet.

25. What lights are sailing trawlers whilst actually engaged in trawling, and not being stationary, required to carry?

All sailing vessels, of whatever tonnage, whilst engaged in trawling, must carry either one of the three following arrangements of lights, whichever of the three, (*a*), (*b*), or (*c*), may be the most convenient:—

(*a*) They may carry the green and red side-lights similar to those of other sailing ships; or

(*b*) They may carry on or in front of the foremast-head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side and the red light from right ahead to four points abaft the beam on the port side; and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet; or

(*c*) They may carry a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon, and visible on a dark night, with a clear atmosphere, for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by, another ship or vessel in sufficient time to prevent collision.

26. What lights are vessels whilst actually engaged in drift net fishing required to carry?

All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than 5 feet and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character and contained in lanterns of such construction as to show all round the horizon, on a dark night, with a clear atmosphere, for a distance not less than three miles.

27. What lights are vessels whilst actually engaged in line fishing required to carry?

A vessel engaged in line fishing is required to carry the same lights as a vessel engaged in drift net fishing.

28. If a vessel, when fishing, becomes stationary in consequence of her gear getting fast to a rock or other obstruction, what signal must she make?

She must show the same light, and if a fog, mist, or falling snow prevail, she must make the same fog signals as if she were at anchor.

29. What lights are fishing vessels and open boats required to exhibit when at anchor?

Between sunset and sunrise they must exhibit a white light, visible all round the horizon at a distance of at least one mile, the same as any other vessel.

30. What sound signals are fishing vessels required to make whilst engaged in fishing in thick weather?

In fog, mist, or falling snow, a drift net vessel attached to her nets, and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

31. May fishing vessels and open boats use flare-up lights, and if so, at what part, or parts, of the vessel should they be exhibited?

Yes. Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

32. Do these regulations referring specially to fishing vessels and boats apply to foreign vessels, and to all parts of the world?

No, with the exception of the *first paragraph* of Article 10 of the regulations, they apply only to British vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre.

33. What lights are steam-ships required to carry when towing other ships?

A steam-ship, when towing another ship, shall, in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position as the white light which other steam-ships are required to carry.

34. What light is a ship which is being overtaken by another required to show?

A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

35. Describe the lights and the day signals that vessels employed in laying or picking up a telegraph cable are required to carry.

A ship, whether a steam-ship or a sailing ship employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line over one another, not less than six feet apart: the highest and lowest of these lights shall be red and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than her foremast-head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

36. Describe the lights and the day signals that vessels which from any cause are not under command are required to carry.

A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same

position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of but not lower than her foremast-head, three black balls or shapes, each two feet in diameter.

37. Are the above-mentioned ships to carry side-lights?

The above ships, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

38. What are the previous mentioned shapes and lights intended to indicate to approaching ships?

These shapes and lights are to be taken by approaching ships as signals that the ship using them is not under command, and cannot therefore get out of the way.

39. Do these rules prevent squadrons and convoys from carrying special lights?

No. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war, or for ships sailing under convoy.

40. What sound signals are steam-ships and sailing ships required by the regulations to be provided with?

A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by bellows or other mechanical means, and also with an efficient bell. A sailing ship shall be provided with a similar fog-horn and bell.

41. When are these signals to be used?

In fog, mist, or falling snow, whether by day or night.

42. What sound signal is to be made by steam-ships and sailing ships when not under way?

A steam-ship and a sailing ship when not under way shall, at intervals of not more than two minutes, ring the bell.

43. What sound signal is required to be made by a steam-ship when under way?

A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

44. What sound signals are required to be made by sailing ships when under way?

A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

45. Do the regulations require ships to take any other precaution during thick weather?

Yes. Art. 13 says every ship, whether a sailing ship or steam-ship, shall, in a fog, mist, or falling snow, go at a moderate speed.

46. Is it optional for a steam-ship to make any other signals with her steam whistle?

Yes; but only to vessels in sight, *i.e.*, not to vessels which are so obscured by fog, mist, or falling snow that they cannot be seen, though their whistles may be heard.

Art. 19 provides that in taking any course authorised or required by the regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.:—

One short blast to mean "I am directing my course to starboard:"

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

47. What precaution is to be taken by steamers approaching another vessel?

If there is risk of collision, the steamer is to slacken speed, or, if necessary, stop and reverse.

48. If you see two white lights in a vertical line one over the other, what do they denote as regards the vessel carrying them?

They denote the presence of a steamer towing with her side lights not within sight on account of distance, fog, &c.; or a vessel end on to me engaged in drift net fishing, or in line fishing, or it may be a steam trawler end on, or within 2 points of being end on, to me.

49. If you see a green, or a red, light with a white light below, what do they denote?

They denote the presence of either a sailing, or a steam, vessel engaged in trawling.

50. If you see both the green and red lights with a white light below them, what do they denote?

They denote the presence of a sailing trawler coming end on to me.

51. If you see a white light alone, what does it denote as regards the ship carrying it?

It denotes the presence of a vessel or boat at anchor; or a pilot vessel on her station; or the mast-head light of a vessel, under steam, with her side-lights not within sight on account of distance, fog, &c., or a fishing vessel stationary through her gear getting fast to some obstruction, or a sailing traveller engaged in trawling (1) under one arrangement of lights heading so that her side-lights or obscured, (2) under another arrangement from the red pyrotechnic light not having been exhibited, or it may be a light shown from the stern of a vessel which is being overtaken.

52. If you see a green or a red light without a white light, or both a green and a red light without a white light, is the vessel carrying the light or lights seen, a vessel under steam or a vessel under sail?

A vessel under sail.

53. How do you know?

Because there is no white mast-head light.

54. If you see a white light over a coloured light, is the vessel a vessel under sail or a vessel under steam?

A vessel under steam. The mast-head light denotes that the vessel is under steam.

[The Examiner will then take one model of a vessel, which he will place on the table, and call it A. He will then take the mast or stand with a white and a red ball on it, and place it at the other end of the table and call it B.

The Examiner should be careful that the model of one vessel only is used when the questions numbered 55 to 60 are asked.]

55. A is a steamer going north, seeing a white light and red light right ahead at B. Are A and the vessel B showing the two lights meeting end on or nearly end on, or is B passing A, or is B crossing the path of A, and in what direction, and how do you know?

Passing to port, because if I see a red light ahead, I know that the head of the vessel carrying that red light must be pointing away in some direction to my own port or left hand. The ship showing the red light has her port or left side more or less open to A.

56. If A is going north, within what points of the compass must the vessel B showing the white and red lights be steering?

B must be going from a little W. of S. to W.N.-W.

57. How do you know this?

Because the screens being properly fitted, I could not see the red light of B at all with the vessel's head in any other direction.

58. A is a steamer going north, and seeing a white and green light ahead. Are A and B meeting, or is B passing A, or is B crossing the course of A, and in what direction; and how do you know?

B is passing to starboard of A, because if I see a green light ahead, I know that the head of the vessel carrying that green light must be pointing away in some direction to my starboard or right hand. The ship showing the green light has her right or starboard side more or less open to me.

59. As A is going north, within what points of the compass must the vessel showing the white and green lights be steering?

B must be going from a little E. of South to E.N.-E.

60. How do you know?

Because the screens being properly fitted, I cannot see the green light at all with the vessel's head in any other direction.

61. If a steamer A sees the *three* lights of another steamer B ahead or nearly ahead, are the two steamers meeting, passing, or crossing?

Meeting end on, or nearly end on.

62. Do the regulations expressly require the course of a ship to be altered to starboard in any case; and if so, when?

Yes; in the case of two steamers meeting end on, or nearly end on.

63. Do they expressly require the course of a ship to be altered to starboard in any other case; and if so, in what other?

No. It is not in any other case expressly required by the regulations.

[The Examiner should see that the candidate puts the models in the position indicated by the question 64, and following.]

64. If a steamer A sees another steamer's red light B on her own starboard side, are the steamers meeting, passing, or crossing; and how do you know?

Crossing, because the red light of one is opposed to the green light of the other; and whenever a green light is opposed to a red light, or a red light to a green light, the ships carrying the lights are crossing ships.

65. Is A to stand on; and if not, why not?

A has the other vessel B on her own starboard side. A knows she is crossing the course of B, because she sees the red light of B on her (A's) own starboard side. A also knows she must get out of the way of B, because Article 16 expressly requires that the steamer that has the other on her own starboard side shall keep out of the way of the other.

66. Is A to starboard or to port in such a case?

A must do what is right so as to get herself out of the way of B: it is generally preferable to pass under a ship's stern rather than attempt to cross her bows, but it depends entirely on the position and relative speed of the two ships, and therefore the regulations wisely leave the giving way ship to get out of the way in any manner that may be most desirable, so always that she does get out of the way.

67. If A gets into collision by porting, will it be because she is acting on any rule?

No; the rule does not require her either to port or to starboard. If she ports, and gets into collision by porting, it is not the fault of any rule.

68. If a steamer A sees the green light of another steamer B on her own (A's own) port bow, are the two steamers meeting, passing, or crossing; and how do you know?

Crossing, because the green light of one ship is shown to the red light of the other.

69. What is A to do, and why?

By the rule contained in Article 22 of the Regulations, A is required to keep her course, subject only to the qualification that due regard must be had to all dangers of navigation; and that due regard must also be had to any special circumstances which may exist in any particular case rendering a departure from that rule necessary in order to avoid immediate danger. The crossing ship B on A's port side must get out of the way of A, because A is on B's starboard side.

70. A, a steamer, sees the green light of another steamer, B, a point on her A's port bow. Is there any regulation requiring A to port in such a case; and if so, where is it to be found?

There is not any.

71. Are steam-ships to get out of the way of sailing ships?

If a steamer and a sailing ship are proceeding in such direction as to involve risk of collision, the steamer is to get out of the way of the sailing ship, unless the sailing ship is overtaking the steamer.

72. What is to be done by A, whether a steamer or a sailing ship, if overtaking B?

A is to keep out of the way of B.

73. When the by rules one of two ships is required to keep out of the way of the other, what is the other to do?

To keep her course. This is absolutely necessary to enable the commander of the ship required by the regulations to keep out of the way, to act with decision and promptitude, which he cannot possibly, unless he knows what the other vessel is going to do.

74. Is there any qualification or exception to this?

Yes. Due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case, and require a departure from the regulations to avoid immediate danger.

75. Is there any general direction in the steering and sailing rules; and if so, what is it?

Yes, it is this: that nothing in the rules shall exonerate any ship, or the owner, master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

76. Can you repeat article (———) of the regulations, I refer to the article containing the rule for (———)?

[The Examiner should repeat this question, naming a different article each time.]

77. What does the Act of Parliament provide as to the obligation of owners and masters in obeying the regulations respecting lights, fog signals, and steering and sailing?

Section 27 of "the Merchant Shipping Act Amendment Act, 1862," provides that owners and masters shall be bound to obey the regulations, and it also provides that in case of wilful default

by the master or owner he shall be deemed to be guilty of a misdemeanor for each infringement.

78. What do breaches of the regulations imply ?

If an accident happens through non-observance of the regulations, it implies wilful default on the part of the person in charge of the deck at the time, unless it is shown to the satisfaction of the court hearing the case that the special circumstances of the case rendered a departure from the rules necessary.

79. If collision ensues from a breach of there gulations, who is to be deemed in fault for the collision ?

The person by whom the regulations are infringed, unless the court hearing the case decides to the contrary.

80. Is there any special rule for steam-ships navigating narrow channels ?

In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which is on the starboard side of such ship.

81. Do the regulations apply to sea-going ships in harbours and in rivers ?

Yes: unless there is any rule to the contrary made by a competent authority.

82. Do they apply to British ships only ?

No, to foreign ships as well, with the exception of paragraphs (*a*), (*b*), (*c*), (*d*), (*e*), (*f*) and (*g*) of Article 10, which apply to only British fishing vessels.

83. Do you know where the present regulations are to be found ?

Yes, in the Orders in Council of the 11th August 1884, the 30th December 1884, and 24th June 1885. Copies are given away on application to the Board of Trade.

84. Is one ship bound to assist another in case of collision ?

Yes.

85. What is the penalty for default ?

If the master or person in charge of the ship fails to render assistance without reasonable excuse, the collision is, in absence of proof to the contrary, to be deemed to be caused by his wrongful act, neglect, or default.

86. Is there any other penalty attached to not rendering assistance ?

Yes. If it is afterwards proved that he did not render assistance, his certificate may be cancelled or suspended by the court investigating the case.

87. Is it not expected that you should understand the regulations before you take charge of the deck of a ship ?

It is.

88. Why ?

If I do not understand them and am guilty of default, the consequences will be very serious to me.

89. What would be a serious offence ?

To cause a collision by porting the helm or doing anything not required by the regulations and without due consideration.

Regulations for preventing collisions at sea. Order in Council of 11th August 1884.

Preliminary.

Art. 1. In the following rules every steam-ship which is under sail and not under steam is to be considered a sailing ship ; and every steam-ship which is under steam, whether under sail or not, is to be considered a ship under steam.

Rules concerning Lights.

Art. 2. The lights mentioned in the following Articles, numbered 3, 4, 5, 6, 7, 8, 9, 10 and 11, and no others, shall be carried in all weathers, from sunset to sunrise.

Art. 3. A sea-going steam-ship when under way shall carry—

(*a*) On or in front of the foremast, at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth, a bright white light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 20 points of the compass ; so fixed as to throw the light 10 points on each side of the ship, viz. from right ahead to two points abaft the beam on either side ; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

(*b*) On the starboard side, a green light so constructed as to show an uniform and unbroken light over an arc of the

horizon of 10 points of the compass; so fixed as to throw the light from right ahead to 2 points abaft the beam on the starboard side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*c*) On the port side, a red light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass; so fixed as to throw the light from right ahead to 2 points abaft the beam on the port side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*d*) The said green and red side-lights shall be fitted with inboard screens projecting at least three feet forward from the light, so as to prevent these lights from being seen across the bow.

Art. 4. A steam-ship, when towing another ship, shall in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position, as the white light which other steam-ships are required to carry.

Art. 5. (*a.*) A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of, but not lower than, her foremast-head, three black balls or shapes, each two feet in diameter.

(*b.*) A ship, whether a steam-ship or a sailing ship, employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over another, not less than six feet apart: the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than, her foremast-head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

(*c.*) The ships referred to in this Article, when not making any way through the water, shall not carry the side-lights, but when making way, shall carry them.

(*d.*) The lights and shapes required to be shown by this Article are to be taken by other ships as signals that the ship showing them is not under command, and cannot therefore get out of the way. The signals to be made by ships in distress and requiring assistance are contained in Article 27.

Art. 6. A sailing ship under way, or being towed, shall carry the same lights as are provided by Article 3 for a steam-ship under way, with the exception of the white light, which she shall never carry.

Art. 7. Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

Art. 8. A ship, whether a steam-ship or a sailing ship, when at anchor, shall carry, where it can best be seen, but at height not exceeding 20 feet above the hull, a white light, in a globular lantern of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light visible all round the horizon at a distance of at least one mile.

Art. 9. A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but

shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

Art. 10. Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

The following portion of this article applies only to fishing vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre:—

(*a*) All fishing vessels and fishing boats of 20 tons net registered tonnage, or upwards, when under way and when not required by the following regulations in this article to carry and show the lights therein named, shall carry and show the same lights as other vessels under way.

(*b*) All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than five feet, and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night with a clear atmosphere, for a distance of not less than three miles.

(*c*) A vessel employed in line fishing with her lines out shall carry the same lights as a vessel when engaged in fishing with drift nets.

(*d*) If a vessel when fishing becomes stationary in consequence of her gear getting fast to a rock or other obstruction, she shall show the light and make the fog signal for a vessel at anchor.

(*e*) Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this Article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

(*f*) Every fishing vessel and every open boat when at anchor between sunset and sunrise shall exhibit a white light visible all round the horizon at a distance of at least one mile.

(*g*) In fog, mist, or falling snow, a drift net vessel attached to her nets and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

Art. 11. A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

Sound Signals for Fog, &c.

Art. 12. A steam-ship shall be provided with a steam whistle or toher efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog horn to be sounded by a bellows or other mechanical means, and also with sh efficient bell.* A sailing ship shall be provided with a similar fog-horn and bell.

In fog, mist, or falling snow, whether by day or night, the signals described in this Article shall be used as follows; that is to say—

(*a*) A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

(*b*) A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the

* In all cases where the regulations require a bell to be used, a drum will be substituted on board Turkish vessels.

starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

(*c*) A steam-ship and a sailing ship, when not under way shall, at intervals of not more than two minutes, ring the bell.

Speed of Ships to be moderate in Fog, &c.

Art. 13. Every ship, whether a sailing ship or steam-ship, shall in a fog, mist, or falling snow, go at a moderate speed.

Steering and Sailing Rules.

Art. 14. When two sailing ships are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other, as follows, viz.—

(*a*) A ship which is running free shall keep out of the way of a ship which is close-hauled.

(*b*) A ship which is close-hauled on the port tack shall keep out of the way of a ship which is close-hauled on the starboard tack.

(*c*) When both are running free with the wind on different sides, the ship which has the wind on the port side shall keep out of the way of the other.

(*d*) When both are running free with the wind on the same side, the ship which is to windward shall keep out of the way of the ship which is to leeward.

(*e*) A ship, which has the wind aft shall keep out of the way of the other ship.

Art. 15. If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

This Article only applies to cases where ships are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two ships which must, if both keep on their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of the two ships is end on, or nearly end on, to the other; in other words, in cases in which, by day, each ship sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each ship is in such a position as to see both the side-lights of the other.

It does not apply, by day, to cases in which a ship sees another ahead crossing her own course; or by night, to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

Art. 16. If two ships under steam are crossing, so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

Art. 17. If two ships, one of which is a sailing ship, and the other a steam-ship, are proceeding in such directions as to involve risk of collision, the steam-ship shall keep out of the way of the sailing ship.

Art. 18. Every steam-ship, when approaching another ship, so as to involve risk of collision, shall slacken her speed or stop and reverse, if necessary.

Art. 19. In taking any course authorised or required by these Regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.—

One short blast to mean "I am directing my course to starboard:"

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

Art. 20. Notwithstanding anything contained in any preceding Article, every ship, whether a sailing ship or a steam-ship, overtaking any other shall keep out of the way of the overtaken ship.

Art. 21. In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such ship.

Art. 22. Where by the above rules one of two ships is to keep out of the way, the other shall keep her course.

Art. 23. In obeying and construing these rules due regard shall be had to all dangers of navigation; and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

No Ship, under any circumstances, to neglect proper Precautions.

Art. 24. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Reservation of Rules for Harbours and Inland Navigation.

Art. 25. Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland navigation.

Special Lights for Squadrons and Convoys.

Art. 26. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war or for ships sailing under convoy.

Art. 27. When a ship is in distress, and requires assistance from other ships or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, that is to say—

In the day-time—

1. A gun fired at intervals of about a minute.
2. The International Code signal of distress indicated by N C.
3. The distant signal, consisting of a square flag, having either above or below it a ball or anything resembling a ball.

At night—

1. A gun fired at intervals of about a minute.
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.).
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals.

ORDERS IN COUNCIL OF 30TH DECEMBER 1884 AND 24TH JUNE 1885.

ALTERNATIVE LIGHTS FOR TRAWLERS WHEN ENGAGED IN TRAWLING, HAVING THEIR TRAWLS IN THE WATER AND NOT BEING STATIONARY.

1884.—PART I.—STEAM-VESSELS OF 20 TONS GROSS REGISTER TONNAGE OR UPWARDS.

(1.) On or in front of the foremast head and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side, such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet nor more than 12 feet.

1884.—PART II.—SAILING VESSELS OF 20 TONS NET REGISTER TONNAGE OR UPWARDS.

(1.) On or in front of the foremast head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft

the beam on the port side: and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet.

1885.—Sailing Trawlers of any Tonnage.

As regards sailing vessels engaged in trawling, such vessels having their trawls in the water and not being stationary in consequence of their gear getting fast to a rock or other obstruction, if they do not carry and show the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in Part 2 of the Schedule to the said recited Order in Council of the 30th of December, 1884, shall carry and show in lieu of the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in paragraph 2 of the Schedule to the said recited Order, other lights as follows, that is to say:

A white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, and visible on a dark night with a clear atmosphere for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by another ship or vessel in sufficient time to prevent collision.

Aids to Memory in four verses, by Thomas Gray.

1. *Two Steam-ships meeting.*

When both side-lights you see ahead—
Port your helm and show your RED.

2. *Two Steam-ships passing.*

GREEN TO GREEN—or, RED TO RED—
Perfect safety—Go ahead!

3. *Two Steam-ships crossing.*

Note.—This is the position of greatest danger: there is nothing for it but good look-out, caution, and judgment.

If to your starboard RED appear,
It is your duty to keep clear;
To act as judgment says is proper:—
To port—or Starboard—Back,—or, Stop her!

But when upon your Port is seen
A Steamer's Starboard Light of GREEN,
There's not so much for you to do,
For GREEN to Port keeps clear of you.

4. *All Ships must keep a good look-out, and Steam-ships must stop and go astern, if necessary.*

Both in safety and in doubt
Always keep a good look-out;
In danger, with no room to turn,
Ease her, stop her, go astern.

14th October 1867.

APPENDIX E.

Distress and Pilot Signals.

The following sections, together with the schedules referred to therein, of the "Merchant Shipping Acts Amendment Act, 1873," relate to Signals of Distress and signals for Pilots. (*See also* "*Regulations for preventing Collisions at sea.*" *Article* 27.)

M. S. Act, 1873.

Signals of distress.

18. The signals specified in the first schedule to this Act shall be deemed to be signals of distress.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals, except in the case of a vessel being in distress, shall be liable to pay compensation for any labour undertaken, risk incurred, or loss sustained in consequence of such signal having been supposed to be a signal of distress, and such compensation may, without prejudice to any other remedy, be recovered in the same manner in which salvage is recoverable.

Signals for pilots.

19. If a vessel requires the services of a pilot, the signals to be used and displayed shall be those specified in the second schedule to this Act.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals for any other purpose than that of summoning a pilot, or uses or causes or permits any person under his authority to use any other signal for a pilot, shall incur a penalty not exceeding twenty pounds.

Power to alter rules as to signals.

20. Her Majesty may from time to time by Order in Council repeal or alter the rules as to signals contained in the schedules to this Act, or make new rules in addition thereto, or in substitution therefor, and any alterations in or additions to such rules made in manner aforesaid shall be of the same force as the rules in the said schedules.

SCHEDULES.

SCHEDULE I.

Signals of Distress.

In the day-time.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress in the day-time:—

1. A gun fired at intervals of about a minute;
2. The International Code signal of distress indicated by N C;
3. The distant signal, consisting of a square flag having either above or below it a ball, or anything resembling a ball.

At night.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress at night:

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, of any colour or description, fired one at a time, at short intervals.

SCHEDULE II.

Signals to be made by Ships wanting a Pilot.

In the day-time.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot in the day-time, viz.—

1. To be hoisted at the fore, the Jack or other national colour usually worn by merchant ships, having round it a white border, one-fifth of the breadth of the flag; or
2. The International Code pilotage signal indicated by P T.

At night.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot at night, viz.—

1. The pyrotechnic light, commonly known as a blue light, every fifteen minutes; or
2. A bright white light, flashed or shown at short or frequent intervals, just above the bulwarks, for about a minute at a time.

APPENDIX F.

Examination in Chart.

For all Grades where the Chart is used.

[The candidate will be required to work out the following questions on either a "true" or "magnetic" chart* whichever may be handed to him by the Examiner; and also determine whether the chart is a "true" or "magnetic" one, and whether it is for the northern or southern, and eastern or western hemisphere.]

* The terms "true" and "magnetic" are used for the sake of brevity and convenience, for indicating charts that have compasses delineated upon them showing the "true" or "magnetic" point of the compass respectively.

1. Using deviation [card] [curve*] No. , find the course to steer by compass from to ; also the distance.

Answer. – Compass course °

Distance °

Variation °

Deviation °

2. With the ship's head on the above-named compass course a [point] [light-house] bore by compass and bore by the same compass, find the ship's position.

Answer.—Latitude

Longitude

3. With the ship's head as above, a [point] [light-house] bore by compass , and after continuing on the same course miles it bore , find the position of ship and her distance from at the time of taking the second bearing.

Answer.—Latitude °

Longitude °

Distance °

All the foregoing questions must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature °

Date °

Chart used °

Additional for Masters.

4. Find the course to steer by compass from to (*see* Question 1) to counteract the effect of a current which set at the rate of miles per hour, the ship making by log miles per hour; also the distance the ship would then make good in hours towards

Answer.—Compass course

Distance

5. On being off took a cast of the lead; required the correction to be applied to the depth obtained by the lead line before comparing it with the depth marked on the chart.

6. What do you understand the small numbers to indicate that you see placed about the chart, and at what time of tide?

7. What do the Roman numerals indicate that are occasionally seen near the coasts and in harbours?

8. How would you find, approximately, the time of high water at any place, the Admiralty tables not being at hand, nor any other special tables available?

All the foregoing questions, and those on Form Exn. 9C., must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature

Date

* A Candidate for a Master's Certificate is expected to use either a card of deviations or a curve of deviations on a Napier's diagram, whichever the Examiner may think proper to put before him.

APPENDIX G.

Deviation of the Compass.

N. B.—*The Examiner will not mark less than* 12 *of the following questions, which must be correctly answered by the candidate, and the Examiner's attention is specially called to the importance of Questions* 7, 8, 9, 10, *and* 19, *which should be marked in all cases.*

1. What do you mean by Deviation of the Compass?
2. How do you determine the deviation (*a*) when in port, and (*b*) when at sea?
3. Having determined the deviation with the ship's head on the various points of the Compass, how do you know when it is easterly and when westerly?
4. Why is it necessary, in order to ascertain the deviations, to bring the ship's head in more than one direction?
5. For accuracy, what is the least number of points to which the ship's head should be brought?
6. How would you find the deviation when sailing along a well-known coast?
7. In the following table give the correct magnetic bearing of the distant object, and thence the deviation:—

Ship's head by Standard Compass.	Bearing of distant object by Standard Compass.	Deviation required.	Ship's head by Standard Compass.	Bearing of distant object by Standard Compass.	Deviation required.
North			South		
N.-E.			S.-W.		
East			West		
S.-E.			N.-W.		

8. With the deviation as above, give the courses you would steer by the Standard Compass to make the following courses, correct magnetic [ ].
9. Supposing you have steered the following courses by the Standard Compass, find the correct magnetic courses made from the above deviation table [ ].
10. You have taken the following bearings of two distant objects by your Standard Compass as above; with the ship's head at , find the bearings, correct magnetic [ ].
11. Name some suitable objects by which you could readily obtain the deviation of the Compass when sailing along the coasts of the English Channel.
12. Do you expect the deviation to change; if so, state under what circumstances?
13. How often is it advisable to test the accuracy of your table of deviations?
14. State briefly what you have chiefly to guard against in selecting a position for the Compass.
15. The Compasses of iron ships are more or less affected by what is termed the heeling error; on what courses does this error vanish, and on what courses is it the greatest?
16. State to which side of the ship, in the majority of cases, is the North point of the Compass drawn in the Northern Hemisphere; and what effect has it on the assumed position of the ship when she is steering on Northerly, and also on Southerly courses?
17. The effect being as you state, on what courses would you keep away, and on what courses would you keep closer to the wind, in order to make good a given Compass course?
18. Does the same rule hold good in both hemispheres with regard to the heeling error?
19. Your Steering Compass having a large error, how would you proceed to correct that Compass by compensating magnets and soft iron, in order to reduce the error within manageable limits?

APPENDIX H.

Syllabus of Examination in the Laws of the Deviation of the Compasses of an Iron Ship, and in the Means of compensating or correcting it.

Candidates for the voluntary examination in Compass Deviation, and also for Extra Masters' Certificates, will be examined in the whole of this syllabus, and will be required to answer all

the questions correctly, and to the entire satisfaction of the Examiner.

1. Describe an artificial magnet, and how a steel bar or needle is usually magnetized.

2. [*For the sake of simplicity it is desirable to adopt the nomenclature of the Astronomer Royal, and call that pole of the compass needle that points to the magnetic north the red, and the other the blue pole.*] What effect has the pole of one magnet of either name on the pole of the same name of another magnet, and what would be the consequence of the pole of one magnet of either name being brought near enough to affect the pole of contrary name, if in these cases both magnets were freely suspended?

3. By applying this law to all magnets, natural as well as artificial, show what would be the result on a magnetic bar or needle, freely suspended, but by weight or by the nature of its mounting constrained to preserve a horizontal position; and what result, if so mounted, but free to move in every direction, the earth being regarded as a natural magnet?

4. Which is the red magnetic pole of the earth, and which the blue?

5. What is the cause of the variation of the compass?

6. What is meant by the deviation of the compass?

7. Describe the sub-permanent magnetism of an iron ship, and state when and how it is acquired, and which is the sub-permanent red, and which is the blue pole, and why it is called sub-permanent magnetism.

8. What is meant by "the composition of forces" and "the parallelogram of forces," and show how the knowledge of these is valuable in ascertaining and compensating the sub-permanent magnetism of an iron ship?

9. Describe the co-efficients B and C, plus (+), and minus (—), and why they are said to produce semi-circular deviations.

10. On what points by compass bearing of the ship's head does + B give westerly deviation, and on what does it give easterly; and also on what point does — B give westerly, and on what points easterly?

11. On what points does + C give westerly, and on what points easterly; also on what points does — C give westerly, and on what points easterly deviation?

12. How would you compensate the co-efficient C?

13. How would you compensate the co-efficient B?

14. If the value either of co-efficient B or C be given, also the magnetic direction of the ship's head while she was being built, how by the traverse tables would you determine the approximate value of the other co-efficient C or B; and if the value of both these co-efficients be given, how would you determine approximately the direction, by compass, of the ship's head whilst being built?

15. What is meant by transient induced magnetism?

16. Under what circumstances does induced magnetism give semi-circular deviation?

17. How would you compensate — B resulting from induced magnetism, and why for this purpose would you adopt a different mode of compensation to that employed in correcting — B produced by sub-permanent magnetism?

18. Describe quadrantal deviation, and state what co-efficients represent it; also on what points of the ship's head, by compass, each of these co-efficients gives the greatest amount of deviation.

19. On what points of the compass will each of these co-efficients, D and E + and —, give easterly, and on what points westerly deviation?

20. Generally + D gives the greatest amount of *quadrantal* deviation: how should it be compensated?

21. If D be compensated in the manner you have described, will it remain so in every latitude? If so, state the reason why.

22. What conditions of the iron of a ship will produce + D and what — D?

23. Describe the nature of the deviation resulting from + A and —A, and describe the error in the construction of the compass that frequently produces them.

24. Under what circumstances does the character of A and E so change as to render it desirable that these co-efficients should be disregarded or modified?

25. The value of A, B, C, D, and E being given, or B, C, and D only, find the deviation on any required point of the compass, or construct a table of deviation, if required.

26. Describe how you would determine the deviation by means of a distant object, by reciprocal bearings, or by the figures on the dock walls.

27. If it be required to determine the deviation of two or more compasses, it is most convenient to bring the ship's head, *correct* magnetic, on as many points as may be necessary. To determine the co-efficients B, C, and D, the bearing of the ship's head by each compass is required. How would you for this purpose employ a Graphic Method?

28 State your rule for determining whether deviation is easterly or westerly.

29. Describe the use of the "dumb card," or an azimuth card without a needle, in compensating a compass.

30. If you determine the deviation by an azimuth or an amplitude of a heavenly body, it is then combined with variation,* which together is sometimes called the *correction* for the compass. State when the deviation is the difference between the variation and the *correction*, and when the sum; and when it is of the same name as that of the *correction*, and when of the contrary name.

31. In observing azimuths of heavenly bodies, the best method is by "time azimuths," since these can be observed without an altitude when the ship is in port, or the horizon cannot be defined from any cause. Given the sun's declination, the hour of the day, and the latitude to find the true bearing of the sun.†

32. By night, if it be desirable to observe the *correction* of the compass. Given the day of the year, and time at ship, also the latitude of the place to determine what† star will be in good position for this purpose.

33. If your correcting magnets are so mounted that their positions can be altered, describe the process by which, on open sea, you can place the ship's head correct magnetic N. (or S.), and correct magnetic E. (or W.), and can make the correction perfect.

34. Given the name of a star, the time, the place of ship, the variation of the compass, and the bearing of the star by compass. Determine the deviation, and name it east or west.

35. If an ordinary standard compass placed higher than the iron top sides be compensated whilst the ship is upright, what coefficient will be effected by heeling?

36. When generally will this co-efficient be plus, and when minus?

37. State the exceptions to this general rule.

38. Does the heeling error arise from the altered position of the sub-permanent poles of the ship, or from a change in the induced magnetism?

39. To what extent is the heeling error altered by a change in the magnetic latitude of the ship?

40. If a ship is beating to windward; when she tacks, under what circumstances will the heeling error retain the same name, and under what circumstances will it take the contrary name?

41. If a ship is placed on the opposite tack by the change of wind, the ship's course being the same by compass, will the heeling error change its name?

42. Under what circumstances will the heeling error, if disregarded, take the ship to windward, or when to leeward?

43. Can the heeling error be compensated? If so, state the means to be employed.

44. Can the compensation of the heeling error be depended on in every latitude? If not, state the reason.

45. Given the heel, the direction of the ship's head by compass, and the heeling error observed, to find the approximate heeling error, with a greater or less given heel, and with the ship's head on some other named point of the compass, the ship's magnetic latitude being in both cases the same.

46. Describe any instrument to show the ship's heel (generally called a clinometer), and state how and where it should be fixed.

47. Should the clinometer be observed when the ship is swung to determine the deviation when the ship is upright? If so, state the reason why.

APPENDIX I.

Particulars of Examination in Sumner's Method by Projection.

Candidates are required to compute their longitude by chronometer worked with two assumed latitudes.

* The magnetic variation is best determined by a chart of the curves of equal magnetic variation.

† The process of finding time azimuths by the ordinary formulæ of spherical trigonometry is tedious, and since on board an iron ship these observations should be often repeated, the candidate will be allowed to use any table or graphic or linear method that will solve the problem within a half of a degree, the altitude of the heavenly body not being given.

They are to mark off on the chart the two positions ascertained by the first altitude, and are then to connect them with a straight line, termed the *line of position*, or the line of equal altitude, which will show the bearing of any land it may intersect.

They will then be required to correct the first *line of position* for the ship's change of station, in the interval between the two observations, to project the *line of position* corresponding to the second observation on the chart, showing by its intersection with the first *line of position*, as corrected for change of station, the position of the ship at the time of the second observation.

The longitudes corresponding to the two latitudes by the second observation are no longer furnished by the Examiners. The candidates are consequently required to work out the whole of the problem for themselves (in place of the explanation recently required), and must be prepared to find the sun's true bearing by projection at the time of taking either the first or second observation; and when necessary to produce the *lines of positions* on the chart in order to make them cut one another should the position of the ship happen to be outside the parallels of the two assumed latitudes given in the question. Outline charts, extending from 46° to 49° and from 49° to 52° of latitude, respectively, are furnished by the Board of Trade to the different examiners for this purpose.

APPENDIX K.

The Candidate must answer in writing, on paper supplied to him by the Examiner, the following questions, numbering the answer to correspond with the questions.

Question—

Questions relating to cyclones or revolving storms common in tropical seas.

1. The direction of the wind in a cyclone being*_____ state the probable bearing of its centre from the ship in the*_____ Hemisphere.
2. And suppose that the wind during the passage of the same cyclone were found to change towards the*_____ _____, what would be the ship's position with reference to the line of progression of the centre of the cyclone, and what action would you take?
3. Under what conditions would the change in the direction of the wind in the cyclone be the reverse of the above?
4. What are the usual indications of a ship being on the line of progression of the centre of a cyclone?
5. What are the usual indications that a ship is (*a*) approaching the centre of a cyclone; (*b*) receding from it?
6. Describe the track usually taken by cyclones in the †_____, and state the seasons of the year in which they most frequently occur in that region.

APPENDIX L.

Instructions to Examiners.

Examination in Colours.

Herewith are—

(*a*) A lanthorn having in it a lamp in which kerosine is to be burnt.

(*b*) A slide having ground glass in it.

(*c*) Nine slides, each having a coloured glass in it. The colours are as follows:—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1).
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

* These spaces to be filled in by the Examiners, and frequently varied.

† The Examiners to fill in whether North Atlantic, Bay of Bengal, China Seas, Indian Ocean, &c., &c.

(δ) Cards, five of each as follow :—

1. White.
2. Black.
3. Red.
4. Pink.*
5. Green.
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight, the examiner should do it in three ways—

1. The cards should be mixed up. The examiner should then hold up each card separately, and ask the candidate to name the colour, and if the candidate does so without hesitation, he is to be regarded as having passed the daylight test.
2. If the candidate hesitates in any of his answers, so as to raise a doubt in the mind of the examiner as to his ablity to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that, they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

Examination by artificial Light.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn, and at least 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour; and if so, what colour?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star * is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c.; or to name card No. 7 as red, green, or yellow; or glass No. 2 as green, blue, or yellow; or glass No. 5 as red, pink, salmon, &c.; or glass No. 7 as bright red or bright green; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B.

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black, by daylight; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown), he may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

APPENDIX M.

Instructions to Examiners.

Compass Adjustment.

It is of the utmost importance that masters of ships should thoroughly understand the tentative method of Compass Adjust-

ment as generally practised in merchant ships, and Examiners are therefore directed to fully satisfy themselves that all Candidates for Masters' Certificates have this particular knowledge. It should be tested in connexion with the Form of Examination, "Exn. 7," or it may be tested by Captain Beall's "Deviascope" at those ports which have been supplied with this instrument. Where the "Deviascope" is used it will not be necessary for the Candidates to give the written answers and sketches illustrative of the Question 19 of Form Examination 7.

A concise statement of the present method of tentative Compass Adjustment is forwarded for the use of Examiners. The Government wish them, however, distinctly to understand that the Government are not in any way advocating the correction of that part of co-efficient B which arises from vertical induction in soft iron by a permanent magnet instead of by a soft iron bar. The Government have no authority to interfere with the methods in use amongst Compass adjusters for the adjustment of Compasses in iron ships, but instruct the Examiners to satisfy themselves that masters are acquainted with the ordinary method as at present practised.

The examination by the "Deviascope" is at present only experimental, and no Candidate should be reported as having "failed" who does not pass the examination in it, provided he has answered satisfactorily the Question 19, "Exn. 7."

The "Deviascope" is sent only to three ports at present, and its extended use will depend upon experience at those ports.

The Tentative Method of Compass Adjustment as generally practised by Compass Adjusters in Ships of the Mercantile Marine.

Before describing the practice it will be as well to briefly state the co-efficients used to express the different magnetic forces:—

Co-efficient	A	represents	a constant quantity.
,,	B	,,	semi-circular deviation due to fore and aft magnetic forces.
,,	C	,,	semi-circular deviation due to transverse magnetic forces.
,,	D	,,	quadrantal deviation due to horizontal induction in soft iron.
,,	E	,,	quadrantal deviation due to horizontal induction in soft iron unsymmetrically distributed.

Signs and Effects of Co-efficients A, B, C, D, and E.

Co-efficient A represents a constant deviation of the same nature and amount, on all points of the compass; + A signifying easterly, and — A, westerly deviation.

Co-efficient + B represents an attraction towards the ship's head, and causes easterly deviations with ship's head in the eastern semi-circle of the Compass, and westerly deviations in the western semi-circle, attaining a maximum value on the east and west points, decreasing to zero on north and south points, by Compass.

Co-efficient — B represents an attraction towards the ship's stern, and causes easterly deviations with ship's head in the western semi-circle, and westerly deviations with the ship's head in the eastern semi-circle, with a maximum value on the east and west points, decreasing to zero on the north and south points, by Compass.

Co-efficient + C represents an attraction towards the starboard side of the ship, and causes easterly deviations with ship's head in the northern semi-circle, and westerly deviations in the southern semi-circle, attaining a maximum value on the north and south points, decreasing to zero on the east and west points, by Compass.

Co-efficient — C represents an attraction towards the port side of the ship, and causes westerly deviations with ship's head in the northern semi-circle, and easterly in the southern semi-circle, attaining a maximum value on the north and south points, decreasing to zero on the east and west points, by Compass.

Co-efficient + D gives easterly deviations with ship's head between N. and E. and S. and W., and westerly deviations between S. and E. and N. and W.

Co-efficient — D gives results exactly the reverse to + D.

Note.—Both + D and — D have a maximum value on the four quadrantal points, and become zero on the cardinal points by Compass.

Co-efficient + E gives easterly deviations with ship's head between N.E. and N.W. and S.E. and S. W. and westerly deviations between N.E. and S.E. and N.W. and S.W.

Co-efficient — E gives results exactly the reverse to + E.

Note.—Both + E and — E have a maximum value on the cardinal points, and become zero on the four quadrantal points, but are usually very small in amount in Compasses placed in the middle line of the ship.

Heeling Error.—The heeling error arises partly from vertical induction in transverse iron, and iron vertical to the ship's deck, and partly from the vertical component of the sub-permanent magnetism of the ship. In the Northern Hemisphere in the majority of cases the N. point of the Compass needle is drawn to windard or the high side of the ship, with, as a rule, a maximum heeling error on N. and S. points, and zero on E. and W. points by Compass. If the Compass is not properly placed in the ship, there may be a sensible heeling deviation on E. and W. courses.

Tentative Corrections.

To correct co-efficient C.—With ship's head north or south, magnetic, place a bar magnet (or more than one if necessary) horizontally and exactly athwart ship, either on the deck or on any convenient platform, with its centre on the fore and aft line passing through the centre of the Compass card, placing its red or marked end to starboard if the N. point of the needle deviates to the starboard side, or to port if it deviates to the port side of the ship, moving the magnet to or from the Compass until it points correctly.

Note.—The deviation represented by co-efficient C varies inversely as the earth's horizontal force, providing the iron is symmetrically arranged on each side of the Compass.

To correct co-efficient B.—With ship's head east or west, magnetic, place a bar magnet (or more than one if necessary) horizontally and exactly parallel to the fore and aft midship line of the ship, either on the deck or on any convenient platform, with its centre on the athwart ship line passing through the centre of the Compass, the red or marked end of the magnet being directed aft if the end point of the Compass needle deviates towards the stern, or forward if it deviates towards the bow, moving the magnet to or from the Compass until it points correctly.

Note.—The co-efficient B consists of two parts: one is due to the permanent magnetism of the ship, which varies inversely as the earth's horizontal force; the other to vertical induction in soft iron, which varies as the tangent of the dip. As ships in the merchant service are rarely built with a view of providing a satisfactory position for the standard Compasses, it is very difficult in many ships to find a position for it where it will not be affected by vertical iron. It follows, therefore, that if this deviation be compensated, as is customary, by a fore and aft permanent magnet instead of by a vertical soft iron bar, the poles of the magnet may in some cases require to be reversed in high southern latitudes.

To correct co-efficient + D.—With ship's head on one of the quadrantal points, magnetic, the + D is generally corrected by boxes of small chain, cylinders of soft iron, or soft iron globes placed athwart ships on the same level, and at equal distances, on the port and starboard sides of the Compass, with the centre of their mass on a level with the Compass needle, move them to or from the Compass till the needle points correctly.

To correct co-efficient—D.—Co-efficient—D, which is of very rare occurrence, is corrected by placing the above correctors on the fore and aft sides of the compass.

Note.—When once the co-efficient D is properly corrected by soft iron it is correct for all magnetic latitudes, provided the distribution of the iron in the ship is not materially changed, and provided the magnetism of the soft iron has not been affected by the Compass needles. With short needles having small magnetic power, such for instance as Sir Wm. Thomson's, there will probably be no change; but when the needles are long and powerful, one-half the original D may be expected to return when approaching the magnetic equator. *See* Admiralty Manual, 1882, page 96, as follows:—"When "a compass with long and powerful needless is employed, "soft iron correctors placed very near it become mag- "netized by induction according to the power of the

needles, and the resulting correction will not remain strictly perfect in all latitudes."

To correct Heeling Error.—The heeling error is corrected for any given magnetic latitude by placing a vertical magnet exactly under the centre of the Compass card, with its N. or red pole uppermost if the heeling error is to windward or to the high side of ship, or its S. or blue end uppermost if to leeward or to the low side of ship, moving the magnet to or from the Compass until the heeling error is corrected.

Note.—The heeling error, due to the permanent par of the magnetism, varies inversely as the earth's horizontal force, and consequently is greatest in high latitudes, diminishes as the ship approaches the magnetic equator, and increases again, still retaining the same name, as the ship recedes from the magnetic equator in the Southern Hemisphere. The heeling error, due to transverse and vertical soft iron, decreases as the ship approaches the magnetic equator, where it is zero, and is of a contrary name in the Southern Hemisphere. It is probable that the poles of the vertical magnet may require to be reversed in high southern latitudes.

A divided scale should be marked or fitted outside the tube or some other convenient place, so as to show the proper position for the correcting magnet as found in any given magnetic latitude, and the same recorded as a guide for approximately placing the magnet in position on any subsequent voyage in the same locality, and especially on the return of the ship to the United Kingdom.

Candidates should understand that the object of tentative adjustment is to bring the deviations within manageable limits, and also to equalise the directive force of the needle so far as is practicable on all courses; but no system of adjustment whatever is sufficiently reliable in character to absolve the navigator from the necessity of using every precaution, and especially of ascertaining the deviation on every available opportunity by observations of the sun by day and the other heavenly bodies by night.

APPENDIX N.

(From Memorandum on Examination of Engineers.)

EXAMINATION OF A MASTER OR MATE IN STEAM

The regulations under which these examinations are conducted are printed at pages 41 to 43 of the regulations for examinations of masters and mates. (Exn. 1.)

A candidate for this examination is required to have a thorough grasp of the construction of the steam engine and boiler, to enable him, in the first place, to understand the nature and importance of any defect which may be reported to him by the engineer, and so that he may work in harmony with the engineer in affording time and facilities for disconnexions, inspections, adjustments, and repairs.

To have a looking-on knowledge of what the principal repairs are about engines and boilers and pipes, and how these repairs are accomplished.

To be able to form an independent opinion as to a breakdown and the consequent propriety or impropriety of proceeding under steam with temporarily repaired or defective machinery.

To understand how to estimate approximately the reduction of fuel required for reduced speed, and consequently to sanction such reduction of speed as may seem to him to be warranted by the report of the engineer, and to satisfy himself before leaving port that there is sufficient coal for the voyage.

To have an intelligent grasp of the general run of pipes and connexions in the engine room, the marking of cocks, the opening and closing of cocks and valves, how mistakes of importance may be made in the confusion of an accident, and how best to guard against such mistakes.

To be capable of being left in charge of the feeding of a set of boilers, to understand the working of the water-gauge, and to be able to guard against being misled by false indications of the gauge glass.

To understand about blowing down and surfacing, the reasons for doing so, and the danger which may result from the neglect of these under certain circumstances. A master or mate presenting himself for examination in steam must be understood to have made up for his want of practical experience by reading up

about the steam engine. He ought, therefore, to show that he has given his mind to intelligently understanding the *rationale* of the action of the steam engine. Under this head, he should, therefore, be able to state approximately the quantity of heat required in the formation of steam, the remarkable relation of "latent" heat to "sensible" heat, using these popular names, how much steam can be raised by the combustion of one pound of coal, what horse-power measure is, what indicated horse-power is, the action of the slide-valve, the course of the steam through the engine, the advantage of working expansively, and how the expansive action is shown by the indicator diagram.

The candidate has to answer in writing 16 out of 20 questions selected from the book of Elementary Questions * Selections for this examination are given on the alphabetic sheet for "Steam." Generally, these answers are given by candidates as learned by rote from a book; the candidate should therefore be asked such *vivâ voce* questions as will necessitate his giving his answers in different words, so as to discover whether he has the root of the matter in him.

The principal part of the *vivâ voce* is the examination on board a steamer, preferably one with which he is unacquainted. He is told to look about and try to find out the run of the machinery without the assistance of any one; the Examiner to be in the engine-room to see that this independent examination is properly carried out. When the candidate reports that he thinks he knows the whole arrangement of the machinery, the Examiner will then question him on the uses of the parts, get him to point out the different cylinders, pumps, valves, condenser, &c. He must show that he understands the run of the pipes in the bilges, not necessarily that he has gone over every one of them, but he ought to be directed to trace, at least, one important range of pipes, and to thoroughly satisfy the Examiner that he could be safely trusted to manipulate the valves or cocks in connexion therewith. It will not often be practicable for the candidate to be asked to actually work engines under steam, but he must satisfy the Examiner that he knows how to do so, and that he is aware what precautions have to be taken in regard to water in the cylinder, &c. It is most important that a candidate should show that, in the event of an accident depriving him of the assistance of engineers, he knows what to do to safely take his vessel to an anchorage, or to stop the engines and proceed under sail alone.

The examination of a mate in steam is the same as that of a master. The knowledge is not with reference to the mate's position. A mate may be examined, but such examination implies that the mate will one day be a master, when the possession of the knowledge will be an advantage to him in the discharge of his duties as master.

APPENDIX O.

The following is a reprint of

INSTRUCTIONS

TO

EXAMINERS OF MASTERS AND MATES.

1. The Examiners already understand that they are to be very careful (in examining all applicants for Certificates of Competency) to satisfy themselves that the applicants understand the Rule of the Road at Sea, and should decline to pass every applicant who does not understand it.

2. As a serious misapprehension has, however, arisen in a recent case in which Sound Signals were being made by a steamer under way in thick weather, contrary to the express wording of Articles 12*a* and 19 of the Regulations, it is more than ever incumbent on Examiners not to pass any applicant unless the Examiner is satisfied that the applicant understands that the Signals named in Article 19 are purely optional, and are only allowed to be made in cases in which the weather is so clear that the ship making them has the other vessel in sight.

3. Any Master using these *optional* Sound Signals, even when the other vessel is in sight, does so in every case on his own

* Printed at end of Engineers' Regulations, Exn. 1*a*.

responsibility; but if he uses them when the other vessel is *not* in sight, he commits a very serious act of disobedience to the Regulations, and must abide the consequences of his illegal act.

4. Applicants must be made to understand that the compulsory Sound Signal which *must* be made by a steamer under way in a fog is a prolonged blast under Article 12*a*, and no other Sound Signal.

5. In examining an applicant on the application of Articles 12 and 13, the Examiner should, by answers to questions, ascertain that the applicant understands that it is his duty to go at a moderate speed in fog, while, as regards Article 24, the Examiner should impress on the applicant that an "ordinary precaution" to be observed in the navigation of a steam-ship in a fog is to get the way off his own vessel immediately he hears the Sound Signal of another steamer, and then he should go ahead very slowly, blowing the "prolonged blast" at intervals, and feeling his way until all danger of collision is passed.

APPENDIX P.

Forms used in connection with the Examination and Certificates of Masters and Mates.

Name of Form.	Initial Letters and Numbers.
Regulations relating to the Examinations of Masters and Mates.	Exn. 1
Masters' and Mates' Form of Application for Examination.	Exn. 2
Form of Application for Examination (Colours) ...	Exn 2*a*.
Examination Paper, to be used in the examination of Second Mates.	Exn. 4
Ditto, to be used by all candidates when appearing for examination for the first time only.	Exn. 4*a*.
Ditto, Second Mates	Exn. 5
Ditto, Only and First Mates	Exn. 6
Ditto, ditto ditto	Exn. 6*a*.
Ditto, Masters, Ordinary	Exn. 7
Ditto, for adjustments of the Sextant ...	Exn. 9*a*.
Ditto, Examination in Chart (for Mates)...	Exn. 9*c*.
Ditto, (for Masters)	Exn. 9*d*.
Examiners' Report of Masters' and Mates' Examination	Exn. 14
Examiners' Authority for delivery of Certificate to successful candidate.	Exn. 16
Examiners' Certificate (Colours)	Exn. 16*d*.
Ditto authority for return of Fee to unsuccessful candidate (Colours).	Exn. 17*a*.
Ditto Report on Colours tests	Exn. 17*b*.
Application for renewed Certificate	Exn. 23
Deviation cards	Exn. 24
Napier's Diagram	Exn. 25
Examination paper on Cyclones on revolving storms ...	Exn. 32

Government of Bengal.

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issued under section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

AS

MASTER.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of MASTER in the Merchant Service, I do hereby, in pursuance of Act I of* 1859, *grant you this Certificate of Competency.*

By order of the Government of Bengal,

*this*_____*day of*_____18____.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

BENGA

No. of Certificate [redacted]

Address of Owner ——————————————————

Date and Place of Birth ——————————————————

Signature ——————————————————

This Certificate is given upon an ORDINARY EXAMINATION passed at ——————— *on the* ———

day of ——————— 18——.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the ——————— *day of* ——————— 18——.

———————————————————



t of Bengal

BENGAL.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issu
under section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

AS

FIRST MATE.

No.

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to f*
ies of FIRST MATE in the Merchant Service, I do hereby, in pursuance of Act I of 1859, grant you this Certifi
etency.

By order of the Government of Bengal,

this ——— *day of* ——— 18—.

Under-Secy. to the Govt. of Bengal,

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate [redacted]

Address of Owner ———————————————

Date and Place of Birth ———————————————

Signature ———————————————

This Certificate is given upon an ORDINARY EXAMINATION passed at ——————— *on the* ———————
day of ——————— 18——.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at the Port of Calcutta on the ——————— *day of* ——————— 18——.

———————————————

———————————————

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, *issued under section* 8 *of the Merchant Shipping (Colonial) Act,* 1869.

Colonial Certificate of Competency

AS

ONLY MATE.

To_____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of ONLY MATE in the Merchant Service, I do hereby, in persuance of Act I of* 1869, *grant you this Certificate of Competency.*

By order of the Government of Bengal.

*this*_____ *day of* _____ 18____.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

BENGAL.

No. of Certificate [redacted]

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

*This Certificate is given upon an ORDINARY EXAMINATION passed at*_____*on the*_____

*day of*_____18—.

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty n exceeding Rs. 500. This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under t Imperial Act 25 and 26 Vic., cap. 63, sec. 23, to cancel or suspend Certificates.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to t Port Officer, Calcutta.

*Issued at the Port of Calcutta on the*_____*day of*_____18—.

_____

_____

BENGAL.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

In accordance with Her Majesty's order in Council of the 29th June 1882, issued under section 8 of the Merchant Shipping (Colonial) Act, 1869.

Colonial Certificate of Competency

as

SECOND MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of SECOND MATE in the Merchant Service, I do hereby, in persuance of Act I of 1859, grant you this Certificate of Competency.*

By order of the Government of Bengal,

this _____ *day of* _____ 18—.

Under-Secy. to the Govt. of Bengal.

Registered at the Office of the Port Officer of Calcutta.

(83)

BENGAL.

No. of Certificate [redacted]

*Address of owner*_____

*Date and Place of Birth*_____

*Signature*_____

*This Certificate is given upon an ORDINARY EXAMINATION passed at*_____ *on the*_____ *day of*_____ 18 .

Any MASTER or MATE who fails to deliver up a certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500. *This Certificate is liable to be cancelled or suspended by any Court or Tribunal which has power under the Imperial Act* 25 *and* 26 *Vic., cap.* 63, *sec.* 23, *to cancel or suspend Certificates.*

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Port Officer, Calcutta.

*Issued at the Port of Calcutta on the*_____ *day of*_____ 18 .

_____

_____

NOTIFICATION.

No. 26 Marine, dated Calcutta, the 31st January 1890.

UNDER the powers conferred upon him by section 10 of Act I of 1859, and with the sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules for the examination of persons desirous of obtaining local certificates of competency as Masters and Mates in the Mercantile Marine. These rules supersede those contained in the Notification of the General (Marine) Department of this Government, dated the 28th August 1877, and published in the *Calcutta Gazette* of the 29th idem.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed, and arrangements have been made for holding the examinations periodically at the Port of Calcutta. The examinations will be held twice a quarter or at such other times as the Government may appoint.

Examinations continued till all the Candidates are examined.

2. The examinations will commence early in the forenoon, and will be continued from day to day until all the candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Notice of application for examination to be given to the Port Officer.

3. Candidates for examination must make their application upon the appropriate Form (Exn. 2), which must be filled up at the Port Office. The Exn. 2, properly filled in, together with the Candidate's testimonials and discharges, must be lodged with the Port Officer of Calcutta, not later than the day before the day of examination, and the Candidate must conform to any regulations in this respect which may be laid down by the Government; as, if this be not done, delay may be occasioned.

Testimonials of character, conduct and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges have to be verified before the Candidate can be examined, it is desirable that they should be handed in together with the Form Exn. 2 as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners and of British seamen serving in foreign vessels, which cannot be verified by the Port Officer, must be confirmed either by the Consul of the country to which the ship in which the Candidate served belonged, or by some other recognized official authority of that country, or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case will be decided on its own merits, and if the sufficiency of the proofs given appears to be at all doubtful, it must be referred to the Government.

Certificates as to Age.

6. Should any doubt exist as to the age of a Candidate he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel. In the case of natives of India, who may not be able to speak English, their Certificates shall be endorsed to the effect that they are only valid for vessels manned and officered entirely by Asiatics.

Verification of Services by the Port Officer.

8. The time for which length of service as Seaman or Officer in the Mercantile Marine is to be reckoned in all cases referred to in the following paragraphs is to commence at the date when the articles of agreement were signed by the applicant, and to end at the date when he was discharged as shown in the articles of agreement. The certificates of discharge will generally be sufficient evidence of this, but great care must be exercised by the Port Officer and Examiners to detect any tampering in any way with the information contained in them, and to report to the Government at once any suspicious cases.

9. Services which cannot be verified by proper Entries in the Articles of the Ships in which the Candidates have served cannot be counted. For instance, a man will state his service to have been as Second or Only Mate, and to support his assertion will produce a Certificate of Discharge or of Employment by the Master to the effect that he served as Mate, when, on reference to the articles, it appears that he has actually been rated as Boatswain: the service in such a case will not be regarded as having been in the capacity of Mate.

Service as an Apprentice.

10. Time for which Indentures of Apprenticeship are in force will be accepted as sea service, provided that the Apprentice has remained by the ship for at least four-fifths of the time covered by the Indentures, and that the Indentures of the applicant are endorsed by the Owner or Master to whom he has been bound to the effect that he has performed his service faithfully for the whole time agreed upon.

Service as 2nd, 3rd or 4th Mate to qualify for Master.

12. Service as Second, Third, or Fourth Mate may be accepted as equivalent to service as First or Only Mate to qualify a Candidate for examination for a Master's Certificate of Competency, provided he can produce satisfactory evidence of his having served at sea 12 months as Second, Third, or Fourth Mate of a Foreign-going Ship while in possession of a First Mate's Certificate of Competency, valid in the United Kingdom. It will be noted that occasional service in charge of a watch in the daytime will not be accepted as Mate's service under the Regulations.

Service on board a Training Ship.

13. Part of the time served on board a training ship will be allowed to count as service at sea, provided that the Candidate can produce amongst his testimonials a Certificate from the Committee that he has conducted himself creditably, and passed a good examination in seamanship so far as practised in the training ship as well as in other matters down to the time of his leaving the ship.

14. No period of service on board a training ship will be allowed to count for more than one year's sea service.

Service in capacities other than as Apprentices or Seaman.

15. Candidates whose services have been in capacities other than Apprentice, Ordinary Seaman, or Able Seaman, *e.g.*, Cook, Steward, Carpenter, &c., will be required to satisfy the Port Officer that they have a good knowledge of Seamanship. This may possibly be proved by the production of satisfactory Certificates from Masters with whom the applicants have served. Failing satisfactory evidence, the applicant may be required to perform additional service, which must be in the capacity of Ordinary Seaman or Able Seaman.

Service on rivers and in smooth water.

16. Service performed on rivers, no matter of what size, or in smooth water or partially smooth water limits, cannot be accepted.

Partial loss of sight.

17. A person who has lost the sight of one eye cannot be permitted to be examined for a Certificate of Competency. If he already holds a Certificate, he cannot be examined for a Certificate of a higher grade.

Service in Light-ships and Engine-room.

18. Service in Light-ships or in an Engine-room will not be accepted as sea service for a Master's or Mate's Certificate of Competency.

Service as Hooghly Master Pilot.

19. Service as a First Class Pilot will be accepted as qualifying for examination for a Master's Certificate for Home Trade Ships, notwithstanding that he may not have served in the capacity of Mate, but only provided that his *Sea Services* are sufficient. For the purpose of this rule, a Hooghly Master Pilot will be held to be a First Class Pilot.

Service as Pilot's Apprentice.

20. Half the amount of service performed as an Apprentice in a Pilot Ship propelled by sails may count as actual Sea Service to qualify for examination for a Certificate of Competency.

Service in Tug Boats.

21. Service performed in Tug Boats employed in Sandheads Service or outside Port limits may be accepted as Sea Service for qualifying for a Mate's Certificate for Home Trade Ships. Service on Hooghly River survey vessels may be accepted on the same conditions. Service in the Hooghly Pilot vessels at the Sandheads is Sea Service.

Desertion and gross misconduct.

22. Candidates who have neglected to join their vessels after having signed Articles, or who have deserted their vessels after having joined, or who have been found guilty

of gross misconduct on board, will be required to produce satisfactory proofs of two years' subsequent service and good conduct at sea, unless the Government, after having investigated the matter, should see fit to reduce the time.

If after passing examination services are found to have been insufficient.

23. If after a Candidate has passed his Examination it is discovered on further investigation, *e.g.*, by verification on the part of the Port Officer, that his services are insufficient to entitle him to receive a Certificate of the grade for which he has passed, it will not be granted to him; but if the Government are satisfied that the error in the calculation of his services did not occur through any fault or wilful misrepresentation on his part, he will be allowed to go up for re-examination without payment of a further fee when he has performed the amount of service in which he was deficient.

Certificate of a lower grade may be granted on certain conditions.

24. If in such a case the applicant's services are sufficient to entitle him to receive a Certificate of a lower grade, provided as aforesaid he has not wilfully misrepresented the amount of his services, an Inferior Certificate may be granted to him, and the difference, if any, between the fee paid by him for the Superior Certificate and the fee payable for the Inferior Certificate, may be placed to his credit.

Must be re-examined for certificate of higher grade.

25. In such a case, when the applicant has by further service made up the amount in which he was found to be short, he must, before he can receive the higher Certificate, be re-examined in all the subjects.

Colour Tests.

26. The Local Government have made the following arrangements for the examination of persons as to their ability to distinguish colours :—*

27. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

28. Any person, including the holders of Certificates of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in Colours only*, must make application to the Port Officer on Form Exn. 2ª, and pay a fee of one rupee.

29. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a certificate to that effect.

30. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

31. The application of a *Candidate who is presenting himself for Examination for a Master's or Mate's Certificate* must be made on Form Exn. 2. Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any of the colours used in the test, he will not be allowed to proceed with the examination in Navigation and Seamanship.

32. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will in such event be returned to him.

33. A Candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the Colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If he fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

34. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form Exn. 2ª.

35. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination in Navigation and Seamanship for the Certificate of the higher grade.

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* *See* Appendix O.

36. Should he pass this examination, the following statement will be written on the face of the higher Certificate which may be granted to him, viz.—"This Officer has failed to pass the Examination in Colours."

37. Should he ultimately fail to pass the Examination in Navigation and Seamanship, a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

38. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency for a Home Trade Ship.

40. All Candidates for Certificates of Competency must first be examined in Colours.*

41. A MATE must be not less than 19 years of age, and have served four years at sea.

No candidate will be allowed to be examined unless he has served two years at sea within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

42. IN NAVIGATION, &c.—He must write a legible hand, and understand the first five rules of arithmetic, both simple and compound. He must be able to take a bearing by compass, and be conversant with the use of Mercator's chart, and be able to find, on either a "true" or "magnetic" chart,† the course to steer, and the distance from one given position to another; to find the ship's position on the chart from cross bearings of two objects; from two bearings of the same object, the course and distance run between taking the bearings being given; and the distance of the ship from the object at the time of taking the second bearing.

43. He must also pass an examination in the International Code of Signals.‡

44. IN SEAMANSHIP, &c.—He must possess a thorough knowledge of the rule of the road as regards both steamers and sailing vessels, their regulation lights, and fog and sound signals.§ He must be able to describe the signals of distress, and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals;‖ also the use and management of the rocket apparatus in the event of his vessel being stranded. He must be able to mark and use the lead and log lines, to moor and unmoor a vessel, and to manage a ship's boat in heavy weather, &c., &c. He must also understand the construction, use, and action of the bulkhead sluices, the engine-room telegraph, &c., and to answer any other questions of a like nature appertaining to the duties of the Mate of a Home Trade Vessel which the Examiners may think proper to put to him.

45. A MASTER must be not less than 20 years of age, and have served five years at sea, of which one year must have been as First or Only Mate in the Home or Foreign Trade, during which service he must have been in possession of a Mate's Certificate for Home Trade Ships or of a First or Only Mate's Certificate for Foreign-going Ships. *Vide also para.* 19.

No candidate will be allowed to be examined unless he has served at sea two years within the last six years, and six months within the last three years immediately preceding the date of his application to be examined.

* *See* Appendix F.

† *See* Appendix D. The terms "true" and "magnetic" are used throughout the Regulations for the sake of brevity and convenience for indicating charts that have compasses engraved upon them, showing the "true" or "magnetic" point of the compass respectively.

‡ *See* Appendix A.

§ *See* Appendix B.

‖ *See* Appendix C.

Any cases not coming within the above conditions must be submitted for the special consideration of the Government before the candidate is allowed to be examined.

46. In Navigation, &c.—In addition to the qualifications required of a Mate of a Home Trade Ship, a Master will be required to find on a chart the course to steer by compass in order to counteract the effect of a given current, and to find the distance the ship will make good towards a given point in a certain time, and to *work out practically* the correction to apply to soundings taken at a given time and place, to compare with the depth marked on the chart,* &c. He will also be required to understand the use of the quadrant, to be able to observe with it, to read *off* and *on* the arc, and to find the index error by the horizon. He will also be required to find the latitude by a meridian altitude of the sun, and to give written answers (*vide supplementary viva voce test, page* 40) to certain practical questions on the subject of the deviation of the compass.†

47. In Seamanship, &c.—In addition to the qualifications required of a Mate of a Home Trade Ship, a Master must understand how to rig a sea anchor, and what means to apply to keep a steamer with machinery disabled out of the trough of the sea, &c. How to get a cast of the lead in heavy weather, &c. He will be examined as to his resources for the preservation of the crew and passengers in the event of wreck, and the steps to be taken if his vessel is disabled and drifting towards a lee shore, and will be required to answer any other questions appertaining to the management of Home Trade Vessels which the Examiner may think necessary to put to him.

Failure.

Re-examination in case of failure

48 In all cases of failure the Candidate must be examined *de novo*. If a Candidate fails in *Seamanship*, he will not be re-examined *until after a lapse* of six months. Whether the whole or part of this period must be served at sea must depend upon the subjects in Seamanship in which the Candidate failed, but what amount (if any) of sea service will be required will be left to the discretion of the Port Officer, subject, however, to revision by the Government should they see fit.

49. The Examiners in making out their Report on Form Exn. 14 should state what amount (if any) of further sea service the Candidate must perform, and they should also insert this information under Division H in Form Exn. 2.

50. If he fails three times in *Navigation* he will not be re-examined until after a lapse of three months from the date of the *last failure*.

Certificate of a lower grade.

51. If a Candidate has failed in his Examination, but the subjects in which he has failed are not included in the subjects required for a certificate of a lower grade, he may, if he desires it, receive a certificate of such lower grade.

52. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled, for re-examination for the higher grade of Certificate he will be required to pay a further full fee.

53. If a Candidate fails for bad spelling or writing, he will not be re-examined until after a lapse of at least three months.

Fees.

54. Candidates for examination, in making their application on Form Exn 2, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause, except failure to pass the colour tests, not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as

* *See* Appendix D.
† *See* Appendix E.

the case may be, they will be allowed to again present themselves for examination for a Certificate of the same grade without paying any further fee.

55. The fee for examination must be paid to the Port Officer. In any case in which a Candidate offers money to any other officer, and in any place but in the Port office, the Candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be again examined for twelve months. Fees to be paid by applicants for examination.

56. If a Candidate fail in his examination, *no part of the fee he has paid will be returned to him.* Fees to be paid by applicants for examinations. 133.

57. The fees are as follow :—

FOR "HOME TRADE SHIPS."

	Rs.
Mate	6
Master	12
For the renewal of any certificate ...	5

General Instructions to Examiners and Candidates.

58. All instruments necessary for use in the examinations are supplied by the Government. Instruments used in examinations.

59. Before commencing the examination, the tables or desks must be cleared of all scraps of paper or books that are not used in the examination, and care should be taken that the candidates do not bring into the examination room any book, paper, document or memoranda of any description whatever. No person whatever should be allowed in the room during the time of examination, but those whose duties require them to be present. Prohibited books and papers.

60 No instructors will be allowed on the premises.

61. Candidates will under no pretence whatever be allowed to leave the premises while the examination is proceeding. If a candidate has occasion to visit the retiring room, he will only be allowed to do so on the completion of the paper on which he may be engaged, when he will be required to enter in a book kept for the purpose the exact times of his leaving and returning to the examination room. When only a few candidates are under examination, two persons will not be allowed to leave the room at the same time. Candidates not to leave premises during examination.

62. Candidates should be so placed as to prevent one copying from the other, and no communication whatever between the Candidates should be allowed. Position of Candidates at examination

63. If any blotting paper is allowed, it should be black; and when the first examination paper is issued, each Candidate should be furnished with a piece, which must be returned to the Examiner upon the completion of the last paper. Blotting paper.

64. The examination papers should be issued to the Candidates in half sheets only, and one at a time. This will prevent a Candidate from spreading out the sheets on the table in an apparently careless manner, but so as to enable his nearest neighbour to look over and copy, or examine the problems It will also enable the Examiner to look over and report upon the work on one half sheet, while the Candidate is at work upon another, and so on. When the errors are not too numerous, or when they are not from ignorance of the subject, the incorrect problems may be returned to the Candidate for correction, but in no case should the errors be pointed out by the Examiner, neither should any marks be made on the correct work of the problem, which would at once indicate how far or to what extent the work is correct. Should the problems be returned to the Examiner the second time incorrect, this would be a failure; and as the time allowed is considered ample for working out the papers carefully, this rule is expected to be strictly observed. How examination papers should be issued.

65. When from the large number of the candidates it may be found impossible to look over the work on the day of examination during the office hours, an hour in the morning of the following day may be allotted for the purpose of correcting the problems, but In certain cases problems may be corrected on morning following examination day.

in no case should a Candidate have his problem returned to him for correction after he has made the second attempt.

Vivâ voce examination.

66. In the *vivâ voce* examination a reasonable time should be allowed for the Candidate to give his answers. No assistance should be given or leading question put.

Minor corrections.

67. All outstanding or minor corrections should appear in the margin of each problem paper; also on the chart papers Exn 9C and Exn. 9D; and unless all these corrections appear on the papers of the Candidate, they will not be considered complete.

Examination to commence with that for Second Mate.

68. In every case the examination, whether for Only Mate, First Mate, Master, is to commence with the problems for Second Mate.

Problems required as tests.

69. Examiners should bear in mind that the problems to be performed are required as tests, and for the purposes of an Examination, and not for sea-going or practical purposes alone.

70 The Candidates will be allowed to work out the various problems according to the method and the tables they have been accustomed to use.

Time allowed for Problems and Writings.

71. The rules as to the amount of time allowed are as follow:—

72 *Candidates for Home Trade Mate's Certificates* must complete the whole of their arithmetical and chart papers within *eight hours*, and Candidates for Home Trade Masters' Certificates within *ten hours*.

Additional time allowed in special

73. Punctually at the expiration of the prescribed time all the papers should be called up, whether completed or not, and if not completed the Candidate will be declared to have failed, unless the Examiner see fit to lengthen the period in any special case. If, however, the period is lengthened in any case, the special circumstances of that case, and the reasons for lengthening the period, together with the time allowed, must be reported to the Government by the Examiner, in the column for "remarks" on the Form Exn. 14. It should be noted that the periods prescribed in the foregoing paragraphs are not intended to include the time occupied by the *vivâ voce* part of the examination.

74. It is anticipated that but few of the Candidates for Certificates of Competency will require the whole of the time herein allowed for completing their examination in navigation; and ample time has been prescribed, so that Candidates may perform their work in a careful, clear and legible manner, and to the entire satisfaction of the Examiners.

Supplementary vivâ voce Examination on written Papers.

75. An impression prevails in regard to the examination of Masters and Mates, that so long as a Candidate can commit to paper correct answers to the various questions requiring written answers (*e. g., Forms Exn. 4a, Exn.* 7, *Exn.* 9*a*, *Exn.* 9*c*, *Exn.* 32, &c.), no matter how indicative the answers may be of their having been learnt off by rote *only*, the duty and responsibility of the local Examiners are at an end, and that they have no power or authority to reject a Candidate should his written answers be correct.

76. Lest, therefore, such an impression should prevail, the Government wish to point out that Candidates for Certificates of Competency are not only expected to give correct written answers, which may merely be learnt off by rote, but they are expected to possess an intelligent knowledge of the various subjects prescribed in the Regulations, particularly as regards the important subject of the Deviation of the Compass.

77. This result may be easily attained by the Examiner putting a few *viva voce* questions to the candidate as the papers are brought up for inspection, or at any subsequent time if more convenient. The oral questions (suggested by the printed questions and the answers given) should be such that the Examiner may satisfy himself that the candidate possesses a real knowledge of what he has written, and should be confined strictly to the subjects of the printed questions. Should the candidate then exhibit ignorance of the subjects, the Examiner (who is in a position to judge of the real knowledge the man before him posses-es) should deal with him at his discretion, notwithstanding that the candidate may have written all the answers correctly by rote.

78. When an Examiner finds it necessary to fail a Candidate in this *supplementary viva voce* test, a memorandum containing the particulars of the points on which the candidate was ignorant, *i.e*, *the identical questions and the identical answers given*, must in each case be attached to his examination papers, when forwarded in the usual course to the Port Officer, or the particulars may be set forth by the Examiner in the margins of the candidate's papers in red ink.

79. If the Candidate passes he will receive the Form Exn. 16, upon which the Government will issue the certificate to the Candidate, whose testimonials, &c., will be returned at the same time. Form Exn. 16. Completion of examination.

Special Notice to Candidates.

80. The attention of Candidates is specially called to the following Regulations:—

81. Candidates are required to appear at the examination-room punctually at the time appointed.

82. Candidates are prohibited from bringing into the examination-room books, paper, or memoranda of any kind whatever. The slightest infringement of this regulation will subject the offender to all the penalties of a failure, and he will not be allowed to present himself for re-examination for a period of three months.

83. In the event of any Candidate being detected in defacing, blotting, writing in, or otherwise injuring any book or books belonging to the Government, the papers of such Candidate will be detained until the book or books so defaced be replaced by him. He will not, however, be at liberty to remove the damaged book, which will still remain the property of the Government.

84. In the event of any Candidate being discovered referring to any book or memoranda, copying from another, or affording any assistance or giving any information to another, or communicating in any way with another, during the time of examination, he will subject himself to all the penalties of a failure, and he will not be allowed to be examined for a period of six months.

85. No Candidate will be allowed to work out his problems on a slate or on waste paper.

86. No Candidate will be permitted to leave the room until he has given up the paper on which he is engaged.

87. Any Candidate who may be guilty of insolence to the Examiner or of other misconduct will render himself liable to the postponement of his examination, or, if he has passed, to the detention of his certificate for such period as the local Government may direct.

General.

88. Certificates of competency will be made and issued in the forms hereunto annexed.

89. Every Certificate of Competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the Certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

90. No application from the holder of a certificate granted by the Government of Bombay to be examined for a certificate of the same legal value shall be entertained.

APPENDIX A.

EXAMINATION OF MASTERS AND MATES IN THE INTERNATIONAL CODE OF SIGNALS.

Instructions to Examiners.

The Government desire to direct the attention of the Examiners to the principal points connected with the International Code of Signals (which is to be treated as a subject in Navigation) as to which Candidates for Examination should be questioned in order to qualify for Certificates of Competency.

The Government would recommend to the Examiners a perusal of the *Report of the Signal Committee of* 1855 (which will be found at the commencement of the Signal Book), and also the *first few pages of the Book.* The information therein given will be found sufficient to make the Examiners theoretically acquainted with the characteristics of the Code, and the advantages it claims to possess over other Codes, and will enable them to appreciate and urge upon Candidates for Examination the facilities which this System of Signalling affords for easy and rapid communication.

The "comprehensiveness" and "distinctness" of the International Code are its chief recommendations.

The form of the Hoist generally indicates the nature of the Signal made, so that an observer can at sight understand the character of the Signal he sees flying.

The annexed plate gives examples which illustrate this.

The Examinations should tend to elicit a knowledge of the distinctive features of the Code above alluded to.

With this object the Examiners should make the 2, 3, and 4 Flag Signals on the Frame board which is furnished for the purpose (*always taking care first to show the Ensign and the Code Pennant at the Gaff*),* questioning the Candidates as to the distinguishing Forms of the respective Hoists, *(see Plate annexed)*; which will be indicated according as a Burgee, or a Pennant, or a Square Flag, is uppermost.

The Candidate ought to know how to find in the Signal Book the communication or the inquiry he desires to make, and how to make the Signal. The Signal to be made should *invariably* be sought for by the Candidate in the Vocabulary and Index, Part II, and never in Part I

The Candidate ought to know how to interpret a Signal.

The Examiner should place a Signal on the Frame board, and vary the Signal by showing a 2 or 3 Flag Signal, or a "Geographical" or a "Vocabulary" Signal, or the name of a Merchant Ship or a Ship of War.

The two latter signals would not of course be found in the Signal Book. The Candidate ought to point them out in the *Code List of Ships.*

A Candidate ought to be able to read off a Signal at sight, so far as to name the Flags composing the Hoist.

He ought to know the use of the Code Pennant, and of the Pennants C. and D., "Yes" and "No."

The Candidate should be practised in the use of the Spelling Table, by being made to spell his own name, or some word not to the Vocabulary of the Code.

A knowledge of the Distant Signals should be required of the Candidate, their object and the mode of signalling by the Distant Code, which will be found at the end of the Signal Book.

For this purpose two Black Balls, two Black Square Flags, and two Black Pennants will be furnished with the Frame board, and the Candidate should be required to make one or two Distant Signals, and to read off one or two made by the Examiners.

The Ball being the distinguishing symbol of the Distant Signal, any Pennants or Flags of the Code may be employed in conjunction with it, irrespective of colour. The Black Pennants and Flags are merely sent as showing best in the light background of the Frame board.

The Examiners should be careful to ascertain that the Candidate possesses a knowledge of the Distress Signals which came into operation November 1st, 1873.

Semaphores.

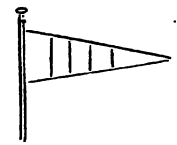
A plate at the end of the Signal Book explains the method by which the arms of the Semaphore are made to represent by their position (up, down, or horizontal) the three symbols used for Distant Signalling, viz., a Flag, a Ball, or a Pennant. Before making Signals with the Semaphore, the Black Disc with the white rim should be placed on the top of the Semaphore Mast, as it properly forms a part of the Mast itself.

The International Code is used on board Her Majesty's Ships, and it has been adopted by all the principal maritime powers for their Imperial as well as for their Mercantile Navies.

Note.—The International Code of Signals, with the Code List, is prepared by the Registrar-General of Shipping and Seamen, and may be had of the Publishers, Messrs. Spottiswoode & Co.,

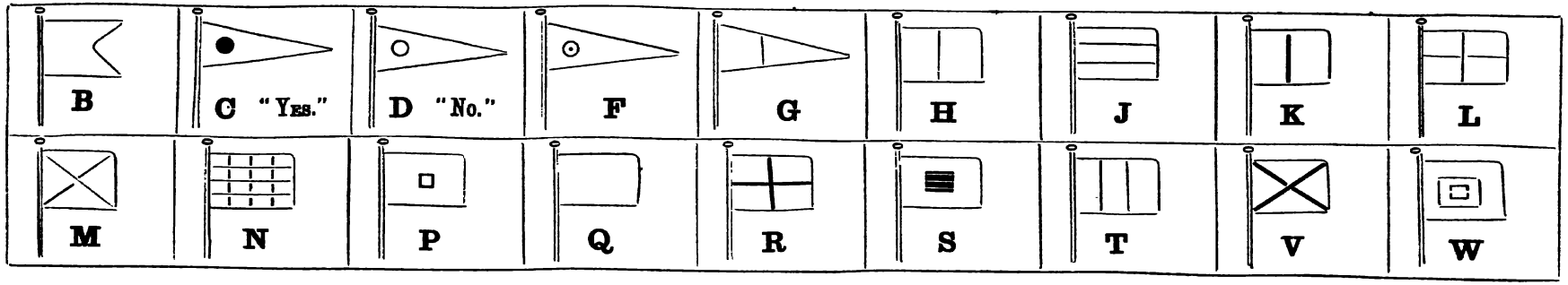
* The object of this is, of course, to distinguish the Signals from those of another Code.

FLAGS OF THE INTERNATIONAL CODE OF SIGNAL

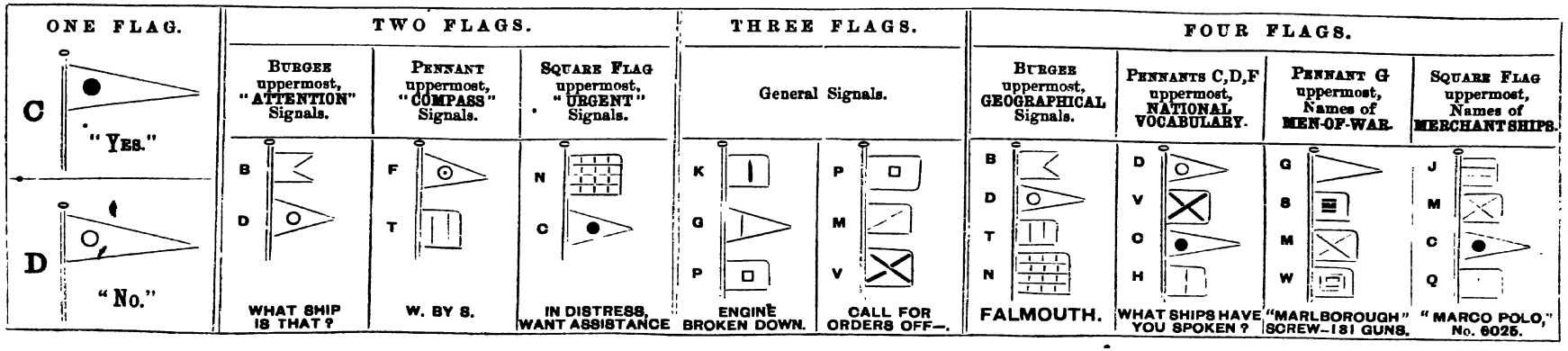


"CODE SIGNAL" AND "ANSWERING PENNANT."

N.B.—When used as the "Code Signal," this Pennant is to be hoisted under the "Ensign;" when used as the "Answering Pennant," where best seen.



The following examples will serve to illustrate how the *form of a Hoist* will usually denote the *nature of the Signal* made :—



54, Gracechurch Street, London, and the principal Booksellers at the various ports

The Official Mercantile Navy List and Maritime Directory published for the use of Merchants, Shipowners, Shipbrokers, and others, may be obtained in like manner; price 12*s*.

APPENDIX B.

REGULATIONS RESPECTING LIGHTS AND FOG SIGNALS AND STEERING AND SAILING RULES ISSUED BY THE BOARD OF TRADE.

Notice.

The Board of Trade have had their attention drawn to the necessity of a more strict examination of applicants for Certificates of Competency in their knowledge of the regulations for preventing collisions at sea.

In order that the rule of the road at sea may be better understood, and that a uniform system of examination may prevail, the Board of Trade have issued the following catechism.

This catechism has received the approval of the Trinity House and Admiralty in England, and of the Council of the Admiralty of France.

The Board of Trade attach very great importance to a thorough knowledge of the steering and sailing rules on the part of every applicant for a Certificate of Competency, and a thorough examination on the part of the Examiners.

All applicants for examination, whether for certificates as masters or mates, are to be examined as to their knowledge of the steering and sailing rules each time they present themselves for examination.

Questions suggested by the following heads of examination are to be asked in addition to, and are not to supersede, any other questions proper and necessary to be asked by the Examiner.

The following questions need not be adhered to literally by the Examiner, and are not all to be asked; but the substance of the leading questions should be asked, and all that are asked should be satisfactorily answered, before an applicant is reported to have passed his examination. The Examiner should make such a selection of the questions as each case appears to him to require.

Thomas Gray,

Board of Trade, *Assistant Secretary.*
Marine Department.

HEADS OF EXAMINATION IN REGULATIONS RESPECTING LIGHTS AND FOG SIGNALS AND IN THE STEERING AND SAILING RULES.

1. What light or lights are required by the regulations to be exhibited by sailing vessels at anchor?

One light only, viz., a white light.

2. What light or lights are required by the regulations to be exhibited by steam-ships at anchor?

The same as for sailing vessels

3. Where is the anchor light to be exhibited?

Where it can best be seen. It must of course be placed where there is the least possible chance of obstruction from spars, ropes, &c., &c.

4. To what height may the anchor light be hoisted?

It may be exhibited at any height where it can best be seen, not exceeding 20 feet above the deck.

5. What is the description of the lantern containing the anchor light required by the regulations?

A globular lantern of not less than eight inches in diameter.

6. In what direction or directions must the anchor light show?

It must show a clear, uniform, and unbroken light, visible all round the horizon.

7. At what distance must it be visible?

At least one mile.

8. What is the number of lights required by the regulations to be carried by sailing ships when under weigh at night?

Two side-lights, and to have in readiness a white light or a flare-up light to show from their stern to any vessel overtaking them.

9. Of what colour are these lights, and how are they to be placed on board the ship?

A green light on the starboard side, and a red light on the port side.

10. What description of light must be shown from the sides of sailing vessels under weigh; and over how many points of the compass, and in what directions, and how far, are they required to show.

Each light must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass;

so fixed as to throw the light from right ahead to two points abaft the beam on the starboard and port sides respectively; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

11. What lights are they to carry when being towed at night?

The same.

12. Are the side-lights required to be fitted with screens; and if so, of what length, and how?

Yes, on the inboard side; at least three feet in length, measuring forward from the light. They are to be so fitted as to prevent the coloured lights from being seen across the bows.

13. What is the number of lights required by the regulations to be carried by steam-ships when under steam at night?

Three lights, and to have in readiness a white light or flare-up light to show from their stern to any vessel overtaking them.

14. Of what colour are these lights, and how are they to be placed on board the ship?

A white light on or in front of the foremast at a height above the hull of not less than 20 feet; and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth. A green light on the starboard side, and a red one on the port side.

15. Over how many points of the compass, in what direction, and how far, is the foremast-head light of a steamer required to show?

Over 20 points, viz., from right ahead to two points abaft the beam on both sides. It must be of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

16. Are the side-lights required to be fitted with screens; and if so, of what length?

The green and red lights are to be fitted with screens on the inboard side, extending at least three feet forward from the light, as in the case of sailing vessels.

17 Over how many points of the compass, in what directions, and how far, are the coloured side lights of steamers required to show?

The side-lights must be so constructed as to show a uniform and unbroken light over an arc of the horizon of 10 points of the compass, on each side of the ship, *i.e.*, from right ahead to two points abaft the beam on the starboard and port sides respectively, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles.

18. What description of lights are steamers required by the regulations to carry when they are not under steam, but under sail only?

Side-lights only, the same as sailing vessels.

19. What exceptional lights are to be carried by small sailing vessels in certain cases?

Whenever, as in the case of small vessels during bad weather, the green and red side lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessel, ready for use; and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

20. What description of lights are pilot vessels required to carry when on their stations on pilotage duty?

A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

21. What description of lights are pilot vessels required to carry when not on their station on pilotage duty?

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

22. What lights are open boats and fishing vessels of less than 20 tons net registered required to carry when under way and not actually engaged in fishing.

Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

23. What lights are fishing vessels and fishing boats of 20 tons net register, or upwards, required to carry when under way and not actually engaged in fishing?

They must carry similar lights to those of other ships when under way.

24. What lights are steam trawlers of 20 tons gross register, or upwards, whilst actually engaged in trawling, and not being stationary, required to carry?

All steam-vessels engaged in trawling must carry either one of the two following arrangements of lights, whichever of the two may be the more convenient:—

(*a*) The usual green and red side-lights, and foremast head light, similar to those carried by other steamships; or

(*b*) They must carry on or in front of the foremast head, and in the same position as the white light which other steamships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side; such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: and (2) a white light in a gobular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform, and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet, nor more than 12 feet.

25. What lights are sailing trawlers whilst actually engaged in trawling, and not being stationary, required to carry.

All sailing vessels, of whatever tonnage, whilst engaged in trawling, must carry either one of the three following arrangements of lights, whichever of the three, (*a*), (*b*), or (*c*), may be the most convenient:—

(*a*) They may carry the green and red side-lights similar to those of other sailing ships; or

(*b*) They may carry on or in front of the foremast head a lanthorn having a green glass on the starbord side and a red glads on the port side, so constructed, fitted, and arranges that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft the beam on the port side; and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light all round the horizon; the lanthorn containing such white light shall be carried lower than the lanthorn showing the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet; or

(*c*) They may carry a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed at to show a clear, uniform and unbroken light all round the horizon, and visible on a dark night, with a clear atmosphere, for a distance of at least 2 miles; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by, another ship or vessel in sufficient time to prevent collision.

What lights are vessels whilst actually engaged in drift net equired to carry?

essels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of the vessel shall be not less than 5 feet and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night, with a clear atmosphere, for a distance of not less than 3 miles.

27. What lights are vessels whilst actually engaged in line fishing required to carry?

A vessel engaged in line fishing is required to carry the same lights as a vessel engaged in drift net fishing.

28. If a vessel, when fishing, becomes stationary in consequence of her gear getting fast to a rock or other obstruction, what signal must she make?

She must show the same light, and if a fog, mist, or falling snow prevail, she must make the same fog signal, as if she were at anchor.

29. What lights are fishing vessels and open boats required to exhibit when at anchor?

Between sunset and sunrise they must exhibit a white light, visible all round the horizon at a distance of at least one mile, the same as any other vessel.

30. What sound signals are fishing vessels required to make whilst engaged in fishing in thick weather?

In fog, mist, or falling snow, a drift net vessel attached to her nets, and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

31. May fishing vessels and open boats use flare-up lights, and if so, at what part, or parts, of the vessel should they be exhibited?

Yes. Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

32. Do these regulations referring specially to fishing vessels and boats apply to foreign vessels, and to all parts of the world?

No, with the exception of the *first paragraph* of Article 10 of the regulations, they apply only to British vessels and boats when in the sea off the coast of Europe lying north of Cape Finisterre.

33. What lights are steam-ships required to carry when towing other ships?

A steam-ship, when towing another ship, shall, in addition to her side lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position as the white light which other steam-ships are required to carry.

34. What light is a ship which is being overtaken by another required to show?

A ship which is being overtaken by another shall show from her stern to such last mentioned ship a white light or a flare-up light.

35. Describe the lights and the day signals that vessels employed in laying or picking up a telegraph cable are required to carry.

A ship, whether a steam-ship or a sailing-ship employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line over one another, not less than six feet apart; the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than her foremast head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

36. Describe the lights and the day signals that vessels which from any cause are not under command are required to carry.

A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over than other, not less than three feet apart, and of such a charater as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles; and shall by day carry in a vertical line, one over the other, not less than three feet apart, in front of but not lower than her foremast head, three black balls or shapes, each two feet in diameter.

37. Are the above-mentioned ships to carry side-lights?

The above ships, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

38. What are the previous mentioned shapes and lights intended to indicate to approaching ships?

These shapes and lights are to be taken by approaching ships as signals that the ship using them is not under command, and cannot therefore get out of the way.

39. Do these rules prevent squadrons and convoys from carrying special lights?

No. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for two or more ships of war, or for ships sailing under convoy.

40. What sound signals are steam-ships and sailing ships required by the regulations to be provided with?

A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by a bellows or other mechanical means, and also with

an efficient bell. A sailing ship shall be provided with a similar fog-horn and bell.

41. When are these signals to be used?

In fog, mist, or falling snow, whether by day or night.

42. What sound signal is to be made by steam-ships and sailing ships when not under way?

A steam-ship and a sailing ship when not under way shall, at intervals of not more than two minutes, ring the bell.

43. What sound signal is required to be made by a steam-ship when under way?

A steam-ship under way shall make with her steam whistle, or other steam sound signal, at intervals of not more than two minutes a prolonged blast.

44. What sound signals are required to be made by sailing ships when under way?

A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

45. Do the regulations require ships to take any other precaution during thick weather?

Yes. Art. 13 says every ship, whether a sailing ship or steam-ship, shall, in a fog, mist, or falling snow, go at a moderate speed.

46. Is it optional for a steam-ship to make any other signals with her steam whistle?

Yes; but only to vessels in sight, *i.e.*, not to vessels which are so obscured by fog, mist, or falling snow that they cannot be seen, though their whistles may be heard.

Art. 19 provides that in taking any course authorised or required by the regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz:—

One short blast to mean "I am directing my course to starboard."

Two short blasts to mean "I am directing my course to port:"

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

47. What precaution is to be taken by steamers approaching another vessel?

If there is risk of collision, the steamer is to slacken speed, or, if necessary, stop and reverse.

48. If you see two white lights in a vertical line one over the other, what do they denote as regards the vessel carrying them?

They denote the presence of a steamer towing with her side lights not within sight on account of distance, fog, &c.; or a vessel end on to me engaged in drift net fishing, or in line fishing or it may be a steam trawler end on, or within two points of being end on, to me.

49. If you see a green, or a red, light with a white light below, what do they denote?

They denote the presence of either a sailing, or a steam, vessel engaged in trawling.

50. If you see both the green and red lights with a white light below them, what do they denote?

They denote the presence of a sailing trawler coming end on to me.

51. If you see a white light alone, what does it denote as regards the ship carrying it?

It denotes the presence of a vessel or boat at anchor; or a pilot vessel on her station; or the mast-head light of a vessel, under steam, with her side-lights not within sight on account of distance fog, &c.; or a fishing vessel stationary through her gear getting fast to some obstruction, or a sailing trawler engaged in trawling (1) under one arrangement of lights heading so that her side-lights are obscured, (2) under another arrangement from the red pyrotechnic light not having been exhibited, or it may be a light shown from the stern of a vessel which is being overtaken.

52. If you see a green or a red light without a white light, or both a green and a red light without a white light, is the vessel carrying the light or lights seen, a vessel under steam or a vessel under sail?

A vessel under sail?

53. How do you know?

Because there is no white mast-head light

54 If you see a white light over a coloured light, is the vessel a vessel under sail or a vessel under steam?

A vessel under steam. The mast-head light denotes that the vessel is under steam.

[The Examiner will then take one model of a vessel, which he will place on the table, and call it A. He will then take the mast or stand with a white and red ball on it and place it at the other end of the table and call it B.

The Examiner should be careful that the model of one vessel only is used when the questions numbered 55 to 60 are asked.]

55. A is a steamer going north, seeing a white light and red light right ahead at B. Are A and the vessel B showing the two lights meeting end on or nearly end on, or is B passing A, or is B crossing the path of A, and in what direction, and how do you know?

Passing to port, because if I see a red light ahead, I know that the head of the vessel carrying that red light must be pointing away

in some direction to my own port or left hand. The ship showing the red light has her port or left side more or less open to A.

66. If A is going north, within what points of the compass must the vessel B showing the white and red lights be steering?

B must be going from a little W. of S. to W. N.-W.

67. How do you know this?

Because the screens being properly fitted, I could not see the red light of B at all with the vessel's head in any other direction.

68. A is a steamer going north, and seeing a white and green light ahead. Are A and B meeting, or is B passing A, or is B crossing the course of A, and in what direction; and how do you know?

B is passing to starboard of A, because if I see a green light ahead, I know that the head of the vessel carrying that green light must be pointing away in some direction to my starboard or right hand. The ship showing the green light has her right or starboard side more or less open to me.

69. As A is going north, within what points of the compass must the vessel showing the white and green lights be steering?

B must be going from a little E. of South to E.N.E.

60. How do you know?

Because the screens being properly fitted, I cannot see the green light at all with the vessel's head in any other direction.

61. If a steamer A sees the *three* lights of another steamer B ahead or nearly ahead, are the two steamers meeting, passing, or crossing?

Meeting end on, or nearly end on.

62. Do the regulations expressly require the course of a ship to be altered to starboard in any case, and if so, when?

Yes; in the case of two steamers meeting end on, or nearly end on.

63. Do they expressly require the course of a ship to be altered to starboard in any other case; and if so, in what other?

No. It is not in any other case expressly required by the regulations.

[The Examiner should see that the candidate puts the models in the positions indicated by the question 64, and following.]

64. If a steamer A sees another steamer's red light B on her own starboard side, are the steamers meeting, passing, or crossing; and how do you know?

Crossing, because the red light of one is opposed to the green light of the other; and whenever a green light is opposed to a red light or a red light to a green light, the ships carrying the lights are, crossing ships.

65. Is A to stand on; and if not, why not?

A has the other vessel B on her own starboard side. A knows she is crossing the course of B, because she sees the red light of B on her (A's) own starboard side. A also knows she must get out of the way of B, because Article 16 expressly requires that the steamer that has the other on her own starboard side shall keep out of the way of the other.

66. Is A to starboard or to port in such a case?

A must do what is right so as to get herself out of the way of B: it is generally preferable to pass under a ship's stern rather than attempt to cross her bows, but it depends entirely on the position and relative speed of the two ships, and therefore the regulations wisely leave the giving way ship to get out of the way in any manner that may be most desirable, so always that she does get out of the way.

67. If A gets into collision by porting, will it be because she is acting on any rule?

No; the rule does not require her either to port or to star board If she ports, and gets into collision by porting, it is not the fault of any rule.

68. If a steamer A sees the green light of another steamer B on her own (A's own) port bow, are the two steamers meeting, passing, or crossing; and how do you know?

Crossing, because the green light of one ship is shown to the red light of the other.

69. What is A to do, and why?

By the rule contained in Article 22 of the Regulations, A is required to keep her course, subject only to the qualification that due regard must be had to all dangers of navigation; and that due regard must also be had to any special circumstances which may exist in any particular case rendering a departure from that rule necessary in order to avoid immediate danger. The crossing ship B on A's port side must get out of the way of A, because A is on B's starboard side.

70 A, a steamer, sees the green light of another steamer, B, a point on her A's port bow. Is there any regulation requiring A to port in such a case; and if so, where is it to be found?

There is not any.

71. Are steam-ships to get out of the way of sailing ships?

If a steamer and a sailing ship are proceeding in such direction as to involve risk of collision, the steamer is to get out of the way of the sailing ship, unless the sailing ship is overtaking the steamer.

72. What is to be done by A, whether a steamer or a sailing ship, if overtaking B?

A is to keep out of the way of B.

73. When by the rules one of two ships is required to keep out of the way of the other, what is the other to do?

To keep her course. This is absolutely necessary to enable the commander of the ship required by the regulations to keep out of the way, to act with decision and promptitude, which he cannot possibly, unless he knows what the other vessel is going to do.

74. Is there any qualification or exception to this?

Yes. Due regard must be had to all dangers of navigation, and to any special circumstances which may exist in any particular case, and require a departure from the regulations to avoid immediate danger.

75 Is there any general direction in the steering and sailing rules; and if so, what is it?

Yes, it is this: that nothing in the rules shall exonerate any ship, or the owner, master, or crew thereof, from the consequences of any neglect to carry lights, or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

76. Can you repeat article (———) of the regulations, I refer to the article containing the rule for (———)?

[The Examiner should repeat this question, naming a different article each time.]

77. What does the Act of Parliament provide as to the obligation of owners and masters in obeying the regulations respecting lights, fog signals, and steering and sailing?

Section 27 of "the Merchant Shipping Act Amendment Act, 1862," provides that owners and masters shall be bound to obey the regulations, and it also provides that in case of wilful default by the master or owner he shall be deemed to be guilty of a misdemeanor for each infringement.

78. What do breaches of the regulations imply?

If an accident happens through non-observance of the regulations, it implies wilful default on the part of the person in charge of the deck at the time, unless it is shown to the satisfaction of the court hearing the case that the special circumstances of the case rendered a departure from the rules necessary.

79. If collision ensues from a breach of the regulations, who is to be deemed in fault for the collision?

The person, by whom the regulations are infringed, unless the court hearing the case decides to the contrary.

80. Is there any special rule for steam-ships navigating narrow channels?

In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which is on the starboard side of such ship.

81. Do the regulations apply to sea-going ships in harbours and in rivers?

Yes; unless there is any rule to the contrary made by a competent authority.

82. Do they apply to British ships only?

No, to foreign ships as well, with the exception of paragraphs (*a*), (*b*), (*c*), (*d*), (*e*), (*f*) and (*g*), of Article 10, which apply only to British fishing vessels.

83. Do you know where the present regulations are to be found?

Yes, in the Orders in Council of the 11th August 1884, the 30th December 1884, and 24th June 1885. Copies are given away on application to the Board of Trade.

84. Is one ship bound to assist another in case of collision?

Yes.

85. What is the penalty for default?

If the master or person in charge of the ship fails to render assistance without reasonable excuse, the collision is, in absence of proof to the contrary, to be deemed to be caused by his wrongful act, neglect, or default.

86. Is there any other penalty attached to not rendering assistance?

Yes. If it is afterwards proved that he did not render assistance, his certificate may be cancelled or suspended by the court investigating the case.

87. Is it not expected that you should understand the regulations before you take charge of the deck of a ship?

It is.

88. Why?

If I do not understand them and am guilty of default, the consequences will be very serious to me.

89. What would be a serious offence?

To cause a collision by porting the helm or doing anything not required by the regulations and without due consideration.

REGULATIONS FOR PREVENTING COLLISIONS AT SEA, ORDER IN COUNCIL OF 11TH AUGUST 1884.

PRELIMINARY.

Art. 1. In the following rules every steam-ship which is under sail and not under steam is to be considered a sailing ship; and every steam-ship which is under steam, whether under sail or not, is to be considered a ship under steam.

RULES CONCERNING LIGHTS.

Art. 2. The lights mentioned in the following Articles, numbered 3, 4, 5, 6, 7, 8, 9, 10 and 11, and no others, shall be carried in all weathers, from sunset to sunrise.

Art. 3. A sea-going steam-ship when under way shall carry—

(*a*) On or in front of the foremast, at a height above the hull of not less than 20 feet, and if the breadth of the ship exceeds 20 feet, then at a height above the hull not less than such breadth, a bright white light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 20 points of the compass, so fixed as to throw the light 10 points on each side of the ship, viz. from right ahead to two points abaft the beam on either side; and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least five miles.

(*b*) On the starboard side, a green light so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the starboard side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*c*) On the part side, a red light, so constructed as to show an uniform and unbroken light over an arc of the horizon of 10 points of the compass, so fixed as to throw the light from right ahead to two points abaft the beam on the port side, and of such a character as to be visible on a dark night, with a clear atmosphere, at a distance of at least two miles.

(*d*) The said green and red side-lights shall be fitted with inboard screens projecting at least three feet forward from the light; so as to prevent these lights from being seen across the bow.

Art. 4. A steam-ship, when towing another ship, shall in addition to her side-lights, carry two bright white lights in a vertical line one over the other, not less than three feet apart, so as to distinguish her from other steam-ships. Each of these lights shall be of the same construction and character, and shall be carried in the same position, as the white light which other steam-ships are required to carry.

Art. 5. (*a*) A ship, whether a steam-ship or a sailing ship, which from any accident is not under command, shall at night carry, in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three red lights in globular lanterns, each not less than 10 inches in diameter, in a vertical line one over the other, not less than three feet apart, and of such a character as to be visible on a dark night with a clear atmosphere at a distance of at least two miles; and shall by day carry in a vertical line one over the other, not less than three feet apart, in front of, but not lower than, her foremast head, three black balls or shapes, each two feet in diameter.

(*b*) A ship, whether a steam-ship or a sailing ship, employed in laying or in picking up a telegraph cable, shall at night carry in the same position as the white light which steam-ships are required to carry, and, if a steam-ship, in place of that light, three lights in globular laterns, each not less than 10 inches in diameter, in a vertical line one over another, not less than six feet apart; the highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character that the red lights shall be visible at the same distance as the white light. By day she shall carry in a vertical line one over the other, not less than six feet apart, in front of, but not lower than, her foremast head, three shapes not less than two feet in diameter, of which the top and bottom shall be globular in shape and red in colour, and the middle one diamond in shape and white.

(*c*) The ships referred to in this Article, when not making any way through the water, shall not carry the side-lights, but when making way shall carry them.

(*d*) The lights and shapes required to be shown by this Article are to be taken by other ships as signals that the ship showing them is not under command, and cannot therefore get out of the way. The signals to be made by ships in distress and requiring assistance are contained in Article 27.

Art. 6. A sailing ship under way, or being towed, shall carry the same lights as are provided by Article 3 for a steam-ship under way, with the exception of the white light, which she shall never carry.

Art. 7. Whenever, as in the case of small vessels during bad weather, the green and red side-lights cannot be fixed, these lights shall be kept on deck, on their respective sides of the vessels, ready for use: and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent a collision, in such a manner as to make them most visible, and so that the green light shall not be seen on the port side, nor the red light on the starboard side.

To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the colour of the light they respectively contain, and shall be provided with proper screens.

Art. 8. A ship, whether a steam-ship or a sailing ship, when at anchor, shall carry, where it can best be seen, but at a height not exceeding 20 feet above the hull, a white light, in a globular lantern of not less than eight inches in diameter, and so constructed as to show a clear, uniform and unbroken light visible all round the horizon at a distance of at least one mile.

Art. 9. A pilot vessel, when engaged on her station on pilotage duty, shall not carry the lights required for other vessels, but shall

respect to additional station and signal lights for two or more ships of war or for ships sailing under convoy.

Art. 27. When a ship is in distress, and requires assistance from other ships or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, that is to say—

In the day-time—

1. A gun fired at intervals of about a minute;
2. The International Code signals of distress indicated by N. C.
3. The distant signal, consisting of square flag, having either above or below it a ball or anything resembling a ball.

At night—

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals.

ORDERS IN COUNCIL OF 30TH DECEMBER 1884 AND 24TH JUNE 1885.

ALTERNATIVE LIGHTS FOR TRAWLERS WHEN ENGAGED IN TRAWLING, HAVING THEIR TRAWLS IN THE WATER AND NOT BEING STATIONARY.

1884.—PART I.—STEAM-VESSELS OF 20 TONS GROSS REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head and in the same position as the white light which other steam-ships are required to carry, a lanthorn showing a white light ahead, a green light on the starboard side, and a red light on the port side, such lanthorn shall be so constructed, fitted, and arranged as to show an uniform and unbroken white light over an arc of the horizon of four points of the compass, an uniform and unbroken green light over an arc of the horizon of 10 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 10 points of the compass, and it shall be so fixed as to show the white light from right ahead to two points on the bow on each side of the ship, the green light from two points on the starboard bow to four points abaft the beam on the starboard side, and the red light from two points on the port bow to four points abaft the beam on the port side: (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than the lanthorn showing the green, white, and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet nor more than 12 feet.

1884.—PART II.—SAILING-VESSELS OF 20 TONS NET REGISTER TONNAGE OR UPWARDS.

(1) On or in front of the foremast head a lanthorn having a green glass on the starboard side and a red glass on the port side, so constructed, fitted, and arranged that the red and green do not converge, and so as to show an uniform and unbroken green light over an arc of the horizon of 12 points of the compass, and an uniform and unbroken red light over an arc of the horizon of 12 points of the compass, and it shall be so fixed as to show the green light from right ahead to four points abaft the beam on the starboard side, and the red light from right ahead to four points abaft the beam on the port side; and (2) a white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, the lanthorn containing such white light shall be carried lower than lanthorn the green and red lights as aforesaid, so, however, that the vertical distance between them shall not be less than 6 feet and not more than 12 feet.

1885. SAILING TRAWLERS OF ANY TONNAGE.

As regards sailing vessels engaged in trawling, such vessels having their trawls in the water and not being stationary in consequence of their gear getting fast to a rock or other obstruction, if they do not carry and show the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in Part 2 of the Schedule to the said recited Order in Council of the 30th of December 1884, shall carry and show in lieu of the lights required by Article 6 of the Regulations aforesaid, or the other lights of the description set forth in paragraph 2 of the Schedule to the said recited Order, other lights as follows, that is to say:

A white light in a globular lanthorn of not less than eight inches in diameter, and so constructed as to show a clear uniform and unbroken light all round the horizon, and visible on a dark night

with a clear atmosphere for a distance of at least 2 miles ; and also a sufficient supply of red pyrotechnic lights which shall each burn for at least 30 seconds, and shall, when so burning, be visible for the same distance under the same conditions as the white light. The white light shall be shown from sunset to sunrise, and one of the red pyrotechnic lights shall be shown on approaching, or on being approached by another ship or vessel in sufficient time to prevent collision.

AIDS TO MEMORY IN FOUR VERSES, BY THOMAS GRAY.

1. *Two Steam-ships meeting.*

When both side lights you see ahead—
Port your helm and show your RED.

2. *Two Steam-ships passing.*

GREEN to GREEN—or, RED to RED—
Perfect safety—Go ahead!

3. *Two Steam-ships crossing*

Note.—This is the position of greatest danger : there is nothing for it but good look-out, caution, and judgment.

If to your starboard RED appear,
It is your duty to keep clear;
To act as judgment says is proper:—
To Port—or Starboard—Back,- or, Stop her!

But when upon your Port is seen
A Steamer's Starboard Light of GREEN,
There's not so much for you to do,
For GREEN to Port keeps clear of you.

4. *All Ships must keep a good look-out, and Steam-ships must stop and go astern, if necessary.*

Both in safety and in doubt
Always keep a good look-out;
In danger, with no room to turn,
Ease her, stop her, go astern.

14*th October* 1867.

APPENDIX C.

DISTRESS AND PILOT SIGNALS.

M. S. Act 1873. The following sections, together with the schedules referred to therein, of the "Merchant Shipping Acts, Amendment Act, 1873," relate to Signals of Distress and Signals for Pilots. (*See also* "*Regulations for preventing Collisions at Sea. Article* 27.)

Signals of distress. 18. The signals specified in the first schedule to this Act shall be deemed to be signals of distress.

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals, except in the case of a vessel being in distress, shall be liable to pay compensation for any labour undertaken, risk incurred, or loss sustained in consequence of such signal having been supposed to be a signal of distress, and such compensation may, without prejudice to any other remedy, be recovered in the same manner in which salvage is recoverable.

Signals for pilots. 19. If a vessel requires the services of a pilot, the signals to be used and displayed shall be those specified in the second schedule to this A

Any master of a vessel who uses or displays, or causes or permits any person under his authority to use or display, any of the said signals for any other purpose than that of summoning a pilot, or uses or causes or permits any person under his authority to use any other signal for a pilot, shall incur a penalty not exceeding twenty pounds.

Power to alter rules as to signals. 20. Her Majesty may from time to time by Order in Council repeal or alter the rules as to signals contained in the schedules to this Act or make new rules in addition thereto, or in substitution therefor, and any alterations in or additions to such rules made in manner aforesaid shall be of the same force as the rules in the said schedules.

SCHEDULES.

SCHEDULE I.—SIGNALS OF DISTRESS.

In the day time.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress in the daytime:—

1. A gun fired at intervals of about a minute;
2. The International Code signal of distress indicated by N C;
3. The distant signal, consisting of a square flag having either above or below it a ball, or anything resembling a ball.

carry a white light at the masthead, visible all round the horizon, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed fifteen minutes.

A pilot vessel, when not engaged on her station on pilotage duty, shall carry lights similar to those of other ships.

Art 10. Open boats and fishing vessels of less than 20 tons net registered tonnage, when under way and when not having their nets, trawls, dredges, or lines in the water, shall not be obliged to carry the coloured side-lights; but every such boat and vessel shall in lieu thereof have ready at hand a lantern with a green glass on the one side and a red glass on the other side, and on approaching to, or being approached by another vessel, such lantern shall be exhibited in sufficient time to prevent collision, so that the green light shall not be seen on the port side, nor the red light on the starboard side.

The following portion of this article applies only to fishing vessels and boats when in the sea off the cost of Europe lying north of Cape Finisterre:—

(*a*) All fishing vessels and fishing boats of 20 tons not registered tonnage, or upwards, when under way and when not required by the following regulations in this article to carry and show the lights therein named, shall carry and show the same lights as other vessels under way.

(*b*) All vessels when engaged in fishing with drift nets shall exhibit two white lights from any part of the vessel where they can be best seen. Such lights shall be placed so that the vertical distance between them shall be not less than 6 feet and not more than 10 feet; and so that the horizontal distance between them measured in a line with the keel of th vessel shall be not less than five feet, and not more than 10 feet. The lower of these two lights shall be the more forward, and both of them shall be of such a character, and contained in lanterns of such construction as to show all round the horizon, on a dark night with a clear atmosphere, for a distance of not less than three miles.

(*c*) A vessel employed in line fishing with her lines out shall carry the same lights as a vessel when engaged in fishing with drift nets.

(*d*) If a vessel when fishing becomes stationary in consequence of her gear getting fast to a rock or other obstruction, she shall show the light and make the fog signal for a vessel at anchor.

(*e*) Fishing vessels and open boats may at any time use a flare-up in addition to the lights which they are by this article required to carry and show. All flare-up lights exhibited by a vessel when trawling, dredging, or fishing, with any kind of drag net shall be shown at the after part of the vessel, excepting that, if the vessel is hanging by the stern to her trawl, dredge, or drag net, they shall be exhibited from the bow.

(*f*) Every fishing vessel and every open boat when at anchor between sunset and sunrise shall exhibit a white light visible all round the horizon at a distance of at least one mile.

(*g*) In fog, mist, or falling snow, a drift net vessel attached to her nets and a vessel when trawling, dredging, or fishing with any kind of drag net, and a vessel employed in line fishing with her lines out, shall at intervals of not more than two minutes make a blast with her fog-horn and ring her bell alternately.

Art. 11. A ship which is being overtaken by another shall show from her stern to such last-mentioned ship a white light or a flare-up light.

Sound Signals for Fog, &c.

Art. 12. A steam-ship shall be provided with a steam whistle or other efficient steam sound signal, so placed that the sound may not be intercepted by any obstructions, and with an efficient fog-horn to be sounded by a bellows or other mechanical means, and also with an efficient bell.* A sailing ship shall be provided with a similar fog-horn and bell.

In fog, mist, or falling snow, whether by day or night, the signals described in this Article shall be used as follows; that is to say—

(*a*) A steam-ship under way shall make with her steam whistle or other steam sound signal, at intervals of not more than two minutes, a prolonged blast.

(*b*) A sailing ship under way shall make with her fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

(*c*) A steam-ship and a sailing ship, when not under way, shall, at intervals of not more than two minutes, ring the bell.

Speed of Ships to be moderate in Fog, &c.

Art. 13. Every ship, whether a sailing ship or steam-ship, shall in a fog, mist, or falling snow, go at a moderate speed.

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* In all cases where the regulations require a bell to be used, a drum will be substituted on board Turkish vessels.

Steering and Sailing Rules.

Art. 14. When two sailing ships are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other, as follows, viz.—

(*a*) A ship which is running free shall keep out of the way of a ship which is close-hauled.

(*b*) A ship which is close-hauled on the port tack shall keep out of the way of a ship which is close-hauled on the starboard tack.

(*c*) When both are running free with the wind on different sides, the ship which has the wind on the port side shall keep out of the way of the other.

(*d*) When both are running free with the wind on the same side, the ship which is to windward shall keep out of the way of the ship which is to leeward.

(*e*) A ship which has the wind aft shall keep out of the way of the other ship.

Art. 15. If two ships under steam are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

This article only applies to cases where ships are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two ships which must, if both keep on their respective courses, pass clear of each other.

The only cases to which it does apply are, when each of the two ships is end on, or nearly end on, to the other; in other words, in cases in which, by day, each ship sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each ship is in such a position as to see both the side-lights of the other.

It does not apply, by day, to cases in which a ship sees another ahead crossing her own course; or by night, to cases where the red light of one ship is opposed to the red light of the other, or where the green light of one ship is opposed to the green light of the other, or where a red light without a green light, or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead.

Art. 16. If two ships under steam are crossing, so as to involve risk of collision, the ship which has the other on her own starboard side shall keep out of the way of the other.

Art. 17. If two ships, one of which is a sailing ship, and the other a steam-ship, are proceeding in such directions as to involve risk of collision, the steam-ship shall keep out of the way of the sailing ship.

Art. 18. Every steam-ship, when approaching another ship, so as to involve risk of collision, shall slacken her speed or stop and reverse, if necessary.

Art. 19. In taking any course authorised or required by these Regulations, a steam-ship under way may indicate that course to any other ship which she has in sight by the following signals on her steam whistle, viz.—

One short blast to mean "I am directing my course to starboard."

Two short blasts to mean "I am directing my course to port."

Three short blasts to mean "I am going full speed astern."

The use of these signals is optional; but if they are used, the course of the ship must be in accordance with the signal made.

Art. 20. Notwithstanding anything contained in any preceding Article, every ship, whether a sailing ship or a steam-ship, overtaking any other shall keep out of the way of the overtaken ship.

Art 21. In narrow channels every steam-ship shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such ship.

Art. 22. Where by the above rules one of two ships is to keep out of the way, the other shall keep her course.

Art. 23. In obeying and construing these rules due regard shall be had to all dangers of navigation; and to any special circumstances which may render a departure from the above rules necessary in order to avoid immediate danger.

No Ship, under any circumstances, to neglect proper Precautions.

Art 24. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

Reservation of Rules for Harbours and Inland Navigation.

Art. 25. Nothing in these rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland navigation.

Special Lights for Squadrons and Convoys.

Art. 26. Nothing in these rules shall interfere with the operation of any special rules made by the Government of any nation with

At night.—The following signals, numbered 1, 2 and 3, when used or displayed together or separately, shall be deemed to be signals of distress at night:

1. A gun fired at intervals of about a minute;
2. Flames on the ship (as from a burning tar barrel, oil barrel, &c.);
3. Rockets or shells, of any coloul or description, fired one at a time, at short intervals.

SCHEDULE II.—SIGNALS TO BE MADE BY SHIPS WANTING A PILOT.

In the day time.—The following signals, numbered 1 and 2, when sed or displayed together or separately, shall be deemed to be signals for a pilot in the day time, viz:—

1. To be hoisted at the fore, the Jack or other national colour usually worn by merchant ships, having round it a white border, one-fifth of the breadth of the flag; or
2. The International Code pilotage signal indicated by P T.

At night.—The following signals, numbered 1 and 2, when used or displayed together or separately, shall be deemed to be signals for a pilot at night, viz.—

1. The pyrotechnic light, commonly known as a blue light, every fifteen minutes; or
2. A bright white light, flashed or shown at short or frequent intervals, just above the bulwarks, for about a minute at a time.

APPENDIX D.

EXAMINATION IN CHART.

FOR ALL GRADES WHERE THE CHART IS USED (INCLUDING "HOME TRADE" CANDIDATES).

[The candidate will be required to work out the following questions on either a "true" or "magnetic" chart, * whichever may be handed to him by the Examiner; and also determine whether the chart is a "true" or "magnetic" one, and whether it is for the northern or southern, and eastern or western hemispheres.

1. Using deviation [card] [curve] † No. find the course to steer by compass from to ; also the distance.

Answer.—Compass course .
Distance .
Variation .
Deviation .

With the ship's head on the above-named compass course a [point] [light-house] bore by compass and bore by the same compass, find the ship's position.

Answer.—Latitude .
Longitude .

3. With the ship's head as above, a [point] [light-house] bore by compass , and after continuing on the same course miles, it bore , find the position of ship and her distance from at the time of taking the second bearing.

Answer.—Latitude .
Longitude .
Distance .

All the foregoing questions must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature .
Date .
Chart used .

ADDITIONAL FOR MASTERS (INCLUDING "HOME TRADE" CANDIDATES).

4. Find the course to steer by compass from to (*see* Question 1) to counteract the effect of a

* The terms "true" and "magnetic" are used for the sake of brevity, and convenience, for indicating charts that have compasses delineated upon them showing the "true" or "magnetic" points of the compass respectively.

† A candidate for a Master's Certificate is expected to use either a card of deviations, or a curve of deviations on a Napier's diagram, whichever the Examiner may think proper to put before him.

current which set at the rate of miles per hour, the ship making by log miles per hour; also the distance the ship would then make good in hours towards

Answer.—Compass course

Distance

5. On being off took a cast of the lead; required the correction to be applied to the depth obtained by the lead line before comparing it with the depth marked on the chart.

6. What do you understand the small numbers to indicate that you see placed about the chart, and at what time of tide?

7. What do the Roman numerals indicate that are occasionally seen near the coasts and in harbours?

8. How would you find, approximately, the time of high water at any place, the Admiralty tables not being at hand nor any other special tables available?

All the foregoing questions, and those on Form Exn. 9 C., must be answered, but this does not preclude the Examiner from putting any other questions of a practical character or which the local circumstances of the port may require.

Signature

Date

APPENDIX E.

DEVIATION OF THE COMPASS.

(For Masters of Home Trade Ships.)

[The Applicant must answer in writing, on paper gi the Examiner, all the following questions, nu answers to correspond with the numbers of the q

1. When taking a Meridian Altitude, how do you the sun is on the Meridian; or, in other words, noon?
2. How does the sun bear when on the meredian of in these latitudes (Home Trade Limits)?
3. What do you mean by deviation of the compass, a caused?
4. Having determined the deviation, how do you know, when it is easterly, and when westerly?
5. Supposing the sun when on the meridian bore by your compass——————what would be the deviation of that Compass for the direction of the ship's head at the time, the variation given on the Chart being——————?
6. How could you find the deviation of your Compass when in port, or when sailing along a cost?
7. Name some suitable objects by which you could readily obtain the deviation of your Compass, when sailing along the coasts of the Channel you have been accustomed to use?
8. The bearing of two objects when in a line with each other was found on the Chart to be——————magnetic; but when brought in a line on board they bore——————by your Compass; required the deviation of your Compass for the direction of the ship's head at the time?
9. What means are there for checking the deviation of your Compass by night?
10. Supposing the North Star (*Polaris*) bore——————° by your Compass, what would be the deviation (approximately) of that Compass for the direction the ship's head at the time, supposing the variation given on the Chart to be——————?
11. Do you expect the deviation to change? if so, state under what circumstances?
12. What is meant by variation of the Compass, and what is the cause of it?

APPENDIX F.

INSTRUCTIONS TO EXAMINERS.

Examination in Colours.

Herewith are—

(*a*) A lanthorn having in it a lamp in which kerosine is to be burnt.

(*b*) A slide having ground glass in it.

(*c*) Nine slides, each having a coloured glass in it. The colours are as follow :—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1.
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

(*d*) Cards, five of each as follow :—

1. White
2. Black.
3. Red.
4. Pink.*
5. Green.
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight the examiner should do it in three ways—

1. The cards should be mixed up. The examiner should then hold up each card separately, and ask the candidate to name the colour, and if the candidate does so without hesitation, he is to be regarded as having passed the day-light test.
2. If the candidate hesitates in any of his answers so as to raise a doubt in the mind of the examiner as to his ability to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

Examination by Artificial light.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn; and, at least, 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour, and if so, what colour ?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star* is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c. ; or to name card No. 7 as red, green, or yellow ; or glass No. 2 as green blue, or yellow ; or glass No. 5 as red, pink, salmon, &c. ; or glass No. 7 as bright red or bright green ; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B.

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black, by daylight; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown), he may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

Government of Bengal.

By the Honourable the Lieutenant-Governor of B

Local Certificate of Competency

AS

MASTER.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of Master in the* _____ *service, I do hereby, in pursuance of Act No. I of* 1859 *of the Legislative Council of India, grant you this CERTIFICATE OF COMPETENCY.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

this _____ *day of* _____ 18___. *Under-Secy. to the Govt. of Bengal.*

No. of Certificate

Bearer _____

Date and Place of Birth _____

No. of Register Ticket _____

Signature _____

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at Calcutta on the _____ *day of* _____ 18___.

Registered,

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Local Certificate of Competency

AS

MATE.

To _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found duly qualified to fulfil the duties of* _____ *Mate in the* _____ *service, I do hereby, in pursuance of Act No. I of* 1859 *of the Legislative Council of India, grant you this CERTIFICATE OF COMPETENCY.*

By order of the Government of Bengal,

Given under my Hand and Seal,

this _____ day of _____ 18__.

Under-Secy. to the Govt. of Bengal.

No. of Certificate

Bearer _____

Date and Place of Birth _____

No. of Register Ticket _____

Signature _____

Any MASTER or MATE who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Port Officer, Calcutta.

Issued at Calcutta on the _____ *day of* _____ 18___.

Registered,

Port Officer of Calcutta.

NOTICE.

Candidates applying to be examined for Certificates of Competency are hereby informed that no remuneration or gratuity whatever, either directly or indirectly, can be received by any Officer, Messenger, or Servant of the Government, except the lawful fees stated in the Regulations, which are to be paid to the Port Officer when the Candidate makes his application.

Any Officer, Messenger, or Servant of the Government accepting any present or gratuity is liable to summary dismissal, and any Candidate so offering money will be subject to the penalty mentioned in para. 16 of the Regulations relating to the examination of Masters, or para. 35 of those relating to the examination of Engineers and Engine-drivers as the case may be.

Every case in which an applicant has paid, or pays hereafter, any fee or gratuity to any Officer, Messenger, or Servant, on any pretence whatever, other than the prescribed fees for examination, should be reported to the Local Government.

W. B. BESTIC,

Under-Secy. to the Govt. of Bengal.

P. W. (Marine) Dept.

REGULATIONS

RELATING TO THE

EXAMINATION OF MASTERS OF INLAND STEAM-VESSELS.

Preliminary.

UNDER the provisions of the Inland Steam-Vessels Act, 1884, no inland steam-vessel having engines of eighty nominal horse-power or upwards is allowed to proceed on any voyage unless her master possesses a first class master's certificate granted under the Act, or a master's certificate granted under Act I of 1859 (*for the amendment of the law relating to merchant seamen*), or the Merchant Shipping Acts, 1854 to 1883, or a certificate to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869; and no such ship having engines of under eighty nominal horse-power is allowed to proceed on any voyage unless her master possesses a second class master's certificate granted under the Act, or a certificate of the higher grade of the nature referred to above:

Provided that a steam-vessel having engines of under eighty nominal horse-power shall be deemed to have complied with the law if she has as her master and engineer a person possessing both a second class master's certificate and an engine-driver's certificate granted under the Act.

Any person who having been engaged to serve as master of an inland steam-vessel proceeds on any voyage in that steam-vessel as master without being at the time entitled to and possessed of the certificate required under the Act, and any person who employs any person as such master without ascertaining that he is at the time entitled to, and possessed of, the certificate required under the Act, is liable to be punished with fine which may extend to *five hundred rupees*.

NOTIFICATION.

No. 27 Marine, dated Calcutta, the 31st January 1890.

UNDER the powers conferred upon him by section 29 of the Inland Steam-Vessels Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to masters of inland steam-vessels.

W. B BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates granted to persons who pass examinations.

1. *Certificates of Competency* will be granted to those persons who pass the requisite examinations, and otherwise comply with the requisite conditions. For this purpose arrangements have been made for holding examinations periodically at the port of Calcutta.

Examinations continued till all the candidates are examined.

2. The examinations will be held by the Port Officer and one or more other examiners to be appointed by the Government from time to time They will commence early in the forenoon, and will be continued from day to day until all the Candidates whose names appear upon the Port Officer's list on the day of examination are examined.

3. Candidates for examination must make their application upon the appropriate form (Exn. 2*b*), which must be filled up at the Port Office. The Exn 2*b* properly filled in, together with the candidates' testimonials and discharges, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials of character, conduct, and ability required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct on board ship for at least the twelve months of service immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. As such testimonials and discharges may have to be verified before the candidate can be examined, it is desirable that they should be handed in, together with the Forms Exn 2*b*, as early as possible.

Testimonials of Foreigners.

5. The testimonials of servitude of Foreigners and of British seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificates as to Age.

6. Should any doubt exist as to the age of a candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

7. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel. In the case of natives of India, who may not be able to speak English, their certificate shall be endorsed to the effect that they are valid only for vessels manned and officered entirely by Asiatics.

Colour Tests.

8. The Government have made the following arrangements for the examination of persons as to their ability to distinguish colours:—*

9. Examinations in Colour are open to any person serving or about to serve in the Mercantile Marine.

10. Any person, including the holders of Certificates of Competency, or persons about to apply for Certificates of Competency, if desirous of being examined *in Colours only*, must make application to the Port Officer on Form Exn. 2*a*, and pay a fee of one rupee.

11. He must on the appointed day attend for examination at the Examiner's Office; and if he passes he will receive a certificate to that effect.

12. If he fails it will be open to him to be examined again in Colours as often as he pleases on payment of the fee of one rupee at each fresh attempt.

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* *See* Apendix A.

13. The application of a *Candidate who is presenting himself for Examination for a Master's Certificate* must be made on Form Exn. 2*b*. Such examination will commence with the Colour test; and if the Candidate does not, at the time of making application, hold a Certificate of Competency of any grade, and should fail to distinguish correctly any one of the colours used in the test, he will not be allowed to proceed with the examination

14. The fee he has paid for Examination for a Certificate of Competency will include the fee for the Colour test, and, with the exception of one rupee, will in such event be returned to him.

15. A candidate for Examination for a Certificate of Competency who, at the time of making application, does not possess a Certificate, and who fails to pass the colour test, may not be re-examined until after the lapse of three months from the date of his first failure. If the fails a second time, he will be allowed a third trial at the expiration of another three months from the date of his second failure. A fresh fee must be paid at each succeeding examination.

16. It is therefore obviously to the advantage of Candidates for Certificates of Competency to apply in the first instance to be examined in *Colours only* on Form Exn. 2*a*.

17. A Candidate who holds a Certificate of Competency, and who, on presenting himself for Examination for a Certificate of a higher grade, is unable to pass the Colour test, will notwithstanding be permitted to proceed with the Examination for the Certificate of the higher grade.

18. Should he pass this examination, the following statement will be written on the face of the higher Certificate which may be granted to him, viz.—"This Officer has failed to pass the Examination in Colours."

19. Should be ultimately fail to pass the Examination, a like statement, relating to his being Colour blind, will be made by the Port Officer on his existing Certificate before it is returned to him.

20. Holders of Certificates which bear the statement of their having failed to pass in Colours, and who may desire to have the statement removed from their Certificates, must obtain the special permission of the Government.

Qualifications for Certificates of Competency as First Class Masters.

21. *Examination in Colours.*—All candidates for certificates of competency must first be examined in colours.*

22. A candidate for a certificate as first class master of inland steam-vessels must be not less than twenty-four years of age, and must have served as a second class master in charge of a steam-vessel for not less than three years, or he must be not less than twenty-two years of age, hold a certificate of competency as second mate granted under Act I of 1859 (for the amendment of the law relating to Merchant Seamen) or the Merchant Shipping Acts 1854 to 1883, or a certificate to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869, and have served as Mate of an inland steam vessel or master of a river flat for not less than one year.

23. Each candidate will be examined apart, and *viva voce*, in each and all of the following subjects:—

(1)—The rules of the road.
(2)—The management of river steamers under all contingencies.
(3)—The tide table.
(4)—Storm signals.
(5)—The provisions of Act VI of 1884, and the rules framed under sections 21; 29, 50 and 51 of the Act.

Qualifications for Certificates of Competency as Second Class Masters.

Examination in Colours.—All candidates for certificates of Competency must first be examined in colours.*

24. A candidate for a certificate as second class Master of an inland steam-vessel must not be less than twenty-one years of age and must produce satisfactory certificates of

* See Appendix A.

sobriety and intelligence, and that he has served three years as Mate of a small steam-vessel or as chief helmsman of a steam-vessel of over 80 horse power, and shall be examined *viva voce* as to his knowledge in the following subjects:—

(1)—The rules of the road.
(2)—The management of small river steamers.
(3)—Storm signals.

Failure.

Re-examination in case of failure.

25. If a candidate fails, he will not be re-examined *until after a lapse* of three months from the date of such failure.

Certificate of lower grade.

26. If a candidate has failed in his examination, but the subjects in which he has failed are not included in the subjects required for a certificate of a lower grade, he may, if he desires it, receive a certificate of such lower grade.

27. No part, however, of the fee he has paid will be returned to him, and on presenting himself, when entitled so to do, for re-examination for the higher grade of certificate he will be required to pay again the full fee.

Fees.

28. Candidates for examination, in making their application on Form Exn. 2*b*, will be required to pay the examination fee before any step is taken, whether by enquiring into their services or testing their qualifications, &c. Should it be found that their service is not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they from any other cause not be examined, no part of the fee will be returned to them, but when they have fulfilled the requisite service, or are able to produce satisfactory testimonials as the case may be, they will be allowed to again present themselves for examination for a certificate of the same grade without paying any further fee.

Fees to be paid by applicants for examination.

29. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected and not allowed to be again examined for twelve months.

30. If a candidate fails in his examination, *no part of the fee will be returned to him.*

31. If the candidate satisfy the examiners as to his knowledge of the prescribed subjects, and generally as to his competency to command an inland river steamer, they shall certify the same to the Government, which will then grant a certificate to the candidate

Form Exn. 16. Completion of examination.

32. The fees are as follows:—

	Rs.
First Class Master	16
Second Class Master	6
Renewal of a certificate	5

General.

33. Certificates of competency of first and second class masters shall be made and issued in the forms hereunto annexed.

34. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

INSTRUCTIONS TO EXAMINERS.

Examination in Colours.

Herewith are—

(*a*.) A lanthorn having in it a lamp in which kerosine is to be burnt.
(*b*.) A side having ground glass in it.

(*c.*) Nine slides, each having a coloured glass in it. The colours are as follows:—

1. Red (Standard).
2. Pink or salmon.
3. Green (Standard or No. 1)
4. Green (Bottle or No. 2).
5. Green* (Pale or No. 3).
6. Yellow.
7. Neutral.*
8. Blue (Standard).
9. Blue* (Pale).

(*d.*) Cards, five of each as follow:—

1. White.
2. Black.
3. Red.
4. Pink.*
5. Green
6. Drab.*
7. Blue.
8. Yellow.

Examination by Daylight. (Cards.)

In conducting the examination by daylight the examiner should do it in three ways—

1. The cards should be mixed up. The examiner should then hold up each card separately and ask the candidate to name the colour, and if the candidate does so without hesitation he is to be regarded as having passed the daylight test.
2. If the candidate hesitates in any of his answers so as to raise a doubt in the mind of the examiner as to his ability to readily distinguish colours, the examiner should put all the cards on the table and require the candidate to select all cards of a colour or colours named by the examiner.
3. Having done that they should all be mixed up again and the candidate should be required to sort the cards into eight heaps, putting all of one colour into each heap.
4. The result of the examination should be noted and recorded in each case.

The room should be dark.

The lamp lighted and placed in the lanthorn.

The applicant should be seated or should stand so as to be opposite to the opening of the lanthorn; and, at least, 15 feet from the front of the lanthorn.

He should first of all see the light in the lanthorn without the interposition of any glass and be asked if it appears to him to have any colour, and if so what colour?

The slide with the ground glass should then be put into the opening at the front of the lanthorn which is nearest to the light, and the applicant asked the same question.

The slide with the ground glass is to be left in, and the slides with the coloured glasses placed one by one and separately in front of it, and the candidate asked in each case to name the colour or tint.

The result of the examination should of course be noted and recorded in each case.

General.

The cards and glasses against which a star* is placed in the list are what may be called confusion tints. The candidate is not to be regarded as having "failed" if he miscalls these tints, provided that he names all the others correctly. But if having named all the others correctly he miscalls these so far as to name the drab card No. 6 as red, pink, salmon, &c.; or to name card No. 7 as red, green, or yellow; or glass No. 2 as green, blue, or yellow; or glass No. 5 as red, pink, salmon, &c.; or glass No. 7 as bright red or bright green; or the plain ground glass any colour, the case should be reported for record. In short, if the candidate's perception or impression of these tints does not agree with the perception of the examiner, the case should be reported on the Form Exn. 17B.

The only reasons for which a candidate is to be reported as having failed are inability to distinguish red from green, or either from black by daylight; and red from green, or either from the ground glass, by artificial light.

If a candidate fails in the colour test when the ground glass is in the lanthorn (as it is always to be when the coloured glasses are shown) the may also be tried over again with the coloured glasses without the intervention of the ground glass, and the result noted and recorded.

By the Honourable the Lieutenant-Governor of Beng

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al.

Certificate of Competency

AS

ST CLASS MASTER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

Mr._____

Whereas *it has been reported to the Lieutenant-Governor that you have been found, after examination, duly to fulfil the duties of First-class Master of an Inland Steam-Vessel under Act VI of* 1884, *I do hereby grant you CERTIFICATE OF COMPETENCY as such First-class Master.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

_____ *day of* _____ 18____.

No. of Certificate

*Address of Owner*_____

*Date and Place of Birth*_____

*Signature*_____

Any master who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty not exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

*Issued at Calcutta on the*_____*day of*_____18____.

Registered,

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

SECOND CLASS MASTER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To

Mr. _____

Whereas *it has been reported to the Lieutenant-Governor that you have been found, after examination, duly qualified to fulfil the duties of Second-class Master of an Inland Steam-Vessel under Act VI of* 1884, *I do hereby grant you this CERTIFICATE OF COMPETENCY as such Second-class Master.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ *day of* _____ 18__.

No. of Certificate

Bearer _____ *son of* _____ *by caste* _____

Date and Place of Birth, showing Village, Thana and District* _____

Residence, showing Village, Thana and District _____

Height _____

Personal description, stating particularly any permanent marks or scars _____

No. of Register Ticket _____

Signature _____

Any master who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty no exceeding Rs. 500.

N.B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith to the Government of Bengal.

Issued at Calcutta on the _____ *day of* _____ 18____.

Registered,

Port Officer of Calcutta.

* If not known exactly must be stated on the best information or evidence.

REGULATIONS

RELATING TO THE

EXAMINATION OF ENGINEERS AND ENGINE-DRIVERS OF INLAND STEAM-VESSELS.

Preliminary.

UNDER the provisions of the Inland Steam-Vessels Act, an inland steam-vessel having engines of eighty nominal horse power or upwards cannot proceed on any voyage unless her engineer possesses an engineer's certificate granted under the Act or the Indian Steam Ships Act, 1884, or the Merchant Shipping Acts, 1854 to 1883, or to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869; and no such ship having engines of under eighty nominal horse-power can proceed on any voyage unless she has as her engineer a person possessing an engine-driver's certificate granted under the Act or the Indian Steam-Ships Act, 1884, or a certificate of the higher grade of the nature referred to above: Provided that a steam-vessel having engines of under eighty nominal horse power shall be deemed to have complied with the law if she has as her master and engineer a person possessing both a second class master's certificate and an engine-driver's certificate granted under the Act.

Any person who has been engaged to serve as Engineer or engine-driver of an inland steam-vessel proceeds on any voyage in that steam-vessel as engineer or engine-driver, as the case may be, without being at the time entitled to, and possessed of, the certificate required under the Act, and any person who employs any person as engineer or engine-driver without ascertaining that he is at the time entitled to, and possessed of, the certificate required under the Act, is liable to be punished with fine which may extend to *five hundred rupees*.

NOTIFICATION.

No. 28 Marine, dated Calcutta, the 31st of January 1890.

UNDER the powers conferred upon him by section 29 of the Inland Steam-Vessels Act, 1884, and with the previous sanction of the Governor-General in Council, the Lieutenant-Governor is pleased to make the following rules to regulate the granting of certificates of competency to engineers and engine-drivers of inland steam-vessels.

W. B. BESTIC,
Under-Secy. to the Govt. of Bengal.

Certificates of competency granted to persons who pass requisite examinations.

1. Certificates of competency will be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose examiners have been appointed and arrangements have been made for holding the examinations periodically at the port of Calcutta.

Examinations continued till all the candidates are examined.

2. The examinations will commence early in the forenoon and will be continued from day to day until all the candidates whose names appear upon the Port Officer's list on the day of examination are examined.

Application how to be made.

3. Candidates for examination must make their application upon Form Exn. 3, which must be filled up at the Port Office. The Exn. 3 properly filled in, together with the candidate's testimonials, must be lodged with the Port Officer not later than the day before the day of examination.

Testimonials required.

4. Testimonials of character, and of sobriety, experience, ability, and good conduct for at least the 12 months immediately preceding the date of application to be examined, will be required of all applicants, and without producing them no person will be examined. If the service has been on shore, the testimonial must be signed by an employer; if at sea, by either the master, managing owner, chief or superintending engineer.

5. As such testimonials and discharges may have to be verified before the candidates can be examined, it is

desirable that they should be handed in, together with the Form Exn. 3, as early as possible.

Testimonials of Foreigners.

6. The testimonials of servitude of Foreigners and of British Seamen serving in foreign vessels which cannot be verified by the Port Officer must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognized official authority of that country; or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs will not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful, the point must be referred to the Government.

Certificate as to age.

7. Should any doubt exist as to the age of a candidate, he will be required to produce a certificate of birth or baptism.

Foreigners to know English.

8. Foreigners must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board a British vessel.

Verification of services, &c., by Articles.

9. Services which cannot be verified by proper entries in the articles of the ships in which the candidates have served cannot be counted.

Qualifications for Certificates of Competency as Engineers.

Qualification of candidate for Inland Engineer's Certificate.

10. A candidate must be not less than twenty-two years of age:—

(*a*) He must have served an apprenticeship to an engineer, of three years in England or five years in India, and must prove that during the period of his apprenticeship he has been employed on the making and repairing of engines. Or, if he has not served an apprenticeship, he must prove that for not less than three years in England or five years in India he has been employed as a journeyman or masterhand in some factory or workshop on the making or repairing of engines. In either case he must also have served two years thereafter in the engine room of a steamer of over 80 horse power, or as a certificated engine-driver in a steamer of less than 80 horse power.

Or failing the above service he must have served as a certificated engine-driver in charge of a steamer for not less than four years.

(*b*) He must be able to give a description of boilers, and the methods of staying them, together with the use and management of the different valves, cocks, pipes, and connections.

(*c*) He must understand how to correct defects from accident, decay, or other causes and the means of repairing such defects.

(*d*) He must understand the use of the barometer, thermometer, and salinometer, and the principles on which they are constructed.

(*e*) He must state the causes, effects, and usual remedies for incrustation and corrosion.

(*f*) He must be able to state how a temporary or permanent repair could be effected in case of derangement of a part of the machinery, or total breakdown.

(*g*) He must write a legible hand, and understand the first five rules of arithmetic, and decimals, and their application to questions about consumption of stores, and full capacities of tanks and bunkers, the duty of pumps, and the direct strains in engines and boilers.

(*h*) He must be able to pass a creditable examination as to the various constructions of paddle and screw engines in general use; as to the details of the different working parts, external and internal, and the use of each part.

Qualifications for Certificates of Competency as Engine-drivers.

11. Candidates for examination must make their application upon the appropriate Form (Exn. 3*b*), which must be filled up at the Port Office.

12. A candidate for a certificate of competency as engine-driver must have attained the age of twenty-two years.

He must have served an apprenticeship of at least four years if in India or three years in the United Kingdom, and have served as assistant engineer for one year on a steamer of not less than 50 horse power.

Or he must have been three years principal serang or tindal in the engine-room of a steamer, or have been for three years in charge of the engine of a factory or mill under a European manager or engineer, as well as one year principal serang or tindal or assistant engineer in the engine-room of a steamer under a certificated engineer.

13. He must have the testimonial shown in Appendix B filled up by the engineer with whom he has last served, or his other testimonials must contain all the particulars therein required.

14. He must pass a *viva voce* examination before the Board of Examiners as to the working of an engine and the use of its different parts.

15. He must be able, if required, to show his practical qualifications by one week's trial in a steamer after fulfilling the other tests to which he will be subjected.

General Rules as to Examinations.

16. All books necessary for the use of candidates under examination will be provided by the Government, and applicants will not be permitted to take into the examination room any book, paper, document, or memoranda of any description whatever; and, subject to the provisions referred to hereafter, they will also not be allowed to work out their problems on a slate or on waste paper

Candidates not to take books, &c., into examination room

17. Candidates will be allowed in the time allotted to cancel any part of their work, and when required additional papers will be supplied by the Examiners. These additional sheets must be attached to, and form part of, the examination papers.

18. In the event of any candidate being discovered copying from another, or affording any assistance or giving any information to another, or communicating in any way with another during the time of examination, he will be regarded as having failed in his examination, and will be turned back for three months, in the same manner as if he had failed in the practical part of the examination; and no part of the fees he may have paid for examination will be returned to him.

Punishment for breaking rules.

19. If a candidate leaves the room before answering any question which has been given to him, he cannot afterwards be permitted to answer it, but the examiners may substitute other data or another question.

Leaving examination room.

20. All applicants presenting themselves for examination for certificates of competency as engineers will be required to give written answers to eight out of a list of ten questions selected from Form Exn. 15*a*,* "Elementary Questions for the first examinations of Engineers for certificates of competency" These questions are intended to furnish a record to some extent of the candidate's knowledge at the time of his examination, and also to induce the candidates to pay more attention to their handwriting and spelling.

Questions from Form Exn. 15*a*.

21. The Form Exn. 15*b*., on which these answers will be written, contains also some questions as to the experience of the applicant, to be answered by him in writing.

22. Examiners may add to their *viva voce* questions on the practical management of steam engines and boilers any of those contained in Exn. 15*a*.

* *See* Appendix A.

23. If at the expiration of the time allowed the candidate has worked out correctly the whole of the questions set to him, and given satisfactory answers in the *viva voce* examination, he will be declared to have passed.

24. If at the expiration of the time allowed he has not worked out the whole of the questions set to him, but if the result of the *viva voce* examination taken in connection with the answers to such of the questions as he has worked out is sufficient to satisfy the Examiner that the applicant is competent to take charge of engines, he will be declared to have passed.

25. In other cases he will be declared to have failed.

(Exn. 15) 26. A report of the examination, and the examination papers, will be forwarded to the Government on the Form (Exn. 15).

Notification of having passed will be given to successful candidates. (Exn. 16) 27. If the candidate passes, he will receive the Form Exn. 16, upon which the Government will issue the certificate to the candidate, whose testimonials, &c., will be returned at the same time. It is therefore important that the port of destination of the certificate should be the same on both the Form Exn. 16 and the Form Exn. 2. If circumstances should make any alteration necessary, the examiners should see that it is made in both forms, otherwise delay in the issue of the certificate may be caused.

Fees.

Fees to be paid by applicants for examination. 28. Candidates for examination, in making their application on Form Exn. 3 or Exn. 3*b*, will be required to pay the examination fees before any step is taken, whether by inquiring into their services or testing their qualifications, &c. No part of the fee will under any circumstances be returned to them, but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory, they will be allowed to present themselves for examination without paying any further fee, when they have fulfilled the requisite service, or are able to produce satisfactory testimonials, as the case may be.

29. The fee for examination must be paid to the Port Officer. In any case in which a candidate offers money to any other officer, and in any place but in the Port Office, the candidate so offering money will be regarded as having committed an act of misconduct, and will be rejected, and not allowed to be examined for twelve months.

30. If a candidate fails in his examinations, *no part of the fee he has paid will be returned to him.*

31. The fees are as follow:—

	Rs.
Engineers	12
Engine drivers	10
Renewal of a certificate	5

Failure.

32. If the applicant fails in the *viva voce* or practical part of the examination, he may not present himself for re-examination until he can produce proofs of THREE MONTHS' further service afloat. If he fails in arithmetic or drawing only, he may come up again at any time. Engine-drivers may be examined *de novo* after six months, if the past examination showed that they might reasonably be expected to qualify.

General.

33. Certificates of competency of engineers and engine-driver shall be made out and issued in the forms hereunto annexed.

34. Every certificate of competency shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, and the other shall be kept and recorded by the Port Officer of Calcutta.

APPENDIX A.

Form Exn. 15a.

ELEMENTARY QUESTIONS FOR THE FIRST EXAMINATIONS OF ENGINEERS FOR CERTIFICATES OF COMPETENCY.

To Engineer Examiners.

Examiners will require all candidates to fill up a form, Exn. 15*b*., of which a copy is enclosed, and they will forward the same to the Government along with the report of the examination.

The arithmetical questions for Engineers and the *viva voce* examinations for all candidates will be continued as heretofore, and failure in the elementary questions will be treated as failure in arithmetic.

The numbers of the questions for each examination will be selected by the examiners, and they are not to be communicated to the candidate until his examination commences.

Exn. 15b.

Port — Class for which examined

Date — Candidate's name

A. Where and how long did you serve in works at the making or at the repairing of Engines, and in what capacities?

B. How long have you served as fireman or trimmer?

C. How long have you served in the Engine-room at sea, and in what capacities?

D. With what descriptions of Engines have you served at sea—Paddle or Screw or both, Jet Condensing, Surface Condensing, or Non-condensing Engines, Compounds, Trunks, Inverted Cylinders, or Horizontal Engines? What size were the Engines?

E. With what descriptions of Boilers have you served at sea—Rectangular or Cylindrical, Wet-bottomed or Dry-bottomed, Multitubular, Sectional or Flue Boilers?

F. What Engine defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

G. What Boiler defects have come under your notice at sea, what caused these defects, and how were they remedied? Give the names of the Steamers for verification.

For the questions to be answered on the following pages, *See* the book of Elementary Questions. The questions need not be written: only the answers to them.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

Question No.

ELEMENTARY QUESTIONS.

1.

What parts of an engine are generally made of wrought-iron?

2.

What parts of an engine are generally made of cast-iron?

3.

For what parts of an engine is steel sometimes used?

4.

What parts of an engine are generally made of brass or gun-metal?

5.

Where is "white metal" sometimes used? On account of what property possessed by it is it adopted? What objection is there to its more general use?

6.

For what parts is Muntz metal sometimes used? Is it malleable? For what properties is it valued?

7.

What difference is there in the composition of cast-iron, of wrought-iron, and of steel?

8.

How can cast-iron, wrought-iron, and steel be distinguished from each other?

9.

What are the different properties of cast-iron, of wrought-iron, and of steel.

10.

What is meant by the terms "breaking stress," "proof stress," "safe-working stress"?

11.

What is the cohesive strength or breaking stress of good ordinary wrought-iron?

12.

Tempering steel: how is it done, and in what order do the colours come?

13.

What is case-hardening?

14.

Which of the common metals or alloys can be forged, and which of them are brittle or "short"?

15.

What is meant by "welding"? Which of the common metals can be welded?

16.

The expansion of metals by heat: give examples of this in the engine and in the boiler.

17.

In the construction of cylindrical marine boilers, for what parts have the plates to be worked hot? When the material is steel, what precautionary treatment of these plates is afterwards necessary?

18.

What is double riveting? In what parts of cylindrical marine boilers is double riveting employed? In which of the shell seams is it most necessary?

19.

What is "caulking," and how are seams prepared for caulking?

20.

Describe the different ways of fastening the ends of the main stays of a boiler. What are the merits of, or objections to, the different plans?

21.

What strain per square inch is allowed on boiler stays?

22.

Describe a riveted stay, and state where such stays are commonly used.

23.

Where are thin plates to be looked for in a boiler as it wears, and how is the thinness to be detected?

24.

How are boiler tubes fixed? What are "stay tubes," and how are they secured?

25.

Where is it generally that boiler tubes leak? How is this defect repaired? What are the causes of this leaking?

26.

What are the causes of cracked tube plates? Where are the cracks situated? How are they repaired?

27.

What is the difference between a "dry uptake" and a "wet uptake"? Which requires most repair? Why? Where have you seen a wet uptake?

28.

What is a superheater? What is its construction? What valves are on it? There is sometimes a gauge glass on it; what is that for?

29.

What parts of a marine tubular boiler are first injured by shortness of water?

30.

Where are angle irons sometimes used in the construction of a boiler, and where are flanged plates used?

31.

Priming: to what causes is it attributed? What means are applied to prevent it? What evils may be produced by it?

32.

Funnel draught: what makes it? What checks it?

33.

Flame is sometimes seen at the top of the funnel: what causes this appearance? Is it beneficial or is it detrimental? Why so?

34.

A blast pipe: what is its construction? Where is it placed For what is it used?

35.

How many bottom blow-off cocks are generally fitted to each boiler, and why are they so fitted?

36.

Blow-off cocks are sometimes fitted with a spanner guard: for what purpose is this? Describe how the guard is formed?

37.

Test cocks or water-gauge cocks: where are they placed? At what heights? Must the cocks themselves be at those heights? What provision is made for cleaning these cocks? Should they ever become choked? When there are no test cocks, how is the height of the water ascertained?

38.

What is a dead-weight safety valve? Of what are the rubbing surfaces formed? How is a lock-up valve arranged to admit of lifting it or of turning it round, and to prevent adding to the weight?

39.

About what area of safety valve is now required by the Board of Trade? What area was formerly required, and on what ground has that been altered? What is the effect of suddenly opening a safety valve when steam is up? To about what extent do safety valves rise when blowing off without being eased by hand?

40.

Spring-loaded safety valves: what advantages have they that are not possessed by dead-weight valves? What are the disadvantages as compared with dead-weight valves?

41.

Of what pieces does a glass water gauge mounting consist? How does it act? Where is it placed? At what height? Is it liable to derangement? How is its working tested?

42.

Glass water gauges have sometimes pipe connections top and bottom: what is the object of this arrangement? Should there be cocks at the extremities of these pipes?

43.

Describe a Bourdon's steam gauge. Some gauges have an inverted syphon pipe below them: what is its use?

44.

Why is a small cock sometimes put on the pipe leading to a steam gauge? Where should it be placed, and what error might be made by omitting to use it?

45.

Do steam gauges indicate the total pressure of the steam, or only a portion of that pressure? What is the pressure measured from?

46.

What is meant by the salting of the boiler? How is this prevented? What is the density of ordinary sea water? How is the density ascertained? What is the difference between the formation of scale and the salting of the boiler? What is the maximum density at which boilers should be worked at sea?

47.

Scum cocks and pipes: how are they arranged? Where are they placed? At what height in the boiler? When are they used? When must they be shut? Neglect of these cocks lead to what dangers?

48.

Scale: of what does it consist? Where is it most objectionable? How is it removed? How is its formation prevented? What evil effects are produced by it?

49.

What is a salinometer? Of what does it consist? How does it act? How is it graduated? Can it be used at any temperature indiscriminately?

50.

What harm may be done through the check valve of one of a set of boilers being defective while under way? How would you work to avoid this harm?

51.

How is the leak from a split tube stopped in a boiler at sea? Describe the operation.

52.

What is the use of dampers? Where are they fitted? When should they be used?

53.

When there are no dampers fitted, what is used instead? What evil to the boiler is sometimes attributed to this? When the heating surfaces are clean does this occur?

54.

Describe the piston of a steam cylinder, with its different rings and their uses. There are generally round pieces let in flush on one side of a piston: what are they? How are these pieces fixed?

55.

Cylinder drain cocks: what is their use? There is sometimes a valve upon each cock: what purpose does it serve?

56.

Cylinder escape valves: of what do they consist? How protected? How regulated? When are they most needed? To what danger do they expose the Engineer? What precaution is sometimes used to obviate this danger?

57.

What is a compound engine? What different kinds are there for screw steamers, in respect to the number and arrangement of their cranks and cylinders? What is a triple expansion engine?

58.

What is link motion? What are some of its advantages? In modern engines for the screw propeller when there is no link motion, what takes its place?

59.

What is a separate expansion valve? Why is it not fitted to all engines? What effect has an expansion valve upon the starting and upon the reversing of the engine?

60.

What arrangement is applied to reduce the friction of a slide valve? To what is the friction due?

61.

Describe a loose eccentric; how does it act? In what engines is the loose eccentric still employed?

62.

What is the travel of the eccentric rod? How is it measured on the eccentric? What is the travel of the slide valve when the link motion is in mid gear and the engine still moving?

63.

What are "double beat valves"? Why are they not generally used for safety valves? Are they ever used instead of the slide valve? What objections are there to their use?

64.

What is a circulating pump? Is it always worked by the main engine? Give an example from your last steamer of the three water temperatures generally noted by careful engineers.

65.

An air valve is sometimes fitted to a circulating reciprocating pump: what purpose does it serve?

66.

What is the difference between a bucket air-pump, a piston air-pump, and a plunger air-pump?

67.

Whether are double-acting air-pumps made with plungers, with pistons, or with buckets?

68.

What is an air-pump trunk? When is it necessary? How is it attached to the bucket?

69.

What class of air-pump requires both foot and delivery valves, and in what other class can either of these valves be in some cases dispensed with?

70.

When under way, when the air-pump bucket is at the top of its stroke, at what height is the water in the condenser?

71.

With a surface condenser and a single acting air-pump, what is the effect of a leaky foot valve, and what is the effect of a leaky bucket when there is also a foot valve?

72.

Air-pump pet cock or valve: where is it placed? How does it act? What is its object? Does it in every case reduce the effective capacity of the pump? Is it equally applicable to double acting pumps?

73.

At what temperature is the hot well worked? What is the effect of higher temperatures? What is the effect of lower temperatures? What limits the lowness of temperature? Has a very low temperature any disadvantages?

74.

Bilge injection with common condensers: what are the fittings required? When is it used? What precautions are necessary in using it?

75.

When surface condensers are used, what takes the place of the bilge injection? To what is the connection made? How is its valve formed? Why is this necessary?

76.

What are the practical guides to the proper amount of opening of the inlet valve for the circulating pump?

77.

Feed-pump pet cock or valve: where is it placed? What is its use? How does it act? Is it always a necessary fitting?

78.

What are some of the ways of fastening the ends of surface-condenser tubes? About what size and about what thickness are condenser tubes? What parts of a surface condenser are made of brass?

79.

What is a blow-through valve or cock? To what is it attached? There is sometimes a valve that when opened admits steam from the slide valve casing to the exhaust port: what is its use? To which cylinder is it fitted?

80.

What is a snifting valve? What is its use? Where is it placed? Can it be placed too high? Can it be placed too low? At what height should it be placed? Was there one in your last steamer; if so, where was it? Why are snifting valves generally omitted now?

81.

What connections are generally fitted to the donkey-pump, and to what services can it be applied?

82.

When the engines are stopped with steam up, what are to be shut and what are to be opened?

83.

How is an engine heated up before starting? What precautionary examinations are made before starting?

84.

What is an interceptor or catch-water? Where is it fixed; what is its construction; how does it act; and what attention does it require?

85.

Describe an air-pump bucket, with its valve or valves and its packing. Of what are the valves generally made?

86.

Of what materials are air-pump rods made? Why so?

87.

What is the racing of the engine? When does it occur? What danger attaches to it? What is done to prevent it?

88.

What are marine governors? What is their general construction? How do they act?

89.

What is meant by the "pitch" of a screw propeller? How is it measured?

90.

Explain the difference between a "right hand" and a "left hand" propeller, and state how each of them revolves.

91.

What is the slip of a screw propeller? How is its amount expressed in figures?

92.

Which of the valves about engines and boilers have to be worked by hand, which of them work self-actingly, and which are worked by the motion of the engine?

93.

Why is soda sometimes put into a boiler, and how is it put in which under way? What is the kind of soda used?

94.

Tallow cups for cylinders were sometimes made with two small cocks, or with only one small cock, or with one large hollow plug cock, or with one small cock and a valve; which of these is suitable for a high-pressure cylinder, and which for the cylinder of a condensing engine? Describe how the cup with only one small cock is used. What is now generally used instead of these? How has this change come about?

95.

Does a cylinder escape valve, self-acting, allow all the water to escape; if not, how much is left in the cylinder?

96.

What is a "Steam Lubricator" (sometimes called an Impermeator)? Explain its action; to what part of the engine is it connected; whether will throwing cold water over it make it work faster or slower? Describe the one used in your last steamer?

97.

A common paddle wheel: of what is the centre made? Of what are the arms formed? What is the form of the bolts which attach the floats to the arms? How are the arms attached to the centres?

98.

Why have some paddle wheels one or more cast-iron floats in each wheel? With what engines are these most required? At what part of the circumference are they placed?

99.

Why are paddle wheel floats sometimes made of different breadths in the same wheel? With what description of engine is this most needed? Where are the broad floats placed, and where are the narrow floats placed in the circumference of the wheel?

100.

What difference is there between a radial paddle wheel and one with feathering floats? What is the object of feathering floats? Are all the eccentric rods attached in the same way, and are they all of the same form?

101.

Whereabout is the centre of the eccentric of a paddle wheel with feathering floats placed? In that case are the feathering levers on the striking face or on the back of the float? When the paddle shaft has an outer bearing, how is the eccentric made?

102.

Of what materials are the working surfaces of a paddle wheel with feathering floats? Are they all lubricated? With what?

103.

What is a "Disconnecting Paddle Engine"? At what place is the disconnecting effected? How is it accomplished? In which of the cranks of a disconnecting engine are the crank pins fixed?

104.

Whether is link motion valve gear or the loose eccentric generally used for disconnecting paddle engines? For what steamers are disconnecting paddle engines frequently employed?

105.

What are expansion joints? Where are they necessary? What attention do they require? Of what should the working surfaces be made?

106.

What omission in the construction of expansion joints may lead to a serious accident when steam is first applied? How is this prevented in the construction of a steam trunion pipe for an ing engine?

107.

Describe an oil cup with a syphon worsted. How is the worsted arranged? How is it cleaned? How far down the tube does it extend?

108.

Describe a thrust bearing; which of the surfaces wears? Why are there sometimes a number of oil tubes for one thrust bearing?

109.

What parts of a screw shaft are generally covered with brass? Why is this necessary? About what thickness is the brass?

110.

What is the stern tube or screw shaft pipe? Why is a pipe of such a length required? Of what is it made? How is it fixed at each end?

111.

What is a lignum vitæ bearing? How is the wood fitted? Where is such a bearing generally used?

112.

How is a screw propeller fixed on the shaft? What means are used to prevent its getting loose at sea?

113.

Where are sluice valves placed? What large sluice valve is here in almost all screw steamers? From what position should this valve be worked? Why so? What attention should it receive?

114.

With a condensing engine; what valves or cocks are on the skin of the ship in the engine-room and in the stokehole?

115.

What are the necessary fittings of a marine boiler?

116.

With a surface condensing engine what cocks or valves are open some time before the engine is started so as to be ready for starting whenever the order is given?

117.

What is a steam jacket? What cocks are on it? In what engines are jackets most generally used? Do they require to be felted?

118.

What parts of an engine or its fittings should be felted or otherwise protected from radiation?

119.

What are the small cylinders sometimes fitted on the slide valve casing cover of vertical engines? Explain their action. To what are they connected by a pipe? Why so?

120.

Name the principal pipes in connection with the engines and boilers of a steamer, and state to what the ends of these pipes are connected.

121.

Through what cocks or valves, pipes and chambers does the water pass on its way from the sea inlet rose plate to the water space of the boiler, with a jet condenser?

122.

Through what cocks or valves, pipes and chambers does the circulating water of a surface condenser pass?

123.

Through what cocks or valves, pipes and chambers does the steam pass from the boiler until it is in the form of water in the hot well?

124.

Name the pieces of the engine through which the pressure of the steam is transmitted from the piston to the screw propeller. Name them in the order in which they act.

125.

What is an air vessel? How does it act? At what parts of an engine or of its fittings are air vessels generally applied?

126.

What is the construction of a mud box? Where should mud boxes be placed? Why are they necessary? How should the space be divided by the rose plate, and why?

127.

What is a trunk engine? When used in a horizontal engine for a right-hand screw propeller at which side of the vessel should the cylinders be placed? Why so?

128.

What is an oscillating engine? For what steamers are oscillating engines generally adopted? Why? How is the steam conveyed to and from the slide valve casing?

129.

Of what parts does the valve motion gear of an oscillating engine consist?

130.

For what have geared engines sometimes been used? Of what were the cogs of the large wheel made?

131.

At what part of a screw steamer is the pressure that propels t applied to the hull?

132.

At what part of a paddle steamer is the pressure that propels applied to the hull?

133.

About how much fuel per indicated horse power per hour is quired by modern steam engines, common, compound and triple xpansion?

134.

What is the explanation of the economy of the surface con-enser?

135.

What is the construction of a surface condenser? Of what are s tubes made? How are they fixed? How are they kept ght? What is done with a split tube?

136.

Where do surface condensers foul? How are they cleaned?

137.

What non-conducting substances are employed to prevent diation, and how are they applied?

138.

In the construction of smoke-box doors and of dry uptakes, at provision is made to lessen the amount of radiation?

139.

How can the formation of black smoke be prevented? Describe oke preventing apparatus.

140.

What is meant by "circulation" in a boiler, and what are the ults of defective circulation?

141.

What means are sometimes adopted to improve the circulation a boiler?

142.

By what arrangement is the circulation promoted in a "hay-ck" boiler?

143.

Describe a ship's side air-pump discharge valve, in what res-ts does it sometimes differ from a common stop valve, and at attention does it require?

144.

What is the construction of a feed escape valve, to what is its harge connected, and how is its loading regulated?

145.

When there is no feed escape valve, what is the arrangement he feed valves or cocks?

146.

What is the measure of a horse-power? How is indicated horse er ascertained?

147.

Has "nominal horse power" a fixed meaning? What is the use of this expression? What is generally taken as the measure of one horse power nominal?

148.

What is "back pressure" in a cylinder? About how much is it in each of the cylinders in your last steamer? Is excessive cushioning ever a trouble under certain conditions in modern engines? Say when and why and in which cylinder this occurs.

149.

What is meant by "speed of piston"? About how much is the speed of piston in modern marine engines?

150.

What is "atmospheric pressure"? What is its average amount? What instrument tells this amount?

151.

What is "gross pressure" or "absolute pressure"? What pressure is it that is shown by the steam gauge?

152.

What is meant by "cutting off" steam? How is it done? What part of the valve regulates the cut off?

153.

What is a piston slide valve? Describe its construction. Why are such frequently employed in place of the common slide valve? What is a great drawback to the use of these valves?

154.

What fixes the time of closing the exhaust? After the exhaust is closed and before the port opens for steam, what becomes of the steam that is in the cylinder?

155.

What is the "lead" of the valve? What is its object? About what amount is it?

156.

What is the "cover" or "lap" of the valve? What is its object? About what proportion of the stroke of the valve is it made?

157.

What is the "exhaust cover" of a slide valve? What is its effect upon cushioning and upon exhaust?

158.

What is "minus cover" or "minus lap" on the exhaust? What is its effect upon the exhaust and upon cushioning?

159.

What is "cushioning" or "compression" in a steam cylinder? How is it affected by the amount of cover or of minus cover there may be upon the exhaust? How is it affected by the exhaust pressure?

160.

What is "mean effective pressure"? How is its amount ascertained?

161.

What is a dial vacuum gauge? What is its construction? For what is it used? About what amount should it show when the engine is working all right? What effect has the variations it indicates on the performance of the engine?

162.

Does the vacuum gauge enable you to tell what pressure there is in the condenser, or must you have recourse also to the barometer to arrive at that? How would you ascertain the actual amount of back pressure there is in the condenser?

163

What is a barometer? What is its construction? Is a barometer sometimes used instead of a vacuum gauge? In what respect does the weather barometer differ from the vacuum gauge barometer?

164.

The common vacuum gauge and the common steam gauge, in which of them are the graduations marked from atmospheric pressure? Does either of them tell what is the true actual pressure in the boiler or in the condenser?

165.

Do steam and vacuum gauges vary with the variations of the weather barometer? When the weather barometer varies from 29 to 31, how much will the vacuum gauge vary, and how will that affect the working of the engine? Why so?

166.

Vacuum is generally stated as so many inches. What is meant by, say, 20 inches vacuum? What does that tell us about the absolute pressure of the vapour then in the condenser?

167.

From what depth will a pump draw water? Is there any limit? Why?

168.

What is vacuum? Can vacuum move a piston? When the temperature of the water in the condenser is 212°, what is the greatest degree of vacuum there can then be in the condenser?

169.

What is a thermometer, its construction? What is the property of matter that is the principle of its construction? What temperatures are regularly noted by careful engineers?

170.

What is the temperature of (1) melting ice, (2) of boiling water, (3) of steam about 60 lbs. pressure by the steam gauge, (4) of steam about 100 lbs, and (5) of strain about 150 lbs, also (6) of smoke in the funnel, and (7) of water in the hot well?

171.

What is meant by the "conduction" of heat? Give examples of it in the boiler and in the engine.

172.

What is meant by the "convection" of heat? Give examples of it in the boiler and in the engine.

173.

What is meant by "radiation" of heat? Give examples of it in the boiler and in the engine.

174.

Which is convection, which is radiation, and which is conduction in the following cases: (1) Heat from the glowing fuel to the furnace crown. (2) Heat passing from one side of the furnace crown plate to the other. (3) Heat passing from the steam pipes in the engine-room. (4) The heat of evaporation?

175.

What are the effective heating surfaces of a marine boiler? What is an objection to vertical heating surfaces?

176.

What parts of a marine engine are exposed to danger when the temperature is below freezing point?

177.

What precautions are necessary in cold climates when the temperature is below freezing point?

178.

State as many ways as you can by which a boiler might not get its full feed; that is, a boiler, or one of a set of boilers, get short of water, although the feed valve is open its proper amount; to what causes might this be due?

179.

Of what are furnace bars generally made About what thickness are they at top? About what space is between them? Whether are the bars put further apart for Newcastle coal or for Welsh coal?

180.

Which burns faster, Newcastle coal or Welsh coal? Which is the flaming coal? Which makes most smoke?

181.

About how many tons of steam coal will be burnt per day in our furnaces, each 3′ 0″ wide, and of about the usual length? On what grounds do you say so?

182.

About how many tons of steam coal will be burnt per day with good compound engines to drive an ordinary steamer of 40 ft. beam 10 knots an hour by steam alone? On what grounds do you say so? What percentage more coal would be required to propel the same steamer one knot faster?

183.

About how many tons of steam coal will be burnt per day with a good compound engine, surface condensers, the low pressure cylinder 70 inches diameter, doing average work? On what grounds do you say so?

184.

A pair of inverted cylinder direct acting engines, there is a liner half an inch thick between the ahead eccentric rod and the eccentric strap, in overhauling the engine this piece is lost and forgotten; what difference will its omission make in the working of the engine, on the admission, on the cut off, and on the exhaust of the steam? Which will take place earlier, and which later, distinguishing between the up stroke and the down stroke?

185.

A pair of inverted cylinder direct acting engines driving a right-hand screw; on which of the crosshead guide bars is the pressure greatest in the up stroke, and on which in the down stroke?

186.

A screw propeller is getting loose, it has a little play on the shaft, sideways on the key or feather; how will this show in the engine-room?

187.

How would you prove whether the centre line of the trunions of an oscillating cylinder be fair with the centre line of the main shaft?

188.

How can the fairness of a line of screw shafting be tested without lifting the shafts?

APPENDIX B.

TESTIMONIAL.

hereby certify that has served with me in the engine-room of as principal serang or tindul for a period of , during which time he has discharged his duties to my entire satisfaction.

I consider that he fully understands the working of an

ANY Engineer giving a testimonial in this form should be very careful in doing so, as the document may materially influence the applicant's elligibility as a candidate.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

ENGINEER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To _____

Whereas *it has been reported to the Lieutenant-Governor of Bengal that you have been found duly qualified to fulfil the duties of Engineer of an Inland Steam-Vessel, I do hereby, in pursuance of Act VI of* 1884, *grant you this CERTIFICATE OF COMPETENCY.*

By order of the Government of Bengal,

Given *under my* Hand and Seal,

Under-Secy. to the Govt. of Bengal.

This _____ 18

No. of Certificate of Competency

*Bearer*_____ _____

*Date and Place of Birth*_____

*No. of Register Ticket*_____

*Signature*_____

Any ENGINEER who fails to deliver up a Certificate which has been lled spended, *is liable to a penalty not exceeding Rs.* 500.

N.B.—Any person other than the owner thereof becoming possessed of this tific *required to transmit it forthwith to the Government of Bengal.*

Issued at Calcutta on the _____ *day of*____ _____ 18___

Registered,

Port Officer of Calcutta.

Government of Bengal.

By the Honourable the Lieutenant-Governor of Bengal.

Certificate of Competency

AS

ENGINE-DRIVER OF AN INLAND STEAM-VESSEL UNDER ACT VI OF 1884.

To _____

Whereas *it has been reported to the Lieutenant-Governor of Bengal that you have been found duly qualified to fulfil the duties of Engine-Driver on an Inland Steam-Vessel having engines of under 80 nominal horse-power, I do hereby, in pursuance of Act VI of 1884, grant you this CERTIFICATE OF COMPETENCY as Engine-Driver.*

By order of the Government of Bengal,

Given *under my* Hand and Seal

This _____ *day of* _____ 18__. *Under-Secy. to the Govt. of Bengal.*

No. of Certificate

*Bearer*_____ *son of*_____ *by caste*_____.

Date and Place of Birth showing Village, Thana and District*_____

*Residence showing Village, Thana and District*_____

*Height*_____

*Personal description, stating particularly any permanent marks or scars*_____

*No. of Register Ticket*_____

*Signature*_____

*Issued at Calcutta on the*_____ *day of*_____ 18____.

Any Engine-Driver who fails to deliver up a Certificate which has been cancelled or suspended is liable to a penalty no exceeding Rs. 500.

N. B.—Any person other than the owner thereof becoming possessed of this Certificate is required to transmit it forthwith t the Government of Bengal.

Registered,

Port Officer of Calcutta.

* If not known exactly must be stated on the best information or evidence.

[REGISTERED No. 29.]

No. 7 of 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 12, 1890.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 163A.

GENERAL.—*The 4th February* 1890.—Mr. J. B. Worgan, District and Sessions Judge, Cuttack, is appointed to act as District and Sessions Judge of Dinagepore, during the absence, on deputation, of Mr. J. G. Charles, or until further orders.

Mr. F. J. G. Campbell is appointed to act as District and Sessions Judge of Cuttack, during the absence, on deputation, of Mr. J. B. Worgan, or until further orders, with effect from the date on which he joined the appointment.

Mr. A. H. Collins is appointed to act, until further orders, in the first grade of Joint-Magistrates and Deputy Collectors, and is posted to the Sudder station of the district of Dinagepore, on being relieved of his present appointment as Officiating District and Sessions Judge of that district.

The 5th February 1890.—The Lieutenant-Governor is pleased, under paragraph 16, Special India Army Circular, dated the 16th March 1889, to promote Captain Joseph Binning, Presidency Volunteer Reserve Battalion, to the rank of Major.

Baboo Komul Narain Chuckerbutty, Sub-Deputy Collector, Tipperah, is transferred to the Sudder station of the Chittagong Hill Tracts district.

Mr. H. Lee, Officiating Magistrate and Collector, Midnapore, is allowed leave for nine days, under article 291 of the Civil Service Regulations in extension of the leave granted to him under the order of the 7th January 1890.

The 6th February 1890.—Mr. W. F. Meres, C.S., has been granted by Her Majesty's Secretary of State for India an extension of furlough for twelve months.

The 7th February 1890.—The services of Captain C. J. Keene of the Eastern Bengal State Railway Volunteer Rifle Corps are placed at the disposal of the Government of the Punjab.

Mr. J. B. Worgan, District and Sessions Judge, is allowed leave for twelve days, under article 108 of the Civil Service Regulations, in extension of the leave granted to him under the order of the 31st January 1890.

The 11th February 1890.—Baboo Okhoy Coomar Bose, Deputy Magistrate and Deputy Collector, on leave, is posted to the Sudder station of the district of Noakholly.

The Licutenant-Governor is pleased to accept the resignation tendered by Lieutenant H. Stuart of his appointment as Quartermaster, Behar Light Horse.

Lieutenant H. C. Spry is appointed to be Honorary Quartermaster of the Behar Light Horse, with effect from the 2nd January 1890, *vice* Lieutenant H. Stuart, resigned.

Commander E. W. Petley, Calcutta Naval Volunteers, is, with the sanction of His Excellency the Governor-General in Council, appointed Honorary Aide-de-Camp on the staff of His Honour the Lieutenant-Governor of Bengal.

Mr. C. P. Caspersz, Officiating Magistrate and Collector, Chittagong, is allowed furlough for ten months, under article 340 of the Civil Service Regulations, with effect from the 21st March 1890, or such date as he may be relieved.

POLICE.—*The 10th February* 1890.—Mr. R. F. G. Faussett, Officiating Assistant Superintendent of Police, is allowed leave for one year, under article 369 of the Civil Service Regulations, with effect from the 12th December 1889.

Mr. C. E. Briscoe, Officiating Assistant Superintendent of Police, Midnapore, is allowed leave for ten days, under article 273 (*a*) of the Civil Service Regulations, with effect from the date on which he availed himself of it.

ECCLESIASTICAL.—*The 10th February* 1890.—The Revd. W. S. Mitchell, Baptist Missionary, Gya, is hereby licensed, under section 6 of Act XV of 1872, to solemnize marriages between persons one or both of whom is a Christian or are Christians.

The Revd. W. S. Mitchell is also appointed to be a Registrar of Births and Deaths under Act VI of 1886.

The 11th February 1890.—The Revd. F. W. Brown, Minister of the American Baptist Mission, Balasore, is hereby licensed, under sections 6 and 9 of Act XV of 1872, to solemnize marriages between persons one or both of whom is a Christian or are Christians, and to grant certificates of marriages between persons who are Native Christians.

The Revd. F. W. Brown is also appointed to be a Registrar of Births and Deaths under Act VI of 1886.

EDUCATION.—*The 8th February* 1890.—Mr. E. F. Mondy, Officiating Principal, Dacca College, is appointed to act, until further orders, in class III of the Bengal Educational Service, with effect from the 29th December 1889, *vice* Mr. A. C. Edwards, on privilege leave.

The 11th February 1890.—Baboo Syama Churn Ganguli, Principal, Utterpara College, is appointed to act in class II of the Subordinate Educational Service, with effect from the 18th November 1889, *vice* Baboo Mathura Nath Chatterjee, on leave.

Mrs. Stansbury, Head Mistress, Eden Female School, Dacca, is appointed to act in class III of the Subordinate Educational Service, with effect from the 18th November 1889, *vice* Baboo Syama Churn Ganguli, on deputation.

Baboo Upendra Nath Maitra, Lecturer, Dacca College, is appointed to act in class IV of the Subordinate Educational Service, with effect from the 18th November 1889, *vice* Mrs. Stansbury, on deputation.

Dr. A. F. R. Hoernle, Principal, Madrassa College, Calcutta, is allowed furlough for eight months, under article 340 of the Civil Service Regulations, with effect from the 1st July 1890, or such subsequent date as he may avail himself of it.

MEDICAL.—*The 11th February* 1890.—Surgeon-Major A. Tomes, Officiating Civil Surgeon, Howrah, is allowed leave for two months, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

The following notification is republished from the *Assam Gazette*:—

No. 652G.—The 31st January 1890.—Consequent on the recall to duty from privilege leave, for the period from the 1st to the 5th of September 1889, of Mr. J. Kennedy, C.S., the officiating promotions of Messrs. J. D. Anderson, C.S., A. Porteous, C.S., and H. Le Mesurier, C.S., announced in notification No. 351 of the 25th of October 1889, published in the *Assam Gazette* of the 2nd of November 1889, will have effect from the 20th, instead of the 15th of September 1889.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.—In the order dated the 24th December 1889, published in the *Calcutta Gazette* of the 25th idem, notifying the result of the Half-yearly Departmental Examination of Assistant Magistrates and others held in November last, *for* "Mr. E. E. Slane, Assistant Conservator of Forests, and Mr. R. Quinnell, Assistant Conservator of Forests" *read* "Mr. E. E. Slane, Sub-Assistant Conservator of Forests, and Mr. R. Quinnell, Sub-Assistant Conservator of Forests."

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT,—FORESTS.

NOTIFICATION.

The 5th February, 1890.—In exercise of the powers conferred upon him by section 19 of the Indian Forest Act VII of 1878, the Lieutenant-Governor hereby declares the tracts of land described below, which (on the 26th November, 1880, as regards the Girga Forest, and on the 20th February, 1882, as regards the other four forests) were notified as proposed Reserves, to be Reserved forests with effect from the 1st March, 1890.

Girga Forest.

District.	Pergunnah or other sub-division.	Name of forest	Description of boundaries.
Singbhoom ...	Porahat ...	Porahat (Girga)	*North.*—A demarcated line from the Lohardugga-Singbhoom boundary skirting the village lands of Jojobir, Komdih, Omda, and Sidma to a point north-west of the village of Kamargaon. *East.*—A demarcated line from that point skirting the village lands of Kamargaon, Salking, Usnugir, and Daimar to the Karo river; then that river for about one mile; then a demarcated line skirting the village lands of Sadiuli and Jilingutu to a point near that village. *South.*—A demarcated line skirting the village lands of part of Jilingutu, Tomden, Jojoda (or Bangurda), Kamai, Sinko (or Chindung), Baru Lumin and Bera Lumin. *West.*—The Lohardugga district boundary.

NOTE.—From t[illegible] omitted the lands belonging to the following groups of villages which have been marked off by [illegible]on :—

Group.	Villages.
I.—Bando	1. Bandu. 2. Baritola. 3. Khanta. 4. Irgi. 5. Lhosod. 6. Kita.
II.—Pandoa	1. Ponda. 2. Aida. 3. Aidatola.

Birda Forest.

District.	Pergunnah or other sub-division.	Name of forest.	Description of boundaries.
Singbhoom ...	Porahat	Birda	*North.*—The demarcated boundary of the Kundrugutu-Bundgaon Pirs starting from the trijunction point of these two pirs with the Baring Pir near Jiklatang and running to the hill west of Kairka. *East.*—A demarcated line passing southward for a mile and a half over the hills west of and skirting the village lands of Jalmai and Bandi; then running generally southward past the villages of Lonjagda Mamla, Kocha Songra, and Songra to the road near Tuihasa. *South.*—A demarcated line from this point past the villages Tuihasa, Erekora, Karla and Birda. *West.*—A demarcated line from Birda past the villages Birda, Dighi, Kontari, Dargada, again Kontari and Dighi and Kaman to the north boundary at Jiklatang.

NOTE.—From this area are omitted the lands belonging to the following villages which have been marked off by demarcation :—

Group.	Villages.
Chirkubera ...	1. Chirkubera. 2. Porotoli. 3. Anidih. 4. Akir. 5. Dumree.

Songra Forest.

DISTRICT.	Pergunnah or other sub-division.	Name of forest.	Description of boundaries.
Singbhoom ...	Porahat ...	Songra ...	*North.*—A demarcated line from a point on the boundary between Songra and Lagra east of the Harni stream near the village of Dumari and skirting the range of hills past the villages Dumari, Angria, Lagra, Chatma, Saunia, Sinko, Marla and Sarda to the Chaibassa-Bandgaon road at Tupna; thence passing over the Bicha Hill to Tutio. *East.*—The Tamar pergunnah of Lohardugga for about 4 (four) miles; then the Seraikela estate to a hill west of Jonua and south-east of Kurjuli. *South.*—A demarcated line from this hill passing over the Lokudburn Hill and crossing the Tolsadom stream about one mile north of Mundri; then passing between the hills half a mile north of Kutipiri to the Chaibassa-Gudri road; then that road for about a mile. *West.*—A demarcated line skirting the village lands of Roauli, Jamjni, Hoilohr, Sidma, Bandu, Kumar and Buriuli to the Kundrugutu road; then that road to a point at the foot of the Jhanda hill about a mile south of Kundrugutu; then a demarcated line skirting the village lands of Kundrugutu, Bingbu, Kandeon Khandajni, Lota, Chaki, Daraia, Jirai, Kopa, Hesatola and Gupdi to the north boundary near Dumari.

NOTE.—From this area are omitted the lands belonging to the following villages which have been marked off by demarcation:—

Group.	Villages.
I.—Pingu	1. Pingu. 2. Loahatu.
II.—Kocha	1. Kocha. 2. Dudukundih. 3. Goai.
III.—Tarabara	Tarabara.
IV.—Tebo	1. Tebo. 2. Sainkata
V.—Kotagarah	1. Kotagarah. 2. Senkra.
VI.—Halmad	1. Halmad. 2. Rogod.
VII.—Raigora	Raigora.
VIII.—Jonko	Jonko.
IX.—Kurjuli	1. Kurjuli. 2. Kanmail. 3. Burudih.

Kundrugutu Forest.

DISTRICT.	Pergunnah or other sub-division.	Name of forest.	Description of boundaries.
Singbhoom ...	Porahat ...	Kundrugutu ...	*North.*—A demarcated line starting from a point on the Girga-Baring Pir boundary near the village of Gere, and skirting the lands of the villages Gere, Mamail, Chakomtola, Ichagutu, Siyankel, Longabera, again Siyankel and Ichagutu, Darung, again Chakomtola, Tomrom, Jatanghasa and Champaba to the Raru river near Tondanghatu; then that river for about one and a half miles to a point between Sanhai (deserted village) and Jarakel; then a demarcated line skirting the village lands of Lota, Manmaru, Jarakel and Kundrugutu, joining the western boundary of the Songra forest at a point on the old road about a mile south of Kundrugutu. *East.*—The old road running in a general southerly direction from a point about a mile south of Kundrugutu to Buriuli, and which forms the western boundary of the Songra Reserved forest.

District.	Pergunnah or other sub-division.	Name of forest.	Description of boundaries.
			South.—A demarcated line from a point on th Kundrugutu road north of Buriuli, an skirting the village lands of Buriul Sidma, Hoilohr, Lamda, Dindapani, Den and Jate; then the Chaibassa-Gudri roa from a point near Jate to a stream nea Kotagara; then a demarcated line skirt ing the village lands of Kotagara an Jarakel to the Gompai nadi; then th Gompai nadi for 850 feet near Birkel then a demarcated line passing over th ridge of the hill north of the village Kir (or Giru) to the Karo river. *West.*—The Karo river past Roro to a point abou a quarter of a mile below the junction the Karo and Raru rivers; then a dema cated line skirting the village lands Buru Ururing, Ururing, Biti, Tutuk (deserted), Jomtai, Olmokund and Gere the north boundary.

NOTE.—From this area are omitted the lands belonging to the following villages which have be marked off by demarcation:—

Group.	Villages.
I.—Tolongjiri	... Tolongjiri.
II.—Kaiom	... 1. Buru Kaiom. 2. Bera Kaiom.
III.—Dharion	... 1. Dharion. 2. Kamrora.
IV.—Kudabera	... 1. Kudabera (or Kodobera). 2. Kukruburu. 3. Diai.
V.—Jonkopai	... Jonkopai.

Bera Forest.

District.	Pergunnah or other sub-division.	Name of forest.	Description of boundaries.
Singbhoom	Porahat ...	Bera ...	*North.*—A demarcated line running from a point near the village of Kichinda south-west of Gudri, skirting the village lands of Kichinda, Tirkera, and Gudri to the Gompai nadi; then up that stream for about 1,400 feet; then again a demarcated line skirting the village lands of Birkel and Jarakel to the Gompai nadi near Jarakel village; then the Gompai nadi for about 1½ miles and on to the Gudri-Chaibassa road. *East.*—The Gudri-Chaibassa road from a point near Kotagara to a point near Jate (along the boundary of the Kundrugutu forests); then a demarcated line skirting the village lands of Jate to the Danki Manda stream; then that stream for about 1,000 feet; then a demarcated line skirting the village lands of part of Jate, Joro (or Byjora), Banjira and Dura to the Sanjai river; down that stream for about ¾ of a mile to its junction with the Danluhr nadi; then up that nadi for about 2,200 feet; then a demarcated line skirting the village lands of Kutipiri, Banskata, Ponsoa and Jarakel to the Multrabera nadi, which it follows for about 400 feet on to its junction with the Mantuda nadi, which it follows for about 2,000 feet past Boikora and Berabinda; then a demarcated line skirting the village lands of Jhaliamara, Khorimati, and Brindabon. *South.*—A demarcated line from a point north of Dhunamara skirting the village lands of Jamjni, Ghoraduba, Soinka, Kuntupai and Dorbo to the Chaibassa-Gurjun road; then that road along the Bera Leda forest boundary until it meets the Anandpur estate.

DISTRICT.	Pergunnah or other su -division.	Name of forest.	Description of boundaries.
			West.—A demarcated line following the boundary between the Anandpur estate and the Porahat and Dorka Pirs of the Porahat estate to the junction of the Koel and Karo rivers; then the Karo river to a point about half a mile north of the village Saudiuli; then a demarcated line skirting the village lands of Konskel and Kichinda.

NOTE.—From this area are omitted the lands belonging to the following villages which have been marked off by demarcation—

Group.	Villages.
I.—Saruda	... Saruda.
II.—Gulikora	... 1. Gulikora. 2. Tongsarjom.
III.—Serengda	... Serengda.
IV.—Kantinkel	... 1. Kantinkel. 2. Eugan. 3. Komurkel. 4. Konsai.
V.—Hindiong	... 1. Hindiong. 2. Sausal. 3. Rairda.
VI.—Sarugara	... 1. Sarugara. 2. Chtar.
VII—Oranga	... 1. Oranga. 2. Kebra. 3. Horo. 4. Bara. 5. Tomsai.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 10th February, 1890.—The following programme of the proposed Visitation Tour of the Lord Bishop of Calcutta is published for general information.

P. NOLAN,
Secretary to the Govt. of Bengal.

Programme of the Bishop of Calcutta's Visitation of the Central Provinces and others parts, 1890.

Station.	Arrival.	Departure.	REMARKS.
Calcutta	.....	Thursday, February 13th.	
Harda	Saturday, February 15th ...	Monday „ 17th.	
Chanda	Tuesday „ 18th ...	Friday „ 21st.	
Nagpur	Friday „ 21st ...	Tuesday „ 25th.	
Raipur	Wednesday „ 26th ...	Thursday „ 27th.	
Kamptee	Friday „ 28th ...	Tuesday, March 4th.	
Akola	Tuesday, March 4th ...	Wednesday „ 5th	
Jubbulpur	Wednesday „ 5th ...	Monday „ 10th.	
Allahabad	Tuesday „ 11th ...	„ „ 17th ...	Visiting Pertabgarh.
Ranchi	Wednesday „ 19th ...	„ „ 24th.	
Calcutta	„ „ 26th ...	Tuesday, April 8th.	
Barharwa	Tuesday, April 8th ...	Wednesday „ 9th.	
Taljhari	Wednesday „ 9th ...	Monday „ 14th.	
Bhagulpur	Monday „ 14th ...	Tuesday „ 15th.	
Jamalpur	Tuesday „ 15th ...	Wednesday „ 16th.	
Motihari	Wednesday „ 16th ...	Friday „ 18th.	
Mozufferpur	Friday „ 18th ...	Monday „ 21st.	
Durbungha	Monday „ 21st ...	Wednesday „ 23rd.	
Calcutta	Thursday „ 24th ...		

Letters should, as a general rule, be addressed to those places where a Sunday is spent, the names of which are printed in italics. Matters of routine requiring immediate attention should be addressed to the Bishop's Commissary, Kidderpur Parsonage, Calcutta.

The Bishop desires to inspect all the Church Registers and other books at each station which he visits.

H. O. MOORE, *Bishop's Chaplain.*

THE PALACE; *Calcutta, 28th January*, 1890.

NOTIFICATION.

The 7th February, 1890.—Baboo Bonomali Pramanick, Sub-Deputy Collector of Baraset, in 24-Pergunnahs, is appointed, under Rule 1, Chapter VI of the rules made by the Local Government under the Bengal Tenancy Act, to be a Settlement Officer in place of Baboo Satchidananda Mukerjee, Sub-Deputy Collector, for the purpose of making a survey and preparing a record of rights in estate No. 26 in the district of 24-Pergunnahs.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 11th February, 1890.—All Deputy Collectors in the Lower Provinces of Bengal are hereby authorized to discharge the functions of Revenue Officers under Chapter X of the Bengal Tenancy Act VIII of 1885, and are vested with the powers of a Settlement Officer under Rule 1, Chapter VI of the rules framed by Government under that Act.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 11th February, 1890.—Under section 3 of the Bengal Survey Act V of 1875, the Lieutenant-Governor is pleased to order that a survey shall be made of all the lands in towji No. 4 of the Bankoorah district, and that the boundaries of mouzahs and fields situated therein shall be demarcated.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 6th February 1890.—Baboo Shama Charan Mitter, Deputy Collector, is appointed Deputy Collector of Income-tax in the district of Hooghly, *vice* Baboo Gyanendra Nath Pal, on leave, and, under section 40 of Act II of 1886, is vested with the powers of a Collector under the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 10th February 1890.—Baboo Girish Chandra Dutt, Deputy Collector, is appointed Deputy Collector of Income-tax in the district of Noakholly, *vice* Baboo Kali Prasanna Chowdhury, and, under section 40 of Act II of 1886, is vested with the powers of a Collector under the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 5th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for the construction of the central distillery at Burdwan, in the villages of Barsarbamangala and Muradpur, mahalla Paikmarapara, pergunnah Burdwan, zillah Burdwan, it is hereby declared that for the above purpose a piece of land measuring, more or less, 4 bighas 6 katas and 14 chataks of standard measurement, bounded on the North by the paddy fields of Muktakesi Debi and waste lands of Jagatmohini Dasi of Kulashushini; on the West by the public road and side lands; on the South by the *bastu* lands of Jagatmohini Dasi of Kulashushini and the Bhutgariya tank or Dattapokar and the paddy fields of Muktakesi Debi; on the East by the paddy fields of Muktakesi Debi, is required within the aforesaid villages of Barsarbamangala and Muradpur, mahalla Paikmarapara. A copy of the land plan may be inspected by the parties interested in the office of the Collector of Burdwan.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 8th February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for the construction of a central distillery at Furreedpore, in the village of Alipore, pergunnah Dhuldi, zillah Furreedpore, it is hereby declared that for the above purpose a piece of land measuring, more or less, 7 beegahs 5 cottahs and 18 dhoors of standard

measurement, equivalent to 2 acres 1 rood and 27 poles, bounded on the North by the Govindapore road, on the East by the road leading to the Ferry ghat, on the South by the Furreedpore khal, and on the West by a hálot, is required within the aforesaid village of Alipore. A plan of the land may be inspected by the parties interested at the office of the Collector of Furreedpore.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 164A.

The 4th February 1890.—The undermentioned Honorary Magistrates in the district of Nuddea are vested with the powers of a Magistrate of the second class—

At Kishnaghur	... ...	Baboo Umesh Chundra Dutta.
At Kooshtea	... ...	Baboo Ram Gopal Datta. „ Bishwanath Singh.
At Ranaghat	... ...	Baboo Jogesh Chundra Pal Chowdhury.

Under section 320 (*k*) of the Code of Criminal Procedure (Act X of 1882), the Lieutenant-Governor exempts Baboo Dwaraka Nath Maitra, a pleader of the Munsif's Court at Atia, from service as assessor in criminal trials held within the district of Mymensingh.

The 5th February 1890.—Baboo Janoki Nath Dutt, Munsif of Serampore, in Hooghly, is appointed to act as a Munsif in the district of Rajshahye, to be ordinarily stationed at Seebgunge, during the absence, on leave, of Baboo Hari Narain Roy, or until further orders.

Baboo Janoki Nath Dutt is vested with the powers of a Judge of a Court of Small Causes for the trial of suits cognizable by such a Court up to the value of Rs. 50 within the local limits of the Seebgunge Munsifi.

Baboo Jaduv Chandra Sen, B L., is appointed to act as a Munsif in the district of Hooghly, to be ordinarily stationed at Serampore, during the absence, on deputation, of Baboo Janoki Nath Dutt, or until further orders.

Mr. S. J. Douglas, Joint-Magistrate and Deputy Collector, Gya, is vested with powers under sections 110, 183, 186, 191 clause (*c*), 260 and 524 of Act X of 1882.

The 6th February 1890.—Baboo Radha Shyam Sing, Deputy Magistrate and Deputy Collector, Jessore, is vested with the power to try summarily the offences mentioned in section 260 of the Code of Criminal Procedure.

The 7th February 1890.—Mr. A. C. Sen, Officiating Joint-Magistrate, Cuttack, is vested with powers under section 110 of Act X of 1882.

The undermentioned Commissioners of the Beernagore Municipality, in the district of Nuddea, are appointed to be Honorary Magistrates and vested with the powers of a Magistrate of the third class for the purpose of forming a Bench for the trial of municipal cases under Act III (B. C.) of 1884, and under section 34 of Act V of 1861 :—

Baboo Monindra Nath Mookerjee.	Baboo Nashiram Sarkar.
„ Baranashi Bosu.	„ Narendra Nath Mookerjee.
„ Upendra Nath Mookerjee.	„ Jogendra Nath Mookerjee.

The 8th February 1890.—The undermentioned gentlemen are appointed to be Honorary Magistrates of the Independent Benches mentioned in the district of Mymensingh, and are vested with the powers of a Magistrate of the third class :—

For the Independent Bench at the Sudder Station :—

Baboo Surja Kumar Das, Partition Deputy Collector.	Baboo Nil Ratan Mookerjee.

For the Tangail Independent Bench.

Mir Mushruf Hosain.	Baboo Isan Chandra Gupta.

For the Netrokona Independent Bench.

Baboo Rajani Kanth Sen.	Baboo Gour Sunder Singh.

For the Kishoregunge Independent Bench.

Baboo Krishna Narain Roy.	Baboo Ram Narain Agasti.

Under the authority vested in him by the final clause of section 357 of the Code of Criminal Procedure, Act X of 1882, the Lieutenant-Governor empowers Baboo Kailash Chandra Chatterjee, Sub-Deputy Magistrate of Nattore, in the district of Rajshahye, to take down evidence in criminal cases in the English language.

The 10th February 1890.—Baboo Umesh Chandra Sen, Munsif of Satkhira, in the district of Jessore, is vested with the powers of a Judge of a Court of Small Causes for the trial of suits cognizable by such a Court up to the amount of Rs. 50 within the local limits of the Satkhira Munsifi, during the absence, on leave, of Baboo Chandi Charan Sen, or until further orders.

Baboo Tara Prosonno Roy is appointed to be an Honorary Magistrate of the Manickgunge Bench, in the district of Dacca, and is vested with the powers of a Magistrate of the third class.

The Lieutenant-Governor accepts the resignation tendered by Baboo Grish Chunder Roy of his appointment as an Honorary Magistrate of the Manickgunge Bench, in the district of Dacca.

The 11th February 1890.—Baboo Sheo Nundun Lal Roy, Deputy Magistrate and Deputy Collector, Chumparun, is vested with the power to try summarily the offences mentioned in section 260 of the Code of Criminal Procedure.

Baboo Prosanna Kumar Dutt, Deputy Magistrate, Bogra, is vested with powers under sections 110, 133, 186 and 524 of the Code of Criminal Procedure.

GRANT OF LEAVE TO MUNSIFS.—*The 8th February* 1890.—Baboo Revati Charan Banerjee, Munsif of Diamond Harbour, in the district of the 24-Pergunnahs, on deputation to
s allowed leave for ten days, viz, eight days under article 309
is, and the remaining two days under article 306(*b*) of the same
the 16th February 1890, or from the date on which he may be

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[Third Publication.]

NOTIFICATION.

The 21st January 1890.—Under section 2 of Act II (B.C) of 1867 (an Act to provide for the punishment of public gambling and the keeping of common gaming houses), the Lieutenant-Governor is pleased to authorize the extension, from the 1st February 1890, of the provisions of the said Act to the villages of Saidpore and Kuja Saidpore (commonly known as the town and bazar of Saidpore), within the jurisdiction of the police-station of Nilphamari and the district of Rungpore The boundaries of the tract within which the said Act shall be in force are as follows:—

North—A straight line drawn from the Saidpore Rifle Range to Penduram Bairagi's house.

South—A straight line drawn from the east of Baboopara to the village road east of Nanku Havildar's para.

East—A straight line drawn from Penduram Bairagi's house to the east of Baboopara.

West—A straight line drawn from the village road east of Nanku Havildar's para to the Saidpore Rifle Range.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

[Third Publication.]

NOTIFICATION.

The 22nd January 1890.—It is hereby notified that the Lieutenant-Governor authorises the extension of the provisions of section 34 of Act V of 1861 to the town comprising the places known as Makundprosad, Jagarsing and Gurujang, in the district of Pooree, within the boundaries noted below, with effect from the 1st April 1890—

Bounded on the north by Tangiapara, Nuagan, Kumbharbast and Kunjiama; on the south by Sanpala, Khorda, and Jaganathpur; on the east by Bartola and Kholadwar; on the west by Sardhapur.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—BENGAL.

IRRIGATION.

The 11th February 1890.

No. 40.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for compensating Adi Mallik Chowkidar for his jagir land acquired for the Makundpur drainage channel of Machhgaun Canal, in the village of Pakunpur, pergunnah Gandito, zillah Cuttack, it is hereby declared that for the above purpose a piece of land measuring, more or less, 2 poles of standard measurement, bounded on the north by royti land of Bhaigo Das; on the south by that of Bharat Majhee; on the east by that of Donai Mohanti; and on the west by that of Bidyakar Das, is required within the aforesaid village of Pakunpur.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 41.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for compensating Gokhai Mallik Chowkidar for his jagir land acquired for No. 8, Distributary and Branches from the Puttamoondi Canal, in the village of Ganiamuha, pergunnah Derabis, killah Aul, zillah Cuttack, it is hereby declared that for the above purpose a piece of land measuring, more or less, 6 poles of standard measurement, bounded on the north by waste mehal land; on the south and east by thani land of Parikhit Prusti; and on the west by Branch B of No. 8, Distributary, Puttamoondi Canal, is required within the aforesaid village of Ganiamuha.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

No. 42.—*Erratum.*—In the Resolution of the Government of Bengal, Public Works Department, Irrigation, published at page 202 of the Supplement to the *Calcutta Gazette* of the 5th February 1890, *for* "No. 198I.A." and "3rd February 1890" *read* "No. 64I.A." and "18th January 1890."

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal, P. W. Dept.

ESTABLISHMENT.

The 5th February 1890.

No. 39.—The services of Mr. W. H. Rushton, Executive Engineer (temporary rank), are temporarily transferred to the Railway Branch for employment on the Behar Section of the Eastern Bengal State Railway.

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

PUBLIC WORKS DEPARTMENT,—MARINE.

NOTIFICATION No. 35Mne.

The 7th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to appoint, under section 11 of the Indian Merchant Shipping Act VII of 1880, Mr. W. Warden, Collector of Customs and Shipping Master of Chittagong, to be "Detaining Officer" at that port.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

NOTIFICATION No. 36Mne.

The 7th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to extend the provisions of section 7 of the Indian Merchant Shipping Act VII of 1880, authorizing the provisional detention of ships believed to be unsafe, to the Port of Chittagong.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

[Firt Publication.]

NOTIFICATION No. 31Mne.

The 4th February 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 17).

BAY OF BENGAL.

BURMA COAST.

Alteration of light on Savage Island—port of Akyab.

IN continuation of Notice to Mariners, No. 14, dated the 27th January 1890, issued by this Office, information has been received from the Port Officer, Akyab, that the light on Savage island will be obscured from the 27th idem, preparatory to its removal to the temporary structure, and will be re-exhibited after 10 to 15 days. During this period a blue light will be burnt every ½ of an hour.

By direction of the Government of Bengal,

OLIVER LASH R.N.,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th February* 1890.

[First Publication.]

NOTIFICATION No. 32Mne.

The 4th February 1890.—The following Notice to Mariners is published for general informat

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 18).

BAY OF BENGAL.

BURMA COAST.

Blue lights on Savage island discontinued.

IN continuation of Notice to Mariners No. 17, dated the 4th instant, a telegraphic communication has been received from the Port Officer, Akyab, that the blue lights on Savage island were discontinued from the 2nd idem.

By direction of the Government of Bengal,

OLIVER LASH, D.P.,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th February* 1890.

[First Publication.]

NOTIFICATION No. 33Mne.

The 11th February 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 19).

CHINA SEA.

SINGAPORE, WESTERN APPROACH—SALAT SINKI.

Bell buoy withdrawn; and a light-vessel moored on Ajax shoal.

THE British Admiralty has given notice (No. 23 of 1890) that on 1st February 1890 a light-vessel will be moored on Ajax shoal, west side of Salat Sinki, western approach to New harbour, Singapore:—

The light will be a *flashing* white light, showing a *flash every thirty seconds*; it will be elevated 38 feet above the sea, and should be visible in clear weather from a distance of 10 miles.

The light-vessel will be painted yellow, with the word *Ajax* in white letters on a black ground on her sides. She will carry a caged ball, painted red, at the masthead, as a day mark.

Position, lat. 1° 13′ 55″ N., long 103° 40′ 20″ E.

Also, that on the same date, the Bell buoy now marking Ajax shoal will be withdrawn.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 10th February* 1890.

[First Publication.]

NOTIFICATION No. 39Mne.

The 11th February 1890.—The following Notice to Mariners is published for genera information.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 20).

BAY OF BENGAL.

CHITTAGONG COAST.

Spar buoy replaced temporarily.

INFORMATION has been received from the Port Officer, Chittagong, that the Spar buoy referred to in Notice to Mariners No. 28, dated 18th March 1889, having sunk, a second class iron buoy has been laid down off the western edge of the sand in about 6½ fathoms low water; lat. 21° 31′ North, long. 91° 39′ East: Chart No. 859.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 10th February* 1890.

[Second Publication.]

NOTIFICATION No. 29Mne.

The 3rd February 1890.—The following Notice to Mariners is published for general information.

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 16).

BAY OF BENGAL.

ORISSA COAST.

Date of exhibition of new light from Chandipore flagstaff.

IN continuation of Notice to Mariners, No. 49, dated the 31st May 1889, issued by this Office, it is intended to exhibit the new light on the Chandipore flagstaff from the 1st May 1890.

The height of the new light above high-water mark will be 62 feet.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 30th January* 1890.

[Third Publication.]

NOTIFICATION No. 12Mne.

The 24th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 9).

AFRICA—NORTH-EAST SHORE.

GULF OF ADEN.

Permanent Light-ship off Ras Marbut, Aden Harbour.

Information has been received from the Political Resident at Aden that on the 15th February the temporary Light-vessel moored off Ras Marbut, Aden, Harbour, will be replaced by the permanent Light-ship. The vessel is moored in 18 feet at low water, and shows at an elevation of 39 feet above the sea a flashing White Light visible every minute. The vessel is painted Red, but has no Red Ball at mast-head and exhibits no Red Flag during the day as stated at page 90, Chapter IV, 3rd Edition of the Gulf of Aden Pilot.

By direction of the Government of Bengal,

E. W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, *Calcutta, the 22nd January* 1890.

[Third Publication]

NOTIFICATION No. 14Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 10).

AFRICA—EAST COAST.

RED SEA—WESTERN SHORE.

A light placed on the island of Difnein, Musawwa Channel.

INFORMATION has been received from the Consul-General for Italy, through the Director of Indian Marine, that a light visible at 6 miles distance, to indicate the North entry of the Musawwa Channel, has been placed on the N.-E. end of the Island of Difnein. The light is in latitude 16° 37′ 8″ N. and longitude 39° 18′ 15″ E. Arc of illumination 195 degrees, leaving a dark sector between the 65° and 250°.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Third Publication.]

NOTIFICATION No. 15Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 11).

AUSTRALIA—EAST COAST.

ULLADULLA HARBOUR.

red light on Warden head, and discontinuance of pier light.

THE British Admiralty has given notice (No. 456 of 1889) that on 1st December 1889 a light would be exhibited from a light-house recently erected on Warden head, south side of entrance to Ulladulla harbour.

The light is a *fixed* White light, visible in clear weather from a distance of about 12 miles.

Position: Approximate lat. 35° 22½′ S.; long. 150° 31½′ E.

Also, that on the same date, the light (fixed *green*) previously shown from the pier head, Ulladulla harbour, would be discontinued.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Third Publication.]

NOTIFICATION No. 16Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 12).

AFRICA—EAST COAST.

ZANZIBAR ISLAND.

Fixed light on Mwana Mwana Island.

INFORMATION has been received from the British Admiralty (No. 452 of 1889) that a light is now exhibited from a light-house (construction commenced in 1881) on the north extreme of Mwana Mwana island, north-west coast of Zanzibar island.

The light is a *fixed* white light.

Position: Lat. 5° 45′ 10″ S.; long. 39° 13′ 10″ E.

NOTE.—The regular exhibition of this light should not be relied on.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Third Publication.]

NOTIFICATION No. 17Mne.

The 27th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 13).

INDIA—SOUTH.

CEYLON—EAST COAST.

A "Torpedo Buoy" placed at the entrance to Trincomalee Harbour.

THE Colonial Government of Ceylon has given notice that on and after 25th December 1889 until 28th February 1890, a Red Buoy, with a red flag and the words "Torpedo Buoy" painted on it, will be placed in the entrance to Trincomalee Harbour between Ostenburg Point and Little Sober Island, and 260 yards from the former.

The water in the triangle formed by this Red Buoy, the E. Point of Small Sober Island and Clappenburg Point, will be obstructed by mines.

All vessels should pass between the Buoy and Ostenburg Point.

By direction of the Government of Bengal,
EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th January* 1890.

[Third Publication.]

NOTIFICATION No. 19Mne.

The 28th January 1890.—The following Notice to Mariners is published for general information.

J. M MCNEILE, *Col.*, R.E.,
Joint-Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 14).

BAY OF BENGAL.

BURMA COAST.

Date of alteration of Savage Island light—Port of Akyab.

WITH reference to Notice to Mariners, No. 50, dated the 31st May 1889, issued by this office, a telegraphic communication has been received from the Port Officer, Akyab, that the transfer of Savage island light, at the entrance of the Port of Akyab, will commence from the 27th instant.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 27th January* 1890.

[Third Publication.]

NOTIFICATION No. 20Mne.

The 28th January 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Joint-Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 15).

BAY OF BENGAL.

BURMA COAST.

Position of a water-logged Native vessel and pieces of wreckage.

A TELEGRAPHIC communication has been received from the Port Officer, Rangoon, that the Master of the steam-ship *Euphrates* reports having passed on the 23rd instant a water-logged native vessel in latitude 15° 23′ north, longitude 94° 59′ east; also pieces of wreckage when 8 miles off Krishna light-vessel. Shipmasters are cautioned accordingly.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 27th January* 1890.

EASTERN BENGAL STATE RAILWAY SYSTEM.

NOTIFICATION.

No. 2.—Mr. W. H. Chase, District Locomotive Superintendent, is granted eight months' furlough, under article 371 of the Civil Service Regulations, 1st edition, with effect from 14th February 1890, with subsidiary leave from 4th idem, or such subsequent date as he may avail himself of the same.

G. F. O. BOUGHEY, *Lieut.-Col.*, *Manager.*

SEALDAH, *the 7th February* 1890.

CIVIL MEDICAL DEPARTMENT, BENGAL.

No. 1351, *dated 6th February* 1890.—Assistant Surgeon Nirmul Chunder Gupta, attached to the Lungleh Hospital in the Lushai country, is appointed to the medical charge of the sub-division and dispensary at Cox's Bazar in the Chittagong district, *vice* Assistant Surgeon Bejoy Gobind Chowdry, transferred.

No 1354, *dated 6th February* 1890.—Assistant Surgeon Bejoy Gobind Chowdry, attached to the sub-division and dispensary at Cox's Bazar, is appointed to the medical charge of the sub-division and dispensary at Palamow in the Lohardugga district, *vice* Assistant Surgeon Kali Nath Banerjee, removed.

No. 1357, *dated 6th February* 1890.—Assistant Surgeon Jogendro Nath Basu, a Supernumerary at the Presidency, is appointed temporarily to the medical charge of the sub-division and dispensary at Cox's Bazar in the Chittagong district, during the absence, on deputation, of Assistant Surgeon Nirmul Chunder Gupta, or until further orders.

A. HILSON, M.D.,
Inspector-General of Civil Hospitals, Bengal.

HIGH COURT NOTICE.

General Letter No. 1, dated Calcutta, the 20th January 1890.

From—C. M. W. BRETT, ESQ., Registrar, High Court,

To—The Sessions Judge / District Magistrate of

I AM directed to invite your attention to the accompanying copy of a Notification of the Government of Bengal, and to request that you will so arrange the business coming before your Court as to comply, as far as possible, with the wishes of the Government.

HIGH COURT.
ENGLISH DEPARTMENT.
Criminal.

NOTIFICATION.

The 24th December 1889.—It is hereby notified for general information that on the following Mahomedan holidays during the year 1890, all public offices and Revenue and Magisterial Courts in Bengal, with the exception of the offices of Collector of Customs Shipping Master, the Registrar of Assurances, Calcutta, the Collector of Stamp Revenue, Calcutta, the Stamping Department of the Office of the Superintendent of Stamps, Calcutta, and the Salt Rowannah and Opium Sale Departments of the Board of Revenue, shall be closed:—

Eed-ul-fitr, which falls on the 21st May, or, if the moon be not visible on the 20th May, on the 22nd May.

Eed-uz zoha, which falls on the 28th July, or, if the moon be not visible on the 18th July, on the 29th July.

Mohurrum, the last two days of which fall on the 26th and 27th August, or, if the moon be visible on the 16th August, on the 25th and 26th August.

Fatiah-dosz-dahum, which falls on the 27th October, or, if the moon be not visible on the 15th October, on the 28th October.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

Sheriff's Office, the 22nd January 1890.

NOTICE is hereby given that the First Criminal Sessions of the year 1890 of the High Court of Judicature at Fort William in Bengal for the Town of Calcutta and Factory of Fort William, and the places subordinate thereto, will be holden at the Court-house in the Town of Calcutta, on Monday, the seventeenth day of February next, at 11 o'clock in the forenoon, and so on from day to day until the said Sessions be over. And it is hereby proclaimed that all persons who will prosecute any of the prisoners to be brought up for trial at the said Sessions be present then and there to prosecute.

H. B. H. TURNER, *Sheriff.*

শরিফ আফিস, সন ১৮৯০ সাল তারিখ ২২শে জানুয়ারি।

সকলকে সমাচার দেওয়া যাইতেছে যে সুবে বাঙ্গালার ফোর্ট উইলিয়ম দুর্গের অধীন শহর কলিকাতার ও অন্যান্য স্থানের ফৌজদারী বিচার নিষ্পত্তি জন্য আগামী সন ১৮৯০ সালের ১৭ই ফেব্রুয়ারি সোমবার বেলা ১১ ঘটিকার সময় এবং যে পর্য্যন্ত সেশিয়ানের কার্য্য শেষ না হয় প্রতিদিন উক্ত সময়ে কলিকাতার হাই কোর্টের আপন আদালত ঘরে সন ১৮৯০ সালের প্রথম ক্রিমিনেল সেশিয়ান বসিবেক এবং এতদ্দ্বারা প্রচার করা যাইতেছে যে, যে সকল ব্যক্তি কোন কয়েদির বিরুদ্ধে ফৌজদারী মিছিল করিবেক তাহারা উক্ত স্থানে উক্ত সময়ে হাজির থাকিয়া মোকদ্দমা করে ইতি।

এইচঃ বিঃ এইচঃ টারনার, শরিফ।

TREASURY NOTICES.

DEPUTY COLLECTOR MR. C. A. S. BEDFORD, Assistant Commissioner, has been placed in charge of the Darjeeling Treasury from 1st February 1890, and authorized to draw bills on other treasuries.

By order,

HARI MOHAN CHANDRA, *Personal Assistant.*

COMMR.'S OFFICE, RAJSHAHYE DIVN., JULPIGOREE, *the 6th February* 1890.

DEPUTY COLLECTOR BABOO CHANDI CHARAN BOSU is temporarily placed in charge of the Dacca Treasury, during the absence, on public service, of Baboo Chandra Kumar Dutta, or until further orders.

A. L. CLAY, *Offg. Commissioner.*

DACCA COMMR.'S OFFICE, CAMP PATUAKHALI, *the 3rd February* 1890.

EDUCATION DEPARTMENT, BENGAL.

Subordinate Educational Service.

The 7th February 1890.—Babu Lachman Lal, Second Master of the Patna City School (class VI), is appointed to officiate as Head Master of the same institution, *vice* Mr. J. H. D'Abreu, on leave.

Maulavi Ifazuddin Ahmad, Third Master of the Patna City School, is appointed to officiate as Second Master of the same institution and in class VI, *vice* Babu Lachman Lal.

The 8th February 1890.—Babu Sarada Kanta Sen, Departmental Sub-Inspector of Schools, Tipperah (class VI), is allowed leave of absence for three months under Article 291 of the Civil Service Regulations, with effect from the 1st March 1890, or any subsequent date on which he may avail himself of it.

Babu Mahim Chandra Basu, Departmental Sub-Inspector of Schools, Mymensingh (class VI), is appointed to act as Deputy Inspector of Schools, Tipperah, during the absence, on deputation, of Babu Bidyadhar Das, or until further orders.

A. CROFT, *Director of Public Instruction.*

NOTIFICATION OF THE BOARD OF REVENUE.

No. 113B.

NOTICE is hereby given that the Third Sale of Opium, the Provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall-street, on Monday the 3rd March 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. The may be ascertained by reference to the Notification issued onthe 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Boar of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th March 1890, respectively, that is to say no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 8th March 1890 and no Bank of Bengal Receipts in full payment of lots will be accepted afte 3-30 P.M. of Tuesday, the 18th March 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the Opium manufactured at the Patna and Ghazeepore Factories will be brought to sale in the present year about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so :—

DATES.	Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Wednesday, 2nd April 1890. ...	2,250	2,500	4,750
On or about Thursday, 1st May ,, ...	2,250	2,500	4,750
On or about Monday, 2nd June ,, ...	2 250	2,500	4,750
On or about Wednesday, 2nd July ,, ...	2,250	2,500	4,750
On or about Monday, 4th August ,, ...	2,250	2,500	4,750
On or about Monday, 1st September ,, ...	2,250	2,500	4,750
On or about Wednesday, 1st October ,, ...	2,250	2,500	4,750
On or about Monday, 3rd November ,, ...	2,250	2,500	4,750
On or about Monday, 1st December ,, ...	2,250	2,500	4,750
Total ...	20,250	22,500	42,750

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L. P., *Calcutta, the 28th January* 1890.

Statement showing the Importation of Salt (private property) in bond and afloat on the River Hooghly, subject to Customs Duty, on the 31st January 1890.

DESCRIPTION OF SALT.	Government golahs.	Private golahs.	Afloat.	Total.
	Mds.	Mds.	Mds.	Mds.
Liverpool Punga	7,00,485	.....	2,21,730	9,22,215
Bombay Kurkutch	30,986	.....	6,627	37,613
Arabian and Persian Gulfs Kurkutch and Muscat Rock ...	8,11,992	.....	4,180	8,16,172
Aden Kurkutch	1,77,573	.....	90,963	2,68,536
Hamburg salt	99,167	.....	23,696	1,22,863
Total ...	18,20,203	.....	3,47,196	21,67,399

By order of the Board of Revenue, L. P.,
J. SCOBELL ARMSTRONG, *Collector of Customs.*

CUSTOM HOUSE, CALCUTTA, *the 7th February* 1890.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that at the bye-election held on the 28th December 1889, in Ward No. IV of the Ranchi Municipality, Baboo Kalipada Ghosh, M.A., B.L, has been elected to be a Commissioner of the said Municipality, under section 27 of the Bengal Act III of 1884.

CHOTA NAGPORE, the 7th February 1890. W. H. GRIMLEY, Commissioner.

NOTIFICATION.

IT is hereby notified for general information that at the election held under section 27 of Act III (B.C.) of 1884 on Monday, the 20th January 1890, Baboo Kumud Nath Dey has been elected a Commissioner for Ward No. IV of the Hooghly and Chinsurah Municipality in the district of Hooghly, *vice* Baboo Shibo Pada Roy Chowdhury, deceased.

N. S. ALEXANDER, *Commissioner.*

BURDWAN COMMR.'S OFFICE, *the 5th February* 1890.

NOTIFICATION.

IT is hereby notified for general information that a bye-election will be held on Monday, the 7th April next, in Ward No. 3 of the Satkhira Municipality, in the district of Khoolna, to elect a Commissioner for that Ward in the place of Baboo Bepin Behari Bose, who has ceased to be a Commissioner under the operation of section 20, Act III (B.C.) of 1884, being absent from six consecutive meetings.

A. BHATTACHARJEE, *Personal Assistant, for Commissioner on tour.*

COMMR.'S OFFICE, PRESY. DIVN., CALCUTTA, *the 10th February* 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 12, 1890.

PART IA.

ers and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following order, issued by the Government of India in the Home Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION—EDUCATION.

The 1st February 1890.

No. 49.—Under section XII of Act II of 1857, the Governor-General in Council is pleased to authorize the affiliation of the Rajchandra College, Barisal, to the Calcutta University in Arts up to the B.A. Standard and in Law, with effect from the 6th December 1889.

A. P. MACDONNELL,
Secretary to the Govt. of India.

The following order, issued by the Government of India in the Department of Finance and Commerce, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATION.

The 7th February 1890.

No. 669.—The following substantive promotions have been made among the Enrolled Officers of the Account Department, with effect from the 16th January 1890, in consequence of Mr. R. A. Sterndale's retirement :—

* * * * * *

Mr. C. G. Vansittart to be Enrolled Officer, class V, and

* * * * * *

E. J. SINKINSON,
Secretary to the Government of India.

The following order, issued by the Government of India in the Military Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

VOLUNTEER CORPS.

APPOINTMENT.

Fort William, the 7th February 1890.

No. 148.—*Calcutta Volunteer Rifle Corps*—

Mr. Bruce Ellis to be second Lieutenant, *vice* Gough, resigned.

E. H. H. COLLEN,
Secretary to the Govt. of India.

The following order, issued by the Government of India in the Marine Department, is republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

APPOINTMENT.

No. 6.—Navigating Lieutenant E. W. Petley, R.N. (retired), is appointed Port Officer of Calcutta, with effect from the 1st April 1888, the date on which he assumed charge of the duties of that office.

E. H. H. COLLEN,
Secretary to the Govt. of India.

[REGISTERED No. 29.]

No. 9 of 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 26, 1890.

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PART I.

Orders and Notifications by the Lieutenant-Governor of Bengal, the High Court, Government Treasury, &c.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

No. 167A.

GENERAL.—*The 12th February* 1890.—Mr. Nilkanto Sircar, Deputy Collector, is appointed to perform the functions of a Collector under section 4 of the Public Demands Recovery Act VII (B.C.) of 1880 in the district of Beerbhoom.

The 20th February 1890.—Mr. W. C. Macpherson, Officiating Magistrate and Collector, Purneah, is allowed leave for three months, under article 291 of the Civil Service Regulations, with effect from the 5th proximo.

Mr. E. W. Collin, Joint-Magistrate and Deputy Collector, is appointed to act as Magistrate and Collector of Purneah, during the absence, on leave, of Mr. W. C. Macpherson, or until further orders.

Mr. D. B. Allen, Officiating Magistrate and Collector, Pooree, is allowed furlough for nine and a half months, under article 340 of the Civil Service Regulations, with effect from the 28th instant.

Mr. F. W. Duke, Officiating Joint-Magistrate and Deputy Collector, Pooree, is appointed to act, until further orders, as Magistrate and Collector of the District.

The 22nd February 1890.—Baboo Bejoy Madhub Mookerjee, Deputy Magistrate and Deputy Collector, Narail, Jessore, is allowed leave for two months and fifteen days, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

Baboo Ganendra Nath Pal, Deputy Magistrate and Deputy Collector, on leave, is appointed to have charge of the Narail sub-division of the district of Jessore, during the absence, on leave, of Baboo Bejoy Madhub Mookerjee, or until further orders.

The 24th February 1890.—Mr. A. W. B. Power, Officiating Magistrate and Collector, Chumparun, is allowed furlough for seven months, under article 340 of the Civil Service Regulations, with effect from the 22nd proximo, or such subsequent date as he may be relieved.

Mr. W. D. Blyth, Inspector-General of Registration, is appointed to act, until further orders, as Magistrate and Collector of Chumparun.

Mr. B. G. Geidt, Joint-Magistrate and Deputy Collector, Sarun, is allowed furlough for eight months, under article 340 of the Civil Service Regulations, with effect from the 31st March 1890, or such subsequent date as he may avail himself of it.

Mr. J. Posford, Officiating District and Sessions Judge, Tipperah, is allowed furlough for nine months, under article 340 of the Civil Service Regulations, with effect from the 11th March 1890, or such subsequent date as he may avail himself of it.

Mr. S. J. Douglas, Joint-Magistrate and Deputy Collector, Gya, is appointed to act, until further orders, as District and Sessions Judge of Tipperah.

Mr. A. A. Wace, Magistrate and Collector, Bhagulpore, is allowed furlough for eight months, under article 340 of the Civil Service Regulations, with effect from the 7th March 1890, or such subsequent date as he may avail himself of it.

Mr. R. M. Waller, Officiating Magistrate and Collector, Furreedpore, is appointed to act as Magistrate and Collector of Bhagulpore, during the absence, on furlough, of Mr. A. A. Wace, or until further orders.

Mr. H. Beveridge, Additional District and Sessions Judge, 24-Pergunnahs and Hooghly, is allowed leave for one month, under article 306 (*b*) of the Civil Service Regulations, with effect from the 20th proximo.

Mr. C. A. Wilkins, District and Sessions Judge, Bhagulpore, is appointed to act as Additional District and Sessions Judge of the 24-Pergunnahs and Hooghly, during the absence, on leave, of Mr. H. Beveridge, or until further orders.

Mr. F. W. Badcock, Officiating District and Sessions Judge, Rajshahye, is appointed to act as District and Sessions Judge of Bhagulpore, during the absence, on deputation, of Mr. C. A. Wilkins, or until further orders.

Mr. F. E. Pargiter, Joint-Magistrate and Deputy Collector, is appointed to act, until further orders, as District and Sessions Judge of Rajshahye.

The 25th February 1890.—Baboo Kedar Nath Dutt, Deputy Magistrate and Deputy Collector, Cuttack, is allowed leave for two and a half months, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

Mr. C. Johnston, Assistant Magistrate and Collector, Kandi, Moorshedabad, is transferred to the Sudder station of the district of Cuttack.

Baboo Mohendra Nath Gupta, Deputy Magistrate and Deputy Collector, on furlough, is posted to Gya, and appointed to have charge of the Aurungabad sub-division of that district.

Baboo Sree Nath Bhudder, Deputy Magistrate and Deputy Collector, Chittagong, is allowed furlough for one year, under article 371 of the Civil Service Regulations.

Mr J. F. Bradbury, Officiating District and Sessions Judge of the first grade, is confirmed in that grade, with effect from the 20th instant, *vice* Mr. J. R. Hallett, retired.

Mr. A. W. Mackie, Officiating District and Sessions Judge, Rungpore, is appointed to be a District and Sessions Judge of the second grade, with effect from the 20th instant, *vice* Mr. J. F. Bradbury.

Mr. C. S. Bayley, substantive *pro tempore* Joint-Magistrate and Deputy Collector of the first grade, is confirmed in that grade, with effect from the 20th instant, *vice* Mr. A. W. Mackie, but will continue to be seconded.

Mr. S. J. Douglas, Joint-Magistrate and Deputy Collector, Gya, is promoted substantively *pro tempore* to the first grade of Joint-Magistrates and Deputy Collectors, with effect from the 20th instant, *vice* Mr. C. S. Bayley.

Mr. G. A. Grierson, Officiating Magistrate and Collector, Gya, is allowed leave for one day, under article 291 of the Civil Service Regulations, in extension of the leave granted to him under the order of the 11th October 1889.

Mr. F. H. Barrow, Magistrate and Collector, is appointed to act, until further orders, as Magistrate and Collector of Gya.

Mr. C. A. Radice, Assistant Magistrate and Collector, Moorshedabad, is transferred to Tipperah.

Mr. B. De, Officiating Magistrate and Collector, Khoolna, is appointed to act, until further orders, in the second grade of Magistrates and Collectors, with effect from the 19th instant, *vice* Mr. D. B. Allen, on furlough.

POLICE.—*The 21st February* 1890.—Mr. A. R. G. Hampton, Officiating Assistant Superintendent of Police, Mymensingh, is transferred to Serajgunge in Pubna.

The 24th February 1890.—Mr. R. F. Guise, District Superintendent of Police, Khoolna, is transferred to Balasore.

The 25th February 1890.—Mr. O. S. Stack, Deputy Inspector-General of Police, is allowed special leave for six months, under article 348 of the Civil Service Regulations, with effect from the 1st April next, or such subsequent date as he may avail himself of it.

Mr. A. H. Giles, District Superintendent of Police, is appointed to act as a Deputy Inspector-General of Police, during the absence, on special leave, of Mr. O. S. Stack, or until further orders.

REGISTRATION.—*The 25th February* 1890.—Munshi Hadi Ali Khan, Special Sub-Registrar, Gya, was on leave from the 9th to the 15th September 1889, both days inclusive, under article 291 of the Civil Service Regulations.

Moulvie Fazalullah, Rural Sub-Registrar, Jehanabad, Gya, acted as Special Sub-Registrar, Gya, from the 13th to the 15th September 1889, both days inclusive, *vice* Munshi Hadi Ali Khan, on leave.

Baboo Bepin Behary Sircar, who was under orders, dated the 20th August 1888, appointed on probation for six months to be Rural Sub-Registrar of Kandi, in the district of Moorshedabad, is confirmed in that appointment.

Moulvie Syed Abdur Raub, Special Sub-Registrar, Burrisal, is appointed to be Special Sub-Registrar of Bogra.

Moulvie Syed Mahomed Hossein, Officiating Special Sub-Registrar of Burrisal, is confirmed in that appointment.

EDUCATION.—*The 25th February* 1890.—Mr. S. C. Hill, Principal, Krishnaghur College, is appointed to act as Inspector of Schools, Behar Circle, during the absence, on furlough, of Dr. C. A. Martin, or until further orders.

Mr. W. Billing, Officiating Professor, Hooghly College, is appointed to act as Principal, Krishnaghur College, during the absence, on deputation, of Mr. S. C. Hill, or until further orders.

MEDICAL.—*The 25th February* 1890.—Apothecary Isaac Burnett, House Surgeon, Mitford Hospital, Dacca, is appointed to act as House Surgeon, Howrah General Hospital, during the absence, on furlough, of Apothecary W. A. Williams, or until further orders, with effect from the afternoon of the 20th January 1890.

Surgeon-Major H. W. Hill, Civil Surgeon of Manbhoom, is allowed leave for three months, under article 291 of the Civil Service Regulations, with effect from the date on which he may be relieved.

The following notifications are republished from the *Assam Gazette*:—

No. 965*G.*—*The 8th February* 1890.—In consequence of the return to duty of Mr. R. Y. Pope, C.S., Assistant Commissioner, first grade, the following Assistant Commissioners reverted to the grades of Assistant Commissioners noted against their names, with effect from the 7th January 1890:—

Mr. W. Teunon, C.S., to second grade. | Mr. W. H. Cossins, C.S., to third grade.

No. 1121*G.*—*The 14th February* 1890.—Mr. J. T. Rivett-Carnac, Officiating Commandant, Military Police, Garo Hills Battalion, and Mr. L. St. J. Brodrick, Assistant Superintendent of Police, Naga Hills, are posted for duty with the Surma Valley Military Police Battalion.

No. 1122*G.*—Mr. S. N. Walker, Assistant Superintendent of Police, whose services were placed at the disposal of the Chief Commissioner in Home Department Notification No. 69, dated the 22nd January 1890, is posted for duty with the Surma Valley Military Police Battalion.

No. 377*R.*—*The 13th February* 1890.—The Chief Commissioner invests Mr. W. Teunon, C.S., Assistant Commissioner, with the powers of a Collector under Act X of 1870 (an Act for the acquisition of land for public purposes), to be exercised within the district of Sylhet.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT—(FORESTS).

NOTIFICATION.

The 18th February, 1890.—The following temporary promotions are ordered with effect from the 30th December, 1889:—

Mr. G. A. Richardson, Deputy Conservator of Forests, third grade, to officiate as Deputy Conservator of Forests, second grade.

Mr. C. A. G. Lillingston, Deputy Conservator of Forests, fourth grade, to officiate as Deputy Conservator of Forests, third grade.

Mr. C. G. Rogers, Assistant Conservator of Forests, first grade, to officiate as Deputy Conservator of Forests, fourth grade.

Mr. H. D. D. French, Assistant Conservator of Forests, second grade, to officiate as Assistant Conservator of Forests, first grade.

P. NOLAN,
Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT—(OPIUM).

NOTIFICATION.

The 18th February, 1890.—Mr. P. J. Luard, Sub-Deputy Opium Agent, Benares Agency, is allowed furlough for six months, under article 371 of the Civil Service Regulations, with effect from the 12th April, 1890, or any subsequent date from which he may avail himself of it.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 18th February, 1890.—Mr. W. H. T. Howey, Assistant Sub-Deputy Opium Agent, Benares Agency, is allowed leave on private affairs for six months, under article 370 of the Civil Service Regulations, with effect from the 10th April, 1890, or any subsequent date from which he may avail himself of it.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 25th February, 1890.—With reference to the Government notification, dated the 11th December, 1889, published at page 1036, Part I of the *Calcutta Gazette* of the 18th idem, Baboo Kali Sunker Sen is hereby appointed, under rule 1, chapter VI of the rules made by Government under the Bengal Tenancy Act, to be Settlement Officer of Pergunnah Serail in the district of Tipperah.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 25th February, 1890.—With reference to the Government notifications dated the 14th January, 1890, under section 3 of Act V (B.C.) of 1875, regarding the survey of certain lands in the districts of Cuttack and Pooree, the Lieutenant-Governor is pleased to appoint the following officers to be Assistant Superintendents of Survey, under section 4 of the same Act, for the purpose of carrying out such survey :—

Mr. W. H. Paterson.	Mr. R. C. D. Ewing.
„ R. B. Smart.	„ C. S. Kraal.

P. NOLAN,
Secretary to the Govt. of Bengal.

NOTIFICATION.

The 19th February, 1890.—The following Resolution of the Government of India, in the Military Department, regarding the formation of Volunteer Reserves, is published for general information.

P. NOLAN,
Secretary to the Govt. of Bengal.

GOVERNMENT OF INDIA.

MILITARY DEPARTMENT.

Extract from the Proceedings of the Government of India, in the Military Department,—(No. 541-B, under date Fort William, the 12th February 1890).

READ the undermentioned papers :—

Letter from North-Western Provinces Government, No. 862-III—4542, dated 27th November 1884, and enclosures.
Letter to North-Western Provinces Government, No. 586-E, dated 13th March 1885.
Letter to Madras Government and others, No. 587-E, dated 13th March 1885.
Letter from Chief Commissioner, Burma, No. 269-21-V, dated 13th August 1885, and enclosures.
Letter from Bombay Government, No. 4605, dated 26th August 1885, and enclosures.
Letter to Bombay Government No. 212-E, dated 22nd September 1885.
Letter from Bengal Government, No. 1117, dated 9th December 1885, and enclosures.
Letter from Bengal Government, No. 1118, dated 9th December 1885, and enclosures.
Letter from Adjutant-General in India, No. 1161-D, dated 29th March 1889.
Letter to Bombay Government, No. 1131-B, dated 6th May 1887.
Letter to Bengal Government, No. 1132-B, dated 6th May 1887.
Letter to Bengal Government, No. 1133-B, dated 6th May 1887.
Letter to Bombay Government, No. 1134-B, dated 6th May 1887.
Letter to Chief Commissioner, Burma, No. 263-B, dated 31st January 1888.
Letter from Punjab Government, No. 145, dated 2nd August 1888, and enclosures.
Letter to Punjab Government, No. 1969-B, dated 15th August 1888.
Letter to Madras Government, No. 1994-B, dated 18th July 1888.
Letter from Madras Government, No 4493, dated 4th July 1888, and enclosures.
Letter to Madras Government, No. 1564-B, dated 19th July 1888.
Letter to Madras Government, No. 2035-B, dated 24th September 1888.
Letter to Bombay Government, No. 799-B, dated 20th March 1889.
Letter to Bengal Government, No. 800-B, dated 20th March 1889.
Letter to Chief Commissioner, Burma, No. 801-B, dated 20th March 1889.
Letter from Chief Commissioner, Burma, No. 156-8-V, dated 5th April 1889, and enclosures.
Letter to Chief Commissioner, Burma, No. 1091-B, dated 29th April 1889.
Letter to Madras Government, No. 2149-B, dated 26th August 1889.
Letter to Punjab Government, No. 2150-B, dated 26th August 1889.
Letter to Bengal and Bombay Governments, No. 2151-B, dated 26th August 1889.
Letter from Bengal Government, No. 85-TG, dated 23rd October 1889, and enclosures.

Letter to Bengal Government, No. 2791-B, dated 19th November 1889.
Letter from Bombay Government, No. 3573, dated 21st November 1889, and enclosures.
Letter from Madras Government. No. 8298, dated 29th November 1889, and enclosures.

OBSERVATIONS.—In April 1885 sanction was given to the formation of volunteer reserves in the North-Western Provinces and Local Governments were asked to submit proposals for the organization of similar forces in their respective provinces. In May 1887 the proposals of the Bengal Government for raising volunteer reserves in Bengal, and those of the Bombay Government for the formation of volunteer reserves in Bombay and in connection with the Bombay, Baroda, and Central India Railway Volunteer Corps, were approved. In the beginning of 1888 sanction was also given to the organization of volunteer reserves in Burma, and in September 1888 to the formation of volunteer reserves in the Madras Presidency In September 1888 the Punjab Government reported that steps were being taken to ascertain the number of persons in the province who were fit to be volunteers and the proportion of these already enlisted in the volunteer or reserve forces. Subsequently Local Governments were requested to furnish, for the information of the Government of India, reports showing the progress made. The reports which have been received show that reservists in the following numbers have been enrolled in the various provinces:—

Bengal	Calcutta	462	
	Bhagalpur	20	(a)
	Muzaffarpur	30	(a)
N.-W. Provinces	Allahabad	180	
	Cawnpore	80	(a)
	Benares	26	
	Oudh Volunteer Reserve Corps	98	
	Mussoorie ditto	150	
	Rohilkhand ditto	38	
	Dehra Dun Mounted Volunteer Reserve Corps	40	
Punjab	...	500	(a)
Madras	Madras City	248	
	Kistna District	81	
	Bellary do	54	
	Coorg and Mysore	5	
Burma	Upper Burma	103	
	Arracan Division	36	
	Tennasserim Division	38	
	Irrawaddy Division	69	
	Total	2,258	

(a) These are said to be expected to join.

RESOLUTION.—The Governor-General in Council observes with satisfaction the progress made in this important matter and desires to record the acknowledgments of the Government of India to the Local Governments and Administrations and to the volunteer corps concerned for their efforts in furthering the volunteer reserve movement. From a comparison, however, of the number of available men in the various towns and districts of India with the numbers already enrolled as volunteers or reservists, it is evident that the volunteer reserve force might be considerably augmented, and His Excellency in Council trusts that Local Governments and Administrations will give their earnest attention to this matter and endeavour to increase existing volunteer reserve corps and companies and to raise new corps and companies where none at present exist. His Excellency in Council also desires that local Governments and Administrations will impress on the civil officers under their orders and on officers commanding volunteer corps the necessity for taking a personal interest in the movement, as it is one to which the Government of India attach great importance.

ORDER.—Ordered that a copy of this Resolution be communicated to the Secretary to the Government of $\frac{\text{Madras}}{\text{Bombay}}$, Military Department; the Secretary to the Government of Bengal, General Department; the Secretary to the Government of the North-Western Provinces and Oudh, General Department; the Secretary to the Government of the Punjab, Civil Department; the Chief Commissioners of Burma, Assam, and the Central Provinces, and the Adjutant-General in India.

DECLARATION.

The 21st February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for the construction of the proposed central distillery at Jessore, in the village of Bijpara, pergunnah Emadpore, zillah Jessore, it is hereby declared that for the above purpose a piece of land in five plots, measuring, more or less, 6 bighas 14 cottahs and 10 chittacks of standard measurement, within the boundaries given below, is required within the aforesaid village of Bijpara—

Plot No. 1 —Bounded on the North by Binode Bihari Shaha's land; East by the old tank; South by Binode Bihari Shaha's land; and West by the old distillery land.

Plot No. 2.—Bounded on the North by the old distillery land and Binode Bihari Shaha's land; East by an old tank; South by Binode Bihari Shaha's land; and West by Mathura Nath Basu's land.

Plot No. 3 —Bounded on the North by Mathura Nath Basu's land; East by the old distillery land and Binode Bihari Shaha's land; South by Mathura Nath Basu's land; and West by Mathura Nath Basu's land.

Plot No 4.—*Old tank.*—Bounded on the North by Baboo Umes Chandra Ghosh's land; East by Mathura Nath Basu's land; South by Binode Bihari Shaha's land; and West by Binode Bihari Shaha's land.

Plot No. 5.—*Old distillery land.*—Bounded on the North by Baboo Umes Chandra Ghosh's land; East by Binode Bihari Shaha's land; South by Binode Bihari Shaha's land; and West by Mathura Nath Basu's land.

A plan of the required land may be inspected at the Collector's office.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

DECLARATION.

The 22nd February 1890.—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken by Government at the public expense for a public purpose, viz., for construction of a building for Sudder distillery at Beerbhoom, in the village of Hatzanbazar, pergunnah Khatanga, zillah Beerbhoom, it is hereby declared that for the above purpose a piece of land measuring, more or less, 4 bighas of standard measurement, bounded on the North by Poorana Sonatorce; and on the South, East, and West by the lands belonging to Baboo Jagendra Chandra Bose, is required within the aforesaid village of Hatzanbazar.

A plan of the land required to be taken up may be inspected by the parties interested in the office of the Collector of Beerbhoom.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

JUDICIAL DEPARTMENT.

No. 168A.

The 20th February 1890.—Under the authority vested in him by the final clause of section 357 of the Code of Criminal Procedure, Act X of 1882, the Lieutenant-Governor empowers Baboo Abhilash Chandra Mukerjee, Officiating Deputy Magistrate and Deputy Collector, Rajshahye, to take down evidence in criminal cases in the English language.

The 21st February 1890.—The following gentlemen are appointed to be Honorary Magistrates for the Sudder Bench of Chittagong, and are vested with the powers of a Magistrate of the third class:—

Baboo Umesh Chandra Sen, Assistant Surgeon.
„ Umesh Chandra Sen, Zemindar.
„ Mohendra Lal Das, B.L.
Moulvie Raizuddin, B.L.
Munshi Khoirati Meah.
Haji Abdool Maloom.
Rev. J. A. DeCruze.

The 22nd February 1890 —In the notification of the 15th instant, appointing Baboo Gopal Chunder Mookerjee, B.L., to act as a Munsif in the district of Gya, to be ordinarily stationed at the Sudder station, during the absence, on deputation, of Baboo Ananta Ram Ghose, or until further orders, *for* Baboo Gopal Chunder Mookerjee *read* Baboo Gopal Chunder Chatterjee.

The 24th February 1890.—Baboo Satkari Haldar, B.L., Officiating Munsif of Alipore, in the district of the 24-Pergunnahs, is appointed to act as a Munsif in the district of Moorshedabad, to be ordinarily stationed at Kandi, during the absence, on deputation, of Baboo Chandra Nath Ghose, or until further orders.

The 25th February 1890.—Baboo Nogendra Nath Dhur, substantive *pro tempore* Munsif of Moradnugger, in the district of Tipperah, on leave, is appointed to be a substantive *pro tempore* Munsif in the district of Dacca, to be ordinarily stationed at the Sudder station of that district.

Baboo Nikunja Behari Roy, Officiating Munsif of Burrisal, in the district of Backergunge, is appointed to be a substantive *pro tempore* Munsif in the district of Tipperah, to be ordinarily stationed at Moradnugger, but to continue in his present appointment, during the absence, on deputation, of Baboo Joy Gopal Singha, or until further orders.

Baboo Soshi Bhusan Sen, B.L., is appointed to act as a Munsif in the district of Tipperah, to be ordinarily stationed at Moradnugger, during the absence, on deputation, of Baboo Nikunja Behari Roy, or until further orders.

Baboo Chandra Nath Ghose, Munsif of Kandi, in the district of Moorshedabad, now on deputation at Azimgunge, is vested temporarily with the powers of a Judge of a Court of Small Causes for the trial of suits cognizable by such a Court up to the value of Rs. 50 within the local limits of the Azimgunge Munsifi.

In supersession of the order of the 5th instant, Baboo Janoki Nath Dutt, Munsif of Serampore, in the district of Hooghly, is appointed to be a Munsif in the district of Burdwan, to be ordinarily stationed at the Sudder station.

Baboo Janoki Nath Dutt is vested with the powers of a Judge of a Court of Small Causes for the trial of suits cognizable by such a Court up to the value of Rs. 50, within the local limits of the Burdwan Munsifi.

Baboo Sham Kishore Bose, Munsif of Burdwan, on leave, is appointed to be a Munsif in the district of Rajshahye, to be ordinarily stationed at Seebgunge.

Baboo Sham Kishore Bose is vested with the powers of a Judge of a Court of Small Causes for the trial of suits cognizable by such a Court up to the value of Rs. 50 within the local limits of the Seebgunge Munsifi.

Baboo Prosunno Kumar Gupta, B.L., is appointed to act as a Munsif in the district of Rajshahye, to be ordinarily stationed at Seebgunge, during the absence, on leave, of Baboo Sham Kishore Bose, or until further orders.

Baboo Hari Narain Roy, Munsif of Seebgunge, in the district of Rajshahye, on furlough, is appointed to be a Munsif in the district of Hooghly, to be ordinarily stationed at Jehanabad.

Baboo Latu Behari Bose, Officiating Munsif of Maldah, in the district of Rajshahye, is appointed to act as a Munsif in the district of Hooghly, to be ordinarily stationed at Jehanabad, during the absence, on furlough, of Baboo Hari Narain Roy, or until further orders.

Baboo Jogendra Nath Mookherjee, Munsif of Jehanabad, in the district of Hooghly, is appointed to be a Munsif in the same district, to be ordinarily stationed at Serampore.

Baboo Kedar Nath Chatterjee, Subordinate Judge, Beerbhoom, is transferred temporarily to Bankoorah.

Moulvie Mahmud-ul-Nabi, Deputy Magistrate and Deputy Collector, Lalbagh, Moorshedabad, is vested with the power to try summarily the offences mentioned in section 260 of the Code of Criminal Procedure.

Baboo Jagan Nath Sahoy, Officiating Munsif of Lohardugga, is vested with the powers of a Magistrate of the third class.

Moulvie Fuzlul Kareem, B.L., is appointed to act as a Munsif in the district of Chota Nagpore, to be ordinarily stationed at Ranchi, during the absence, on leave, of Syed Abdul Aziz, or until further orders.

Baboo Bishnu Pada Chatterjee, M.A., B.L, is appointed to act as a Munsif in the district of Mymensingh, to be ordinarily stationed at Netrokona, during the absence, on leave, of Baboo Akhoy Kumar Sen, or until further orders.

GRANT OF LEAVE TO MUNSIFS.—*The 19th February* 1890.—Baboo Kali Nath Dhar, Munsif of Azimgunge, in the district of Moorshedabad, is allowed leave for three months, under article 369 of the Civil Service Regulations, with effect from the 3rd March 1890, or from the date on which he may be relieved.

The 20th February 1890.—Syed Abdul Aziz, Munsif of Ranchi, in Chota Nagpore, is allowed leave for thirty-three days, viz., one month under articles 307 and 309 of the Civil Service Regulations, and the remaining period under article 306 (*b*) of the same Regulations, with effect from the date on which he may be relieved.

The 21st February 1890.—Baboo Akhoy Kumar Sen, Munsif of Netrokona, in the district of Mymensingh, is allowed leave for two months and sixteen days, viz., fifteen days under article 309 of the Civil Service Regulations, and the remaining period under article 306 (*b*) of the same Regulations, with effect from the 2nd March 1890, or from the date on which he may be relieved.

Baboo Raj Narayan Chuckerbutty, Munsif of Cutwa, in the district of Burdwan, is allowed leave for twenty days, under article 306 (*b*) of the Civil Service Regulations, in extension of the leave granted to him on 21st December 1889.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—BENGAL.

ESTABLISHMENTS.

The 25th February 1890.

No. 58.—Adverting to Notification No. 28, dated the 29th ultimo, Mr. H. B. Taylor, Executive Engineer, temporary rank, is appointed to officiate as Under-Secretary to this Government in the Railway Branch, with effect from the forenoon of the 24th instant.

IRRIGATION.

The 25th February 1890.

No. 59.—*Declaration.*—Whereas it appears to the Lieutenant-Governor of Bengal that land is required to be taken up by Government at the public expense for a public purpose, viz., for the reconstruction of the Rampal Embankment cut, it is hereby declared that for the above purpose two pieces of land on both sides of the cut measuring, more or less, 2 bighas 15 cottahs and 15 chittacks of standard measurement, in the village of Rampal, pergunnah Kumarprotab, district Moorshedabad, is required.

This declaration is made, under the provisions of section 6 of Act X of 1870, to all whom it may concern.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

RAILWAY.

The 24th February 1890.

No. 56.—*Corrigendum.*—For "Bengal Northern Railway" in Declaration No. 48, of the 17th February 1890, published at page 145, Part I of the *Calcutta Gazette* of the 19th February 1890, read "Bengal Nagpur Railway."

No. 57.—It is hereby notified, under section 4 of Act X of 1870, to all whom it may concern, that a survey for a line of railway is about to be made from Sini station on the Bengal Nagpur Railway in the district of Singbhoom to Howrah, passing near the following places:—

In the Singbhoom district.

Goomharia.	Moholia.
Jugsoli.	Ghatsila.
Domjori.	Narsingurh.

Chakulia.

In the Midnapore district.

Ektal.	Soosooma.
Gopalpoor.	Midnapore.
Jhargoon.	Boli Chuk.
Dhangoram.	Punch Kura.

Kola Ghat.

In the Howrah district.

Bagnan.	Baoria.
Moiskrika Ghât.	Rajgung Haut.
Rajapoor Haut.	Echapoor.

Howrah.

This declaration is made in supersession of this Department's Declaration No. 52 of the 18th February 1890.

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal.

PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTIFICATION No. 45Mne.

The 20th February 1890.—The following letter No. 698A., dated the 12th February 1890, from the Government of Bombay, regarding the removal of quarantine at Aden, Perim, and the Somali Coast against arrivals from the Turkish ports of the Persian Gulf, is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

No. 698A., dated Bombay Castle, the 12th February 1890.

From—J. DEC. ATKINS, ESQ., C.S., Acting Under-Secy. to the Govt. of Bombay, General Department,

To—The Secretary to the Government of Bengal, Calcutta.

IN continuation of my letter No. 3583, dated 31st August 1889, I am directed to state that, under instructions from the Government of India, quarantine restrictions at Aden, Perim, and the Somali Coast against arrivals from the Turkish ports of the Persian Gulf have been withdrawn.

NOTIFICATION No. 48Mne.

The 25th February 1890.—The Lieutenant-Governor is pleased to appoint the gentleman named below to be a member of the Committee appointed under Resolution No. 461Mne., dated the 18th February 1890, published in the Supplement to the last issue of the *Calcutta Gazette*, to consider and advise on the arrangements that should be adopted on the opening of the Kidderpore Docks—

Mr. G. Irving ... ...
Representing the Calcutta Trades' Association.

E. J. MARTIN,
Joint-Secy. to the Govt. of Bengal.

[First Publication.]

NOTIFICATION No. 46Mne.

The 25th February 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Govt. of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE.)

NOTICE TO MARINERS—(No. 23).

AUSTRALIA—EAST COAST.

INNER ROUTE.

Sunken rock and bank eastward of Claremont No. X (Chapman) island; and non-existence of rock awash south-eastward of Young island.

THE British Admiralty has given notice (No. 31 of 1890) that the following information has been received, relating to dangers found in the Inner Route, east coast of Australia, the result of recent examinations by Lieutenant and Commander G. C. Frederick, H.M.'s Surveying Vessel *Dart*:—

(1) A sunken rock, composed of coral, with a depth of 5 feet on it at low water, is situated with Claremont No. X (Chapman) island, bearing W.S.W., distant $1\frac{9}{10}$ miles.
Position: lat. 12° 53′ S., long. 143° 39′ 15″ E.

(2) A bank, with several patches of $2\frac{1}{2}$ fathoms near its western edge, extending thence more than a mile to the eastward, with patches of 4 and 5 fathoms on it, lies between the above rock and Claremont No. X island.
From the shoalest part of this bank Claremont No. X island bears W. by S., distant 8 cables.

(3) A careful search was made for the rock awash at low water, marked on the charts in a position bearing S.E., distant $1\frac{5}{10}$ miles from Young island. Depths of 12 to 14 fathoms, and a level bottom, were found all round and upon the assigned position of this rock; and at low water, and under favourable circumstances, no indications of shoal water were observed in the locality.

This rock has consequently been expunged from the Admiralty charts.
Position: lat. 12° 8′ 30″ S, long 143° 14′ E.

(*Variation* 5° *Easterly in* 1890.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th February* 1890.

[First Publication.]

NOTIFICATION No. 47Mne.

The 25th February 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Govt of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 24).

AFRICA—EAST COAST.

GULF OF ADEN.

Permanent light vessel, Aden harbour, replaced in position.

IN continuation of Notice to Mariners, No. 109, dated the 12th November 1889, issued by this office, the British Admiralty has given notice (No. 35 of 1890) that on 15th February 1890 the provisional light-vessel will be replaced by the permanent light-vessel.

The light will be (as previously) a *flashing* white light, showing a flash *every minute*, and elevated 39 feet above the sea.

The light-vessel, moored in 18 feet at low water, is painted red, but will not carry a red ball at the masthead, nor hoist a red flag during the day.

By direction of the Government of Bengal,

EATON W. PETLEY,
Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 24th February* 1890.

[Second Publication.]

NOTIFICATION No. 41Mne.

The 17th February 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Government of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 21).

BAY OF BENGAL.

BURMA COAST.

Regarding Savage island light; and a white light on Fakir Point.

IN continuation of Notice to Mariners, Nos. 17 and 18, respectively dated the 4th February 1890, information has been received from the Port Officer, Rangoon, that the transferring of the light on Savage island to the temporary structure having been completed, that light will be exhibited as before. A white light will also be shewn from Fakir Point to guide vessels leaving or entering the port at night.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 15th February* 1890.

[Second Publication.]

NOTIFICATION No. 42Mne.

The 17th February 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secretary to the Government of Bengal.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 22).

BAY OF BENGAL.

ORISSA COAST.

Inner bar buoy replaced in position.

IN continuation of Notice to Mariners, No. 2, dated the 4th January 1890, issued by this Office, information has been received from the Collector of Customs, Balasore, that the Inner bar (red) buoy has been replaced in position.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 15th February* 1890.

[Third Publication.]

NOTIFICATION No. 31Mne.

The 4th February 1890.—The following Notice to Mariners is published for general information.

J. M. MCNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 17).

BAY OF BENGAL.

BURMA COAST.

Alteration of light on Savage Island—port of Akyab.

IN continuation of Notice to Mariners, No. 14, dated the 27th January 1890, issued by this Office, information has been received from the Port Officer, Akyab, that the light on Savage island will be obscured from the 27th idem, preparatory to its removal to the temporary structure, and will be re-exhibited after 10 to 15 days. During this period a blue light will be burnt every ½ of an hour.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th February* 1890.

[Third Publication.]

NOTIFICATION No. 32Mne.

The 4th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 18).

BAY OF BENGAL.

BURMA COAST.

Blue lights on Savage island discontinued.

IN continuation of Notice to Mariners No. 17, dated the 4th instant, a telegraphic communication has been received from the Port Officer, Akyab, that the blue lights on Savage island were discontinued from the 2nd idem.

By direction of the Government of Bengal,

OLIVER LASH, B.P.,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 4th February* 1890.

[Third Publication]

NOTIFICATION No. 38Mne.

The 11th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secy. to the Govt of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT,—(MARINE).

NOTICE TO MARINERS (No. 19).

CHINA SEA.

SINGAPORE, WESTERN APPROACH—SALAT SINKI.

Bell buoy withdrawn; and a light-vessel moored on Ajax shoal.

THE British Admiralty has given notice (No. 23 of 1890) that on 1st February 1890 a light-vessel will be moored on Ajax shoal, west side of Salat Sinki, western approach to New harbour, Singapore:—

The light will be a *flashing* white light, showing a *flash every thirty seconds*; it will be elevated 38 feet above the sea, and should be visible in clear weather from a distance of 10 miles.

The light-vessel will be painted yellow, with the word *Ajax* in white letters on a black ground on her sides. She will carry a caged ball, painted red, at the masthead, as a day mark.

Position, lat. 1° 13′ 55″ N., long 103° 40′ 20″ E.

Also, that on the same date, the Bell buoy now marking Ajax shoal will be withdrawn.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 10th February* 1890.

[Third Publication.]

NOTIFICATION No. 39Mne.

The 11th February 1890.—The following Notice to Mariners is published for general information.

J. M. McNEILE, *Col.*, R.E.,
Secy. to the Govt. of Bengal, P. W. Dept.

GOVERNMENT OF BENGAL, PUBLIC WORKS DEPARTMENT—(MARINE).

NOTICE TO MARINERS—(No. 20).

BAY OF BENGAL.

CHITTAGONG COAST.

Spar buoy replaced temporarily.

INFORMATION has been received from the Port Officer, Chittagong, that the Spar buoy referred to in Notice to Mariners No. 28, dated 18th March 1889, having sunk, a second class iron buoy has been laid down off the western edge of the sand in about 6½ fathoms low water; lat. 21° 31′ North, long. 91° 39′ East: Chart No. 859.

By direction of the Government of Bengal,

OLIVER LASH,
for Port Officer of Calcutta.

PORT OFFICE, CALCUTTA, *the 10th February* 1890.

JAIL DEPARTMENT.

No. 1701, *dated the* 20*th February* 1890.—Surgeon W. H. B. Robinson made over charge of the Jessore Jail to Assistant Surgeon Behari Lal Pal on the forenoon of the 12th February 1890.

A. D LAWMORE,
Offg. Inspr.-Genl. of Jails, Bengal.

CIVIL MEDICAL DEPARTMENT, BENGAL.

No. 1757.—*The* 17*th February* 1890.—Assistant Surgeon Hari Mohun Sen was employed on the famine relief works at Angool, in the Cuttack district, from the forenoon of 15th August to afternoon of 30th November 1889.

No. 2034.—*The* 24*th February* 1890.—Assistant Surgeon Kali Prosanno Chowdry, in medical charge of the charitable dispensary at Burdwan, is allowed leave for three months, under article 369 of the Civil Service Regulations.

No. 2036.—*The* 24*th February* 1890.—Assistant Surgeon Kallee Prosono Ghosal is appointed to have temporary medical charge of the charitable dispensary at Burdwan, during the absence, on leave, of Assistant Surgeon Kali Prosanno Chowdry, or until further orders.

A. HILSON, M.D.,
Inspector-General of Civil Hospitals, Bengal.

HIGH COURT NOTICE.

CIRCULAR ORDER ISSUED BY AUTHORITY OF THE HIGH COURT OF JUDICATURE AT FORT WILLIAM IN BENGAL.

CRIMINAL.

No. 1, *dated the* 24*th January* 1890.

For Rule 39, Clauses (*a*), (*b*), (*c*), (*cc*), (*ccc*), (*d*), (*e*), (*f*), (*g*), (*h*), (*hh*) (*i*), (*j*), and foot-notes, Chapter VI, pages 135 to 139, Criminal Rules and Orders, substitute the following:—

39.[1] [*Charges for Copies—C. O. No.* 1 *of* 24*th January* 1890]—(*a*) In all Criminal Courts a uniform charge shall be made for the preparation of copies, whether certified or uncertified, at the rate of 3 annas per folio. This term, it is to be carefully explained to all subordinate officers, merely denominates a certain quantity of manuscript; the folio to consist of 150 words English or of 300 words Vernacular, 4 figures counting as one word.

(*b*) This charge shall be levied by means of an impressed stamp of 3 annas[2] on each sheet of paper corresponding with the folio to be provided by the applicant for a copy. Each of these sheets shall contain a folio, that is, 150 words English or 300 words Vernacular. As there are 25 lines in each sheet, no line shall contain more than 6 words English or 12 words Vernacular.

(*c*) All copies, whether certified or uncertified, must, before issue, be examined by a salaried officer.[3] The copies themselves will, in all cases, be made by Section-writers, who will be remunerated at the rate of 2 annas per folio.

(*d*) Uncertified copies may be converted into certified copies upon the application of the person to whom they have been granted, and upon his filing with such application the necessary 8-anna Court-fee stamps required by law.

(*e*) Certified copy must be "certified to be a true copy," must bear the seal of the Court, and must be signed in full, if not by the Presiding Officer, then by the officer hereinafter named, viz.:—

At the head-quarters of a district—

All certified copies by the Head Clerk of the Court of the District Magistrate;

In Courts at Sub-divisions—

All certified copies by the Head Clerk of the Court of the Sub-divisional Magistrate.

In every case the certifying officer will append to his signature the words "authorised under Section 76, Act I of 1872."

[1] This rule takes effect from the 1st of April 1890.

[2] Till such stamps are available, the sheets now in use for copies, each bearing an impressed (non-judicial) stamp of 4 annas, will, after they have been overprinted with the words "3 annas" in English and in the Vernacular, be sold for 3 annas per sheet.

[3] The duty of examining copies should, as a rule, be entrusted to the Comparing or Examining Clerks, or if there none in the office, to the Head Clerk or Sheristadar. The copyists must not be allowed to examine for each other. Uncertified copies should only be marked as "examined" and initialled by the Examiner.

The words

Certified to be a true copy

authorised under Section 76, Act I of 1872.

may be impressed by means of a stamp.

(*f*) One-third of the charge of 3 annas per folio, levied by means of the impressed stamp, represents the payment to Government on account of the salary of Examiners, cost of paper, &c., the remaining two-thirds will represent the earnings of the Section-writers, whose accounts will be made up monthly, and the amount due to each paid out of contingencies.[1] These payments must be checked at the time with the upper part of each stamp, which, when the copy is ready, must be torn off each sheet, along the perforated line, and then endorsed with the copyist's name, and kept till the end of the month. Care must be taken to see that nothing in excess of two-thirds of the amount realized in stamps is paid away.

(*g*) To prevent the risk of stamped slips being used more than once, the Officer passing the copyist's account will, after checking it as directed, tear the slips to pieces and cause them to be burnt in his presence. A certificate that this has been done must be attached to the contingent bill on which the copyists' fees are drawn.

(*h*) To protect the interests of the Government, care must be taken to see that all copies issued from the Courts are prepared on the prescribed stamp paper; they must be written on one side of the sheet only, and must not contain more than the authorised number of words. On the other hand, care must be taken to see that applicants are not imposed upon by the copyists spreading their writing over a larger number of sheets than is necessary. By insisting on the number of lines in each sheet being uniform, control may easily be exercised in this matter, the number of words in a few of the lines in each folio being checked. The business of a copyist is (like most other occupations) one calling for skill and greatly dependent for its successful practice on experience; copyists, therefore, must possess or acquire skill in their business, or they ought not to be retained. Copyists who fail to do their work satisfactorily must be removed.

(*i*) When an applicant requires his copies to be furnished on the day of application, an extra fee of one rupee (or, if the copies exceed four folios, of 4 annas for each folio)[2] shall be charged on all copies so furnished, to be levied from him by a Court-fee stamp, which should be affixed to the application for the copy and be entered in the Register for Court-fee stamps. Care, however, is to be taken that other applicants for copies do not materially suffer by the arrangement. If the granting of other copies be much delayed by this rule, an extra hand ought to be told off to furnish their copies.

(*j*) Under ordinary circumstances, the time for furnishing the copies required shall not be later than 1 P.M. of the fifth open day after the presentation of the application.

(*k*) When a copy of a judgment, sentence or order is granted, the following particulars must invariably be recorded on the back of the copy itself, and in the form[3] given below for the information of the Appellate Court (Section 12, Act XV of 1877).

Date of application for the copy.....

Date of delivery of the requisite stamped sheets.....

Date on which the copy was ready for delivery[4].....

Date of making over the copy to the applicant.....

(*l*) In the case of certified copies, the Court-fee chargeable under the Court-fees Act should be levied by affixing the necessary stamp to the first folio of the copy.

(*m*) In the case of maps and plans, no general rule can be laid down. In each case a charge will have to be fixed with reference to the difficulty or intricacy of the work to be done. Half will be paid to the copyist, and half credited to Government on account of examination fees and cost of materials.[5]

List of Orders cancelled.

Circular Order (Civil) No. 8, dated 29th June 1875.

Circular Order (Civil) No 30, dated 23rd August 1879, paragraph 4.

Circular Order No. 35, dated the 1st October 1880.

General Letter No. 4, dated the 4th March 1881.

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[1] The copyist is paid by the folio; he would get his pay according to the number of folios copied, whether the copies are subsequently taken out or not.—(H. C. No. 2168, 1881.)

[2] This is a fee for credit to Government, and no part of it is payable to the copyists. Expedition fees should be shown in column 5 of Annual Statement I, Part IV.

[3] This form is printed on the reverse of the stamped sheets now in use for copies.

[4] Compare IX, C. L. R. 293, which is to be strictly followed—(H. C. 1757, 1883.)

[5] In Criminal cases parties are entitled to obtain copies, certified or uncertified, of any portion of the record of trial, this ruling covers such Police-papers as may be made use of as evidence at the trial. As regards other Police-papers, the High Court can pass no orders—(H. C. 1972, 1880, and 1652, 1882.)

Complainants must pay copying fees whenever they want copies. But an accused is, under Section 371 of Act X of 1882, entitled, in cases other than summons cases, to a copy of the judgment absolutely free of charge and on plain paper—(H. C. Proceedings, May 1881.)

As a general rule, copies of exhibits in a Criminal case should certainly not be granted to persons who are strangers to the case. A Magistrate should use his discretion in each case, acting on the general principle that no copies should be given to a stranger without very good cause being shown—(H. C. 82, 1882.)

Circular Order No. 4, dated the 1st June 1881.
Circular Order No. 1, dated the 18th June 1883.
Circular Order No. 10, dated the 21st July 1884, last paragraph.
Circular Order No. 2, dated the 2nd February 1885, paragraph 3.
Rule No. 4, dated the 29th June 1886, paragraphs 2 and 3.

CIVIL.

No. 2, dated the 24th January 1890.

For Rule 41, Clauses (*a*), (*b*), (*c*), (*cc*), (*ccc*), (*d*), (*e*), (*f*), (*g*), (*h*), (*hh*), (*i*), (*j*), and foot-notes, Chapter V, pages 291 to 294, Civil Rules and Orders, substitute the following:—

41.[1] [*Charges for Copies—C. O. No. 2 of 24th January* 1890.]—(*a*). In all Civil Courts, a uniform charge shall be made for the preparation of copies, whether certified or uncertified, at the rate of three annas per folio. This term, it is to be carefully explained to all subordinate officers, merely denominates a certain quantity of manuscript; the folio to consist of 150 words English, or of 300 words Vernacular, four figures counting as one word.

(*b*) This charge shall be levied by means of an impressed stamp of 3 annas[2] on each sheet of paper corresponding with the folio to be provided by the applicant for a copy. Each of these sheets shall contain a folio—that is, 150 words English or 300 words Vernacular. As there are 25 lines in each sheet, no line shall contain more than six words English or twelve words Vernacular.

(*c*) All copies, whether certified or uncertified, must, before issue, be examined by a salaried officer.[3] The copies themselves will, in all cases, be made by Section-writers, who will be remunerated at the rate of 2 annas per folio.

(*d*) Uncertified copies may be converted into certified copies upon the application of the person to whom they have been granted, and upon his filing with such application the necessary 8-anna Court-fee stamps required by law.

(*e*) Certified copies must be "certified to be a true copy," must bear the seal of the Court, and must be signed in full, if not by the Presiding Officer, then by the officer hereinafter named, *viz.*—

at the Head-quarters of a District—

in the case of copies of—
Judicial documents not being Wills,—by the Sheristadar;
in the case of copies of—
Other documents including copies of Wills,—by the Head Clerk.

In Courts of Small Causes constituted under Act IX of 1887—

All certified copies,—by the Head Clerk;

in other Courts at out-stations—

All certified copies,—by the Sheristadar.

In every case the certifying Officer will append to his signature the words "authorized under Section 76, Act I of 1872"

The words

Certified to be a true copy

authorized under Section 76, Act I of 1872.

may be impressed by means of a stamp.

(*f*) One-third of the charge of 3 annas per folio, levied by means of the impressed stamp, represents the payment to Government, on account of the salary of Examiners, cost of paper, &c.; the remaining two-thirds will represent the earnings of the Section-writers, whose accounts will be made up monthly, and the amount due to each paid out of contingencies.[4] These payments must be checked at the time with the upper part of each stamp, which, when the copy is ready, must be torn off each sheet, along the perforated line, and then endorsed with the copyist's name, and kept till the end of the month. Care must be taken to see that nothing in excess of two-thirds of the amount realized in stamps is paid away.

(*g*) To prevent the risk of stamped slips being used more than once, the officer passing a copyist's account will, after checking it as directed, tear the slips to pieces and cause them to be burnt in his presence. A certificate that this has been done must be attached to the contingent bill on which the copyists' fees are drawn.

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[1] These Rules take effect from the 1st April 1890.

[2] Till such stamps are available, the sheets now in use for copies, each bearing an impressed (non-judicial) stamp of 4 annas, will, after they have been overprinted with the words "3 annas" in English and in the Vernacular, be sold for 3 annas per sheet.

[3] The duty of examining copies should, as a rule, be entrusted to the Comparing or Examining clerks, or if there are none in the office, to the Head Clerk or Sheristadar. The copyists must not be allowed to examine for each other.
Uncertified copies should only be marked as "examined" and initialled by the Examiner.

[4] The copyist is paid by the folio; he would get his pay according to the number of folios copied, whether the copies are subsequently taken out or not [H. C. No. 2163 (Criminal), 1881.]

(*h*) To protect the interests of the Government, care must be taken to see that all copies issued from the Courts are prepared on the prescribed stamp paper; they must be written on one side of the sheet only, and must not contain more than the authorized number of words. On the other hand, care must be taken to see that applicants are not imposed upon by the copyists spreading their writing over a larger number of sheets than is necessary. By insisting on the number of lines in each sheet being uniform, control may easily be exercised in this matter, the number of words in a few of the lines in each folio being checked. The business of a copyist is (like most other occupations) one calling for skill, and greatly dependent for its successful practice on experience; copyists, therefore, must possess or acquire skill in their business, or they ought not to be retained. Copyists who fail to do their work satisfactorily must be removed.

(*i*) When an applicant requires his copies to be furnished on the day of application, an extra fee of one rupee (or, if the copies exceed four folios, of 4 annas for each folio)[1] shall be charged on all copies so furnished, to be levied from him by a Court-fee stamp, which should be affixed to the application for the copy, and be entered in the Register for Court-fee stamps. Care, however, is to be taken that other applicants for copies do not materially suffer by the arrangement. If the granting of other copies be much delayed by this rule, an extra hand ought to be told off to furnish the copies urgently required.

(*j*) Under ordinary circumstances, the time for furnishing the copies required shall not be later than 1 P. M. of the fifth open day after the presentation of the application.

(*k*) When a copy of a decree, judgment or order is granted, the following particulars must invariably be recorded on the back of the copy itself, and in the form[2] given below, for the information of the Appellate Court (Section 12, Act XV of 1877):—

Date of application for the copy	... ...
Date of delivery of the requisite stamped sheets	... ...
Date on which the copy was ready for delivery	... ...
Date of making over the copy to applicant	... ...

(*l*) In the case of certified copies, the Court-fee chargeable under the Court-fees Act should be levied by affixing the necessary stamp to the first folio of the copy.

(*m*) In the case of maps and plans, no general rule can be laid down. In each case a charge will have to be fixed with reference to the difficulty or intricacy of the work to be done. Half will be paid to the copyists, and half credited to Government on account of examination fees and cost of materials.

List of Orders cancelled.

C. O. No. 8, dated 29th June 1875, paragraph 4.
C. O. No. 30, dated 23rd August 1879, paragraph 4.
C. O. No. 35, dated 1st October 1880.
C. O. No. 14, dated 1st June 1881.
C. O. No. 4, dated 18th June 1883.
C. O. No. 7, dated 21st July 1884, last paragraph.
C. O. No. 4, dated 2nd February 1885, paragraphs 3 and 4.
Rule No. 7, dated 14th May 1886.

[1] This is a fee for credit to Government, and no part of it is payable to the copyists. Expedition fees should be entered in Column 5 of Annual Statement 1, Part III.

[2] This form is printed on the reverse of the stamped sheets now in use for copies.

EDUCATION DEPARTMENT, BENGAL.

Subordinate Educational Service.

The 18th February 1890.—Babu Jagat Bandhu Bhadra, Head Master of the Jessore Zillah School (class IV), is allowed leave of absence for one month, under Article 306(*b*) of the Civil Service Regulations, with effect from the 10th February 1890, or any subsequent date on which he may avail himself of it.

Babu Raj Kumar Das, M.A., Second Master of the Jessore Zillah School (class VI), is appointed to act as Head Master of the same institution, *vice* Babu Jagat Bandhu Bhadra, on leave.

The 20th February 1890.—Babu Gopal Chandra Sarkar, B.A., Second Master of the Pubna Zillah School (class VII), is allowed leave of absence for two weeks, under Article 306(*b*) of the Civil Service Regulations, with effect from the 3rd February 1890.

Babu Dwarka Nath Bagchi, Sub Inspector of Schools under the District Board of Rajshahye (class VII), has been granted by the Board leave of absence for one month, under Article 291 of the Civil Service Regulations, with effect from the date on which he may avail himself of it.

Babu Indra Kumar Chatterjea, Sub-Inspector of Schools under the District Board of Hoogly (class VI), has been granted by the Board leave of absence for one month, under Article 369 of the Civil Service Regulations, in extension of that granted to him under orders of the 17th February 1890.

The 22nd February 1890.—Babu Becharam Ganguli, Sub-Inspector of Schools under the District Board of Rajshahye (class VI), has been granted by the Board leave of absence for three months, under Article 371 of the Civil Service Regulations, with effect from the date on which he is relieved of his acting appointment as Deputy Inspector of Schools, Rajshahye.

A. CROFT, *Director of Public Instruction.*

NOTIFICATIONS OF THE BOARD OF REVENUE.

No. 113B.

NOTICE is hereby given that the Third Sale of Opium, the Provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall-street, on Monday the 3rd March 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. The may be ascertained by reference to the Notification issued on the 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Boar of Revenue.

3rd.—The latest dates for deposit and clearance will be the 8th and 18th March 1890, respectively, that is to say no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 1-30 P.M. of Saturday, the 8th March 1890 and no Bank of Bengal Receipts in full payment of lots will be accepted afte 3-30 P.M. of Tuesday, the 18th March 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the Opium manufactured at the Patna and Ghazeepore Factories will be brought to sale in the present year about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so :—

DATES.	Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Wednesday, 2nd April 1890.	2,250	2,500	4,750
On or about Thursday, 1st May	2,250	2,500	4,750
On or about Monday, 2nd June	2,250	2,500	4,750
On or about Wednesday, 2nd July	2,250	2,500	4,750
On or about Monday, 4th August	2,250	2,500	4,750
On or about Monday, 1st September	2,250	2,500	4,750
On or about Wednesday, 1st October	2,250	2,500	4,750
On or about Monday, 3rd November	2,250	2,500	4,750
On or about Monday, 1st December	2,250	2,500	4,750
Total	20,250	22,500	42,750

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L. P., *Calcutta, the 28th January* 1890.

No. 304B.

NOTICE is hereby given that the Fourth Sale of Opium, the provision of 1887-88, will be held at the Government Opium Sale-room, No. 2, Bankshall Street, on Wednesday, the 2nd April 1890, at 11 A.M., and will comprise 4,750 chests, viz.—

	Chests.
Opium manufactured at the Patna Factory	2,250
Ditto at the Ghazeepore Factory	2,500
Total ...	4,750

2nd.—The general conditions of the sale now advertised will be the same as usual. They may be ascertained by reference to the Notification issued on the 26th November 1889, and published in the *Government* and *Exchange Gazettes*, or on personal application at the Office of the Board of Revenue.

3rd.—The latest dates for deposit and clearance will be the 7th and 17th April 1890, respectively, that is to say, no Bank of Bengal Receipts, Government Promissory Notes, or other public securities that may be tendered for deposit in redemption of Promissory Notes given by purchasers in the sale-room will be received after 3-30 P.M. of Monday, the 7th April 1890, and no Bank of Bengal Receipts in full payment of lots will be accepted after 3-30 P.M. of Thursday, the 7th April 1890.

4th.—In addition to the quantity above advertised for sale, the following quantities, more or less, of the opium manufactured at the Patna and Ghazeepore Factories will be brought to sale up to December next about the dates specified below. The Board of Revenue, however, reserve to themselves the right of altering these dates should circumstances render it expedient to do so:—

DATES.		Manufactured at the Patna Factory, about chests.	Manufactured at the Ghazeepore Factory, about chests.	Total, about chests.
On or about Thursday, 1st May	1890 ...	2,250	2,500	4,750
On or about Monday, 2nd June	,, ...	2,250	2,500	4,750
On or about Wednesday, 2nd July	,, ...	2,250	2,500	4,750
On or about Monday, 4th August	,, ...	2,250	2,500	4,750
On or about Monday, 1st September	,, ...	2,250	2,500	4,750
On or about Wednesday, 1st October	,, ...	2,250	2,500	4,750
On or about Monday, 3rd November	,, ...	2,250	2,500	4,750
On or about Monday, 1st December	,, ...	2,250	2,500	4,750
TOTAL	...	18,000	20,000	38,000

By order of the Board of Revenue, L. P.,

K. G. GUPTA, *Offg. Secretary.*

BOARD OF REVENUE, L.P., CALCUTTA, *the 25th February* 1890.

Statement shewing the Importation of Salt (private property) in bond and afloat on the River Hooghly, subject to Customs Duty, on the 15th February 1890.

DESCRIPTION OF SALT.	Government golahs.	Private golahs.	Afloat.	Total.
	Mds.	Mds.	Mds.	Mds.
Liverpool Punga	6,61,521		2,53,058	9,14,579
Bombay Kurkutch	24,713			24,713
Arabian and Persian Gulfs Kurkutch and Muscat Rock ...	7,84,136			7,84,136
Aden Kurkutch	2,16,665			2,16,665
Hamburg salt	1,01,457			1,01,457
Total ..	17,38,492		2,53,058	20,41,550

By order of the Board of Revenue, L. P.,

J. SCOBELL ARMSTRONG, *Collector of Customs.*

CUSTOM HOUSE, CALCUTTA, *the 22nd February* 1890.

ELECTION OF MUNICIPAL COMMISSIONERS.

NOTIFICATION.

IT is hereby notified for general information that at a bye-election held under section 27, Act III (B.C.) of 1884, on the 9th instant at English Bazar, in the district of Maldah, the undermentioned gentlemen were elected to be Commissioners of the Municipality at that station.—

Ward No. I.

Baboo Sita Nath Choudhury, *vice* Baboo Gopal Krishna Roy, resigned.

Ward No. IV.

Baboo Kailash Chandra Shaha, *vice* Baboo Krishna Lal Das, deceased.

CHANDRA NARAIN SINGH, *for Offg. Commissioner on tour.*

COMMR.'S OFFICE, BHAGULPORE DIVISION, *the 22nd February* 1890.

NOTIFICATION.

IT is hereby notified for general information that at the election held on Monday, the 10th February 1890, Munshi Sujjad Karim has been elected, under section 27, Act III (B.C.) of 1884, a Commissioner for Ward No. V of the Burdwan Municipality, in the district of Burdwan, *vice* Baboo Bani Nath Banerjee, who ceased to be a member by the operation of section 20 of the Act.

N. S. ALEXANDER, *Commissioner.*

BURDWAN COMMR.'S OFFICE, *the 22nd February* 1890.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 26, 1890.

PART IA.

Orders and Notifications by the Government of India, &c.

[*Reprinted from the "Gazette of India."*]

The following orders, issued by the Government of India in the Home Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

NOTIFICATIONS—ESTABLISHMENTS.

Calcutta, the 18th February 1890.

No. 107.—Mr. J. R. Hallett is permitted to resign Her Majesty's Bengal Civil Service with effect from the 12th February 1890, or the subsequent date on which he may sail from India.

A. P. MACDONNELL,
Secy. to the Govt. of India.

The 20th February 1890.

No. 112.—Mr. A. P. MacDonnell, C.S.I., Secretary to the Government of India in the Home Department, has obtained furlough for one year, with effect from the 10th March 1890, or the subsequent date on which he may avail himself of it.

J. P. HEWETT,
Under-Secy. to the Govt. of India.

POLICE.

The 20th February 1890.

No. 169.—The services of Mr. F. A. Fullerton, Assistant District Superintendent of Police, Cachar, are replaced at the disposal of the Government of Bengal.

A. P. MACDONNELL.
Secy. to the Govt. of India.

The following orders, issued by the Government of India in the Military Department, are republished for general information.

JOHN EDGAR,
Chief Secy. to the Govt. of Bengal.

Fort William, the 21st February 1890.

FURLOUGH AND LEAVE.

No. 172.—The undermentioned officers are granted furlough out of India:—

Colonel W. Hopkinson, General List, Infantry, Cantonment Magistrate, 1st class, Bengal, (p. a.) for 240 days, under Rule IX of the Regulations of 1868.

VOLUNTEER CORPS.

APPOINTMENTS.

No. 184.—*Cossipore Artillery Volunteers*—

Mr. Stewart McPherson to be Second Lieutenant, *vice* Thomson, promoted.

G. G. O. No. 16 of 1890 is cancelled.

PROMOTION.

No. 185.—*Cossipore Artillery Volunteers*—

Second Lieutenant James Balfour Thomson to be Lieutenant, *vice* Gore-Browne, transferred to the Great Indian Peninsula Railway Volunteer Rifle Corps.

E. H. H. COLLEN,
Secy. to the Govt. of India.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 26, 1890.

PART IB.

ORDERS BY THE LIEUT.-GOVERNOR OF BENGAL.

MUNICIPAL AND LOCAL.

NOTIFICATION.

The 12th February 1890.—It is hereby notified for general information that, in exercise of the power vested in the Local Government by section 351 of Act III (B.C.) of 1884, and on the recommendation of the Commissioners of the Lohardugga Municipality, made at a meeting, the Lieutenant-Governor confirms the bye-laws set forth below, which have been framed by the Commissioners of the said Municipality, under section 350 of the said Act.

I.—For regulating business at meetings.

1. Meetings shall be either ordinary or special.

2. An ordinary general meeting of the Commissioners shall be held on the last Saturday of every month, unless the Chairman for any special reasons shall fix any other day

3. A special meeting may be called at any time by the Chairman or the Vice-Chairman.

4. All such meetings shall be convened by the Chairman, or in his absence by the Vice-Chairman, by notice to be served on each Commissioner not later than three days preceding the date of the meeting.

5. Notices of motions must be sent to the Chairman or Vice-Chairman at least two days before the meeting convened by the Chairman or Vice-Chairman. Notices received too late will be inserted in the list of business of the next succeeding meeting.

6. Meetings shall be held at the office of the Commissioners or at such place as the Commissioners in a general meeting may from time to time determine.

7. A notice-book shall be kept by the Chairman, in which all notices shall be entered. All such notices shall be dated and numbered as received.

8. Every notice convening a meeting shall be accompanied by a list of the business to be brought forward at such meeting, signed by the Chairman or Vice-Chairman.

9. At ordinary meetings the business shall be transacted in the following order, unless the President, with the consent of the majority of Commissioners present, determine otherwise:—

(*a*) The minutes of last ordinary meeting and of any special meeting held since shall be read, and if approved of as correctly entered, shall be confirmed and signed by the Chairman of the meeting.

(*b*) All correspondence of importance from higher authorities.

(*c*) Any business postponed from the last ordinary meeting shall be considered.

(*d*) The business contained in the notice of the meeting prescribed by rule 4 above shall be considered in the order in which it appears in the notice paper, unless the President, with the consent of the majority of the members present, determine otherwise.

10. No business shall be considered or proposition received at any meeting if it does not appear in the list of business, except with the consent of the majority of the Commissioners present.

11. Every motion or amendment duly made must be seconded, and until seconded no discussion on it shall take place.

12. After a motion has been moved and seconded, an amendment may be moved at any stage of the debate thereon.

13. When a motion or an amendment has been declared by the Chairman to be duly carried, no further proposal for amending the motion or amendment can be entertained.

14. Unless not less than two-thirds of the Commissioners consent by signing a requisition, no subject once finally disposed of can be reconsidered within six months.

II.—For regulating the conduct of persons employed by the Commissioners.

15. The Commissioners may fine, suspend or degrade any officer or servant engaged by them for neglect of duty or misconduct. The fine not to exceed one month's pay.

16. The Municipal officers or servants shall be liable to a fine, in addition to a forfeiture of their pay, for absence without leave; the fine not to exceed the amount of their pay for the day or days they are so absent.

17. The Commissioners may grant leave of absence to the officers or servants engaged by them either with or without pay.

18. As to the leave granted to Municipal officers, the Government rules shall apply as far as practicable.

III.—For regulating traffic in the streets.

19. No owner of any cart, carriage, or other vehicle shall allow it to be driven by a driver under 16 years of age.

20. No long bamboos shall be carried through the streets after sunset and before sunrise either by men or carts.

21. No person shall leave or keep any truck, cart or carriage or other vehicle standing on any public road except only when engaged in taking up and setting down passengers or in loading or unloading goods.

22. No person shall make a shop over any public road or drain, or in any way occupy any culvert, bridge or platform which may have been placed over any public drain, except with the permission of the Commissioners.

23. No person shall slaughter animals on or by the side of a public road.

24. No procession accompanied by beat of drum or by a band of music shall be allowed on a public road without the written permission of the Commissioners previously obtained.

25. All owners and drivers of carts laden with bricks or other materials shall be responsible for their being so secured that the contents may not fall on the road.

26. No person shall, without the permission of the Commissioners, take more than ten head of cattle at one time along any of the public roads within the limits of the Municipality, except by such routes as shall be fixed for the purpose from time to time by the Municipal Commissioners.

27. No person shall let loose or allow to be let loose or allow to get loose any diseased or worn-out animals, or use or cause to be used any such animal for the purpose of drawing any cart or other conveyance within municipal limits.

28. No person shall allow any pig to be at large or keep them otherwise than in closed styes.

29. No person shall let off any fire-balloon, firework or firearms in or near the public roads or lanes within the Municipality without the permission of the Commissioners, nor otherwise than as the Commissioners shall direct.

30. No person shall accumulate straw, jute, timber, bricks or any other materials on any public road without the permission of the Commissioners.

31. Any person required by the Act or by any bye-law under it to take out a license shall produce and show his license when required to do so by any person empowered by the Commissioners to make such requisition.

The penalty for the infringement of any one of the bye-laws from Nos. 19 to 31 shall be a fine not exceeding Rs. 20, and for continued infringement after sentence a daily fine not exceeding Rs. 5.

IV.—General bye-laws.

32. No person shall put or cause to be put on any house or other building any spout or other thing intended for the conveyance or discharge of water in such a manner that the water discharged therefrom shall be thrown into or fall upon any public road or thoroughfare.

33. No person shall keep filth, dirt, dung, ashes, bones, dead bodies, rubbish or other matter of a noxious kind on any public road, street or lane, or within close proximity to such public roads or lanes, except for the purpose of immediate removal.

34. No person shall, without the written permission of the Commissioners, set up any obstruction in any drain or water-course, and the Commissioners may order the removal of any such obstruction. (Spreading fishing nets and placing fishing traps in a drain or water-course come under the definition of obstruction.)

35. No person shall deposit or cause to be deposited any carcass of any animal in any place other than those appointed by the Commissioners.

36 No refuse resulting from any business, trade or profession shall be removed by the Municipal Commissioners except on payment for removal at the rate to be fixed by the Commissioners from time to time, and any expense incurred on this account shall be recoverable as a debt due to the Commissioners.

37. The Commissioners may require the owner or occupier of any pit, cesspool or other excavation to fill it up within a fixed time, if it appears to them to be injurious to public health. If such owners or occupiers do not comply with the order or requisition as mentioned above, the Commissioners may, instead of imposing any penalty, fill up the pit, cesspool or excavation at their own cost, to be realized from the owner or occupier under section 360 as a debt due to the Commissioners.

38. When the owners or occupiers of any land have been ordered, under section 200 of the Act, to cleanse any water-course, private tank or pool therein, they may, in addition, be ordered to remove the weeds instead of accumulating them on the slopes or banks of the tank, water-course or pool.

39. The owner or occupier of any part of the bank of any water-course or tank which is used by the public or any section of the community, or of the bank of a public drain or a private drain leading to a public drain, shall keep it free from filth, jungle and weeds; and the Commissioners may give notice, in writing, to the owner of any trees or shrubs overhanging such water-course or tank, and likely to foul the water thereof, to cut or trim the same in such a manner as the Commissioners shall direct. The Commissioners may also give a like notice to the owner of trees or shrubs overhanging any public drain or private drain leading to a public drain, and likely in any way to injure such drains and obstruct the clearing of them, to cut or trim them in such a manner as the Commissioners may think proper.

40. No person suffering from a contagious skin disease shall bathe in any tank used as a public bathing-place

41. No washerman or other person shall wash clothes in any tank or water-course except those which the Commissioners shall set apart for the purpose.

42. No person shall erect or place over a public road any kind of structure or obstruction without the written permission of the Commissioners previously obtained.

43. No person shall, without the permission of the Commissioners, cut sods or grass or remove any earth or grass from any public road or from the margin or slopes of any road or drain.

44. No person shall dig or remove from or deposit earth or any other substance in or make any alterations whatever in any public drain, or throw or place any offensive matter or rubbish on such drains without the permission of the Commissioners.

45. No person shall enlarge or deepen any existing tank or other excavation or dig a new one without the permission of the Commissioners.

46 No person shall quarry kunker, cut timber or grass or damage trees, or remove or damage any property, or deface the blocks on which the names of any road or street are engraved, or remove any boundary marks or pillars being the property of the Commissioners and within municipal limits.

47. No person shall break or cause to be broken any wall, fence, rail or post constructed for the protection of any public well, tank, drain or other excavation.

48. When any person erects any hut or building in contravention of the provision of section 236 and the bye-laws framed under it, the Commissioners shall have power to issue notice on such person to remove the external covering of his hut or building made of inflammable materials within one month, and on his failure to execute the work, the Commissioners shall have power to execute it by their own men or otherwise at their own cost, and recover the same from the owner or occupier of such house or hut as a debt due to the Commissioners.

49. No person desiring to construct a pucca privy shall do so, except with the permission of the Municipal Commissioners and according to the plan approved of by them.

50: No person shall build or cause to be built or keep after prohibition by the Commissioners any tattee, privy or urinal within 10 feet of any public road or street. In case there is no wall at least 5 feet high between a privy and a public road, the distance from the former to the latter is to be at least 30 feet.

51. No person shall burn or cause to be burnt a corpse, or build or dig or cause to be built or dug a grave in any other place than those set apart or recognized by the Commissioners.

52. No grave once used shall be opened for the burial of another, and no grave shall be dug or built having less than 5 feet depth.

53. No person when burning or causing to be burnt any corpse in any burning ground shall permit the same to remain without being completely reduced to ashes, or shall permit the clothes or other articles connected with the burning of such corpse to remain at or near such burning-ground unless the same be completely reduced to ashes.

The penalty for infringement of any one of the bye-laws from numbers 32 to 53, both inclusive, shall be a fine not exceeding Rs. 20, and for continued infringement a daily fine not exceeding Rs. 5.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 19th February 1890.—Whereas a notification, dated the 24th November 1889, announcing the intention of the Lieutenant-Governor to extend the provisions of the Bengal Vaccination Act V (B.C.) of 1880 to the Tangail Municipality, in the district of Mymensingh, was published at page 261, Part 1B of the *Calcutta Gazette* of the 27th idem, and whereas no objection has been raised to the proposal within six weeks from the date of the publication of the notification within the Municipality, it is hereby notified for general information that, in exercise of the power conferred on him by section 1 of the said Act, the Lieutenant-Governor extends the provisions of the Act to the said Municipality.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 19th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Puna Lal to be a Commissioner of the Daudnagar Municipality, in the district of Gya, *vice* Baboo Lalji Pershad, resigned.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 19th February 1890.—It is notified for general information that the declaration, dated the 21st November 1887, published at page 282, Part IB of the *Calcutta Gazette* of the 23rd idem, for the acquisition of a plot of land required by the Dacca Municipality for the excavation of new tanks for the water-works of the town, is hereby cancelled.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 22nd February 1890.—It is hereby notified for general information that, in the exercise of the power vested in the Local Government by section 4 of Act XX of 1887, the Lieutenant-Governor has been pleased to declare that the provisions of section 3 of the said Act with respect to wild birds shall apply, so far as regards the rules that may be framed by the Commissioners of the Cuttack Municipality with the approval of Government, to deer, hares and antilope.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 24th February 1890. It is hereby notified for general information that, in the exercise of the power vested in the Local Government by section 221, Act III (B.C.) of 1884, and in accordance with the recommendation of the Commissioners of the Naihati Municipality, made at a meeting, the Lieutenant-Governor sanctions the extension of the provisions of sections 220 to 225, 229, 231, 234, 235, 245 to 251, 254 to 262, 265, 266, 268, 269, 270 with the exception of clause 4, 271, 272, 273 with the exception of clause 4, 274 and 277 of Part VI of the said Act, to the whole of the said municipality except the villages of Bhatpara, Kantalpara, Naihati, and Gorifa, to which the above provisions have already been extended by notification dated 3rd December 1889, published at page 269 of Part IB of the *Calcutta Gazette* of the 4th idem. The Lieutenant-Governor further sanctions the extension of the provisions of sections 237, 238 and 241 clauses 1 and 2, to the whole municipality, except the villages of Bhatpara, Kantalpara, Naihati, and Gorifa, to which the above provisions have already been extended by the aforesaid notification and excepting also the premises occupied by the Eastern Bengal Railway Company for the purposes of the Kanchrapara and Shamnagar railway stations.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 24th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Tara Prasanna Ghose to be the Chairman of the Raghunathpore Municipality in the district of Manbhoom, *vice* Baboo Nanda Lall Koondoo, transferred.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 25th February 1890.—It is hereby notified that, under section 19, clause (3) of the Bengal Local Self-Government Act III (B.C.) of 1885, the Lieutenant-Governor is pleased to appoint Moulvi Abdul Haq Khan to be a member of the District Board of Noakhally, in the place of Munshi Amzad Ali, deceased.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 25th February 1890.—It is hereby notified that, under section 27, Act III (B.C.) of 1884, the Lieutenant-Governor is pleased to appoint Baboo Abhilash Chandra Mukerjea to be a Commissioner of the Rampore Beaulcah Municipality, in the district of Rajshahye, *vice* Baboo Preonath Chatterjea who has ceased to be a Commissioner under section 20 of the Act.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 25th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Burdwan Local Board, in the district of Burdwan, under section 25 of Act III (B. C.) of 1885, of Baboo Nalinaksha Bose to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 25th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Culna Local Board, in the district of Burdwan, under section 25 of Act III (B. C.) of 1885, of Baboo Narendranath Barat to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 25th February 1890.—It is hereby notified that the Lieutenant-Governor is pleased to approve the election by the members of the Cutwa Local Board, in the district of Burdwan, under section 25 of Act III (B. C.) of 1885, of Baboo Brojendranath Sen to be their Chairman.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

NOTIFICATION.

The 25th February 1890.—It is hereby notified that, under section 19, Act III (B.C) of 1885, the Lieutenant-Governor is pleased to appoint Chaudhuri Mohamed Omur Uddin Ahmed to be a member of the District Board of Rungpore, *vice* Munshi Samiruddin Ahmed, B.L., deceased.

H. J. S. COTTON,
Offg. Secy. to the Govt. of Bengal.

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 26, 1890.

PART II.

Advertisements.

[N.B.—Advertisements, Notices, &c., intended for insertion in this part of the Gazette, cannot be received after Noon on Monday.]

LAND SALE NOTICES.

NOTICE is hereby given that the undermentioned plots of the Nizamut lakhiraj State lands situated in the district of Nuddea will be put up to sale at the Collectorate of Nuddea on the 13th March 1890, corresponding with 1st Chyte 1296 B.S.

The purchasers of the plots will be subject to the following conditions :—

I.—The plots will be sold revenue free to the highest bidders above the upset price.

II.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force, and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the estates to be again put up for sale at the risk of the defaulting purchasers after issue of advertisement as in the case of original sale.

V.—The purchasers shall be put in possession on receipt of the orders of the Collector approving of the sales, but such possession shall be liable to be disturbed in case the final confirmation of the Board of Revenue should not be accorded to the proceedings.

Consecutive number of plot.	Name of estate.	Mouzah.	Pergunnah.	Approximate area in bighas.	Annual assessment.	Upset price.	Boundaries.	Remarks.
				B. K. CH	Rs. A. P.	Rs. A. P.		
1	Aujongachi in Bartoil.	Bahalispara in Bartoil.	Mohamedshahye.	31 7 14	12 0 0	313 5 0	North, east, and south of jote lands of Hagoorum Boal and others of Bartoil; west of the confines of mouzah Belghuria.	Mourashi jote of Bunesh Chandra Sarkar of Belgachi and dwelling-house of Gopal Chandra Ghose of Bartoil.
2	Aujongachi ...	Aujongachi ...	Taragooniah	304 1 10	93 0 0	3,036 11 0	West of the dwelling-houses of Chuni Sheik and Nobin Mandal Ghose and others, ryots of the zemindars of Chitna; north of the nij-jote lands of the aforesaid zemindars; east of the confines of Khairpur; south of the nij jote lands of the aforesaid zemindars.	Mourashi jote of Bunesh Chandra Sarkar of Belgachi.
3	Dak Adda ...	Kulberia ...	Plassey ...	1 4 8	2 1 6	40 0 0	East and north of a public road; south and west of jote lands of Brojo Lal Rai.	Plot No. I, khas Nizamut.
							South of jote lands of Gurudoyal Sinha and Bhikoo Mandal; east and north of jote lands of Puncharan Rai; west of jote lands of Bani Mandal.	Plot No. II, khas Nizamut.

Nuddea Collectorate, the 14th January 1890.

N. K. BOSE, for Collector.

NOTICE is hereby given that the undermentioned plot of the Nizamut lakhraj State lands, situate in the district of 24-Pergunnahs, will be put up to sale at the Collectorate of the 24-Pergunnahs on Friday, the 28th March 1890—

The purchaser of the plot will be subject to the following conditions :—

I.—The plot will be sold revenue-free to the highest bidder above the upset price.

II.—The sale to be subject to existing leases, and to the rights conferred by the settlement proceedings and by the laws in force, and purchaser to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the revenue authorities.

III.—If the amount of the purchase-money do not exceed Rs. 100, the whole amount will be paid down at once.

IV.—If the amount of the purchase-money exceed Rs. 100, one fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the 15th day after the sale, reckoning the day of sale as one, or if that day be a close holiday, then by noon of the first succeeding office day, the sale to be cancelled (the sum deposited being forfeited to Government), and the plot to be again put up for sale at the risk of the defaulting purchaser after issue of advertisement as in the case of original sale.

V.—The purchaser shall be put in possession on receipt of the orders of the Collector approving of the sale, but such possession shall be liable to be disturbed in case the final confirmaton of the Board of Revenue should not be accorded to the proceedings.

Name of estate.	Mouzah.	Pergunnah.	Approximate area.	Annual assessment.	Upset price.	Boundaries.	Remarks.
			B. K. CH.	Rs. A. P.	Rs. A. P.		
Dak Adda	Chitpore ...	Amirabad...	0 3 6	16 14 0	506 4 0	South of the dwelling house of Jitu Dhobi, east of the tank belonging to Zebunnissa Begum, north of the dwelling house of Talemun Jemadar, and west of a public road and the sepoy post.	Dwelling-house of Kudroo Dhobi of Chitpore.

K. N. ROY, Deputy Collector, for Collector on tour.

NOTICE is hereby given, under section 6, Act XI of 1859, section 11, Act VII (B C) of 1868, and Act II (B.C.) of 1871, that the undermentioned dependent tenures in the Town Khas Mehal, in the district of Chittagong, will be put up to public and unreserved sale at the Collector's Office of that district on the 3rd day of March 1890, for arrears of rent and cesses remaining unpaid after the latest day of payment, the 26th day of December 1889.

Khas Tehsil Office, Town Circle.

Serial No.	No. of tenures in register No. I.	Names of tenures and their situation.	Annual rental.		The amount of arrears for which the tenures to be sold.			Remarks.
			Rent.	Cess.	Rent.	Cess.	Total.	
		Thana town mouzah Bakalya, mehal Noabad.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	887	20134/559 Taluq Manindra Chandra Ghose and others.	3,373 6 0	226 9 0	843 0 0	56 11 0	899 11 0	
		Mouzah ditto, thana ditto.						
2	895A	20134/559(ক) Taluq Khetra Moni Dasi and others.	1,135 11 9	44 6 0	284 0 0	11 1 0	295 1 0	The entire taluqa will be sold.
		Thana Fatikchir, mouzah Jouzkhala, mehal Noabad.						
3	4818	23878/588 Taluq Obedar Rahaman Khan	2,344 0	102 9 0	693 0 0	5 5 9	698 5 9	

Chittagong, the 14th January 1890. C. H. ALLEN, for Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Khulna will be put up for sale at the Collector's Office of that district on the 26th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

1	2	3	4	5	6	7	8	9
No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
114-1	Kismut pergunnah Bajitpur.	2,124 4 7	.....	Share No. 1, 3*as.* 3*g.* 2*a.* 16*f.*	Shital Nath Bhanga and others.	420 2 8	.....	22 8 0
137-1	Kismut pergunnah Bhaluka.	14,943 15 8	.....	Share No. 1, 4*g.* 13-5-8-1	Grijanath Ray Chowdhury and others	224 13 5	.....	31 10 5
159-4	Kismut Ramdanga, pergunnah Sarparajpur.	540 13 8	.....	Share No. 4, 2*as.* ...	Haran Chandra Majumdar and others.	68 11 6	.....	13 3 2
170-2	Kismut pergunnah Silimabad.	5,784 6 0	.....	Share No. 2, 2*as.* 0*g.*	Syamacharan Bosu and others.	885 11 9½	.....	310 15 6

Khulna Collectorate, the 8th February 1890. B. DE, Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Dacca will be put up for sale at the Collector's Office of that district on the 23th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realised in the same manner as arrears of revenue.

When in columns 5, 7 and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Suddor jumma of whole estate	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the suddor jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
115	Pergunnah Patpashar, Banamch Mahadev Mukhopadhya.	10,768 0 1½	.....	Residue share .. Hisya 2a. 13g. 1kr. 1kt.	Hara Sundari Chaudhurani and others. Monindra Nath Mukhopadhya and others.	8,973 5 4½ 1,794 10 9	.. ..	3,024 7 4½ 725 9 7
193	Pergunnah Rajnagar, Juppoh Hosamabad Jawar, Hyderabad Khachak Pitrush market.	688 5 4½	Entire estate.	.....	Sukhmoy Chandra Das himself and manager for Gour Hari Das and others.	.....	69 12 2½	... .
194	Pergunnah Rajnagar, Hisya Raj Krishna Sen Chakla Nurpur Hurannessa.	708 9 11½	...	Residue share ...	Husni Khanam and others.	201 13 6½	...	78 11 9
197	Pergunnah Rajnagar, Chakla Nurpur, Debi Prosad Sen.	632 10 5½	... .	Hisya 2g. 3kr. 3kt.	Durga Sunker Sen ...	5 7 9	.....	2 8 1
272	Pergunnah Shahebabad May Peshkosh Dowani, Banamch Mirza Hyderali.	533 5 4	.....	Residue share ... Hisya 1a. 11½g. ...	Rajendra Narain Bandapadhya. Ditto ditto ...	133 5 1 52 1 4	....	83 7 1 32 9 9
325	Tuppeh Moheswardi, Banamch Saha, Newaj Khan, Elahi Newaj Khan.	14,133 5 4½	.. ...	Hisya 15g. 1kr. 14t. 6f. Ananda Mohon, Hari Mohon and Krishna Mohan Das.	Ananda Mohon Das and others.	677 2 6	....	102 3 9
392	Pergunnah Bikrampur, taluq Brindavan Chandra Radha Kishore Sen, hisya 8a. Radha Madhav.	1,452 9 1	...	Residue share ...	Nanda Kumar Guha ..	425 6 1½	.....	150 11 6
393	Pergunnah Bikrampur, taluq Brindavan Chandra Radha Kishore Sen, hisya 8a. Raj Kishore Sen.	1,452 9 1	.....	Ditto ...	Rup Lal Raghu Nath Das and others.	554 10 2½	... ..	145 8 7
534	Pergunnah Bhawal Jawar Nalukot, taluq Sridhar Hari Rati, Krishna Ram Chakravorty.	544 0 0	... ..	Ditto ... Hisya 1a. Banga Chandra, Har Chandra Chakraverty. Hisya 0a. 2kr. 1kt. Bramya Mayi Debya.	Joy Chandra Chaudhury and others. Banga Chandra Chakraverty and others. Brahmya Mayi Debya	74 15 0½ 34 0 0 16 4 8	. ...	43 12 2½ 14 5 0½ 14 1 1
552	Pergunnah Mobarak Ujian, taluq Jagir Abdulla.	961 1 0½	.....	Residue share ...	Showdamini Gupta and others.	384 6 9½	.....	74 12 2
562	Shahar Chandina May Peshkosh Chandina, Maulvi Abdul Ali.	1,898 10 8	.....	Ditto ...	Protap Chandra Das and others.	664 8 2	.....	170 4 6
569	Pergunnah Bikrampur, taluq Ram Gunga Bosu.	684 3 0	.....	Ditto ...	Sitamani and others ...	256 9 0	....	95 0 0
4319	Pergunnah Patpashar, taluq Golam Hosen Chaudhuri.	930 3 11½	.....	Ditto .. Hisya 1½a. Najbannessa and others. Hisya 3a. 2g. 1kr. 14kp. Hamidannessa and others.	Amirannessa Khatoon, Manager for Maulvi Abdul Hye and others. Najbannessa and others. Hamidannessa Khatoon and others.	359 1 9 87 3 5 181 12 2	....	86 15 11 8 9 10 35 11 11
5849	Pergunnah Hashara Raja Ram Chaudhuri.	823 10 1	Entire estate.	.....	Gojendra Nath Shome and others.	.....	1 12 0	. ....
6551	Pergunnah Rajnagar, taluq Debi Prosad Ghosh.	642 2 1½	.....	Residue share ...	Kala Chand Sunha and others.	535 1 8½	.....	40 1 5
8434	Char Buktabali ...	584 0 0	Entire estate.	.....	Pran Nath Pare and others.	.. ...	153 0 0	.....
8060	Tunneh Amirabad, Estate No. 234.	760 4 1½	Ditto ...	.....	Abhaya Charan Das and Brojendra Kumar Rai Chaudhuri.	.....	72 14 3	.....
9069	Char Fukurhati within Char Krishnapura.	519 0 0	Ditto ...	.....	Kripa Mayi Debya and others.	.....	7 2 0	.....
9083	Mouzah Golara Baluchari within Char Jalua Kamta.	752 0 0	Ditto ...	.....	A. M. Bhoogy Shaheb, Receiver.	.....	149 0 0	.....
9101	Char Tilli within Char Mirzapur.	1,187 0 0	Ditto ...	.....	Kailash Bashini and Bindhu Bashini Chaudhurani and others.	.....	299 0 0	.. .
9762	Pergunnah Burdakhat Char Delwarpur.	4,196 0 0	Ditto ...	.....	Joharuddin Hyder and others.	.....	1,052 0 0	... ..

Dacca Collectorate, the 8th February 1890.

L. HARE, Offg. Collector.

NOTICE is hereby given that the proprietary right of Government, as specified in the conditions of sale below to the undermentioned estate, situate in the district of Maldah, will be put up to sale at the Maldah Collectorate on 26th March 1890, corresponding with 14th Chaitra 1296 B.S.

The purchasers will be subject to the following conditions of sale :—

Conditions of Sale.

1*st*.—The estate to be sold to the highest bidder above the upset price, which will be fixed by the Collector at the time of sale. The purchaser of this estate will be considered as the proprietor of the estate, and the entire proprietary right of Government in such estate will be transferred to him, subject to the revenue fixed in perpetuity.

2*nd*.—The sale to be subject to existing leases and to the rights conferred by the settlement proceedings and by the laws in force; and purchasers to be bound to respect the rights of resident cultivators who have signed the schedule of assessment prepared by the Revenue authorities.

3*rd*—If the amount of purchase money do not exceed Rs. 100, the whole amount to be paid at once.

4*th*—If the amount of purchase-money exceed Rs. 100, one-fourth of the amount bid to be immediately deposited. If the balance be not paid by noon of the fifteenth day after the sale, reckoning the day of sale as one, or, if that day be a close holiday, then by noon of the first succeeding office day, the sale is to be cancelled (the sum deposited being forfeited to Government), and the estate to be again put to sale at the risk of the defaulting purchaser, after issue of advertisement, as in the case of original sale.

Number on the district roll.	Name of estate and pergunnah.	Approximate area in acres.	Government revenue assessed.
		A. R P.	Rs.
98	Kismut Jot Kusturi, pergunnah Kotvali	62 0 12	50

Collector's Office, district Maldah, the 6th February 1890. POORNO CHANDRA CHATTERJEE, Dy. Collr in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Beerbhoom will be put up for sale at the Collector's Office of that district on 26th March 1890, for arrears of revenue and other demands which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
53	Shahapur, pergunnah Joynugal.	3,190 7 0	.....	2*a*. 13*g*. 1*k*. 1 *kranti*	Choudhuri Mahomed Ichcha and others.	581 11 8	.....	4 7 0
75	Turigram, pergunnah Shahajapur.	1,508 0 0	The whole	.....	Sheikh Tarikulla ...	.....	0 2 0	.....
94	Gokulata, pergunnah Chakala Gokulata.	3,250 14 0	.....	8*a*.	Dharmadas Gati Mustafi and others.	1,025 7 0	.....	13 1 6
109	Dauka, pergunnah Ichchapukhuria.	1,803 1 0	.....	13*a*. 17*g*. 2*k*. ...	Giris Chandra Choudhuri, guardian of Kumaris Chandra Roy, minor, and others.	1,563 9 2	.....	3 10 1
122	Bajitpur, pergunnah Akbarshahi.	2,096 1 0	.....	9*a*. 8*g*. 1*kag*. 8 *til*.	Nil Madhab Roy and others.	1,760 12 11	.....	14 4 6
936	Palitpur Basantapur, pergunnah Dadshahi.	751 10 0	The whole	.....	Ratan Kumari Bibi and others.	.....	218 8 0	.....

Beerbhoom Collectorate, the 10th February 1890. N. K. SARKAR, Dy Collector in charge.

NOTICE is hereby given, under section 6, Act XI of 1859, that the undermentioned estates in the district of Durbhunga will be put up to public and unreserved sale at the Collector's Office of that district, on the 15th March 1890, corresponding with 9th Chait 1297 F., on Saturday, at 12 o'clock, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue due on the 13th January 1890.

Serial No.	Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share.	Names of proprietors of properties to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
			Rs. A. P.				Rs. A. P.		Rs. A. P.
1	437	Erazi Ganj Barar Hurdaspore, pergunnah Bala Gutch.	547 2 10	.....	Patti ijmali 9 annas 12 gundas.	Mosamat Jasoda Koer, mother and guardian of Adyia Purshad Singh, Baboo Sital Parshad Singh, Shew Gulam Singh, Singheswar Parshad Singh, Nar Singh Parshad, Chitar Narain Singh, Kunj Narain Singh and others.	308 8 8	.....	306 8 4

Durbhunga Collectorate, the 12th February 1890. A. AHMAD, Deputy Collector, for Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Backergunge will be put up for sale at the Collector's Office of that district on the 26th March 1890, corresponding with 14th Choitra 1296 (B.S.), for the kist ending 12th January 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale:—

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Tuppeh Azimpur, hissa 8a. 19g.	2,431 4 4½	.....	Joint share, 6a. 10g. 3k. 1½ 10.	Asmat Ali Khan Choudhury and others.	917 7 6½	.....	6 10 10
1416	Taluq Bancna Ram Bosu, hissa 8a., pergunnah Bozergomedpur.	1,550 5 3	.....	3a. under separate account.	Dinabandhu Sen ...	200 5 10½	.....	45 6 4½
1437	Jiban Krishna Sen, Hari Krishna Sen, Komal Krishna Sen, Govindadeb Roy, Pran Mukhya Chandra Roy, Darpa Narayan Roy, and Mritunjaya Mukherjee taluq, pergunnah Bozergomedpur.	2,295 9 5½	.....	6a. 18½g. 1½kt. Ijmali share.	Uma Charan Bhattacharjee and others.	978 13 0½	.....	24 13 1
1548	Taluqa Mohammad Hanga, pergunnah Bozergomedpur.	1,159 3 8	.....	8a. Ijmali share ..	Grish Chandra Mukhapadhyaya and others.	579 9 10	.....	28 4 11
1578	Panioty Alexander taluq, pergunnah Bozergomedpur.	4,853 12 0½	.....	2a. Ijmali share ...	Jagadiswari Debya ...	604 3 2½	.....	113 2 11½
1185	Radha Krishna, Harananda Roy, and Kalidas Siddhanta taluq, pergunnah Bozergomedpur.	2½,036 10 10	.....	5a. 11½g. 1½k. Ijmali share.	Brindaban Chandra Chakervarti and others.	874 11 7	...	43 15 1½
1628	Ramna Ramna Joar Mohammud Safi taluq, pergunnah Bozergomedpur.	19,487 10 8	.....	8a. 15½g. 19-15-0½-1. Ijmali share.	Golam Asad Choudhuri and others.	10,676 12 1	.....	2,119 11 7
1633	Ram Raja Deo taluq, pergunnah Bozergomedpur.	2,062 2 11½	.....	2a. Ijmali share ...	Jagadiswari Debya ...	257 12 2½	.....	51 13 5½
1613	Ditto ditto ...	2,062 2 11½	.....	3a. under separate account.	Tamamani Debya ...	386 10 7	.....	78 6 2
1751	Radha Kanta Sen taluq, pergunnah Chandradwip.	906 10 8	.....	8a. Ijmali share ..	Kali Mohan Mohinta and others.	453 5 4	.....	2 13 9½
1764	Pergunnah Dakhin Shahabazpur, 3a. 1½g. 1kt. share.	8,543 6 8	Whole estate.	.....	Mr. Alexander Toms, executor of estate J. P. Wise and others.	.....	5,332 10 8½	.....
1916	Haveli Selimabad tappeh, hissa 10g.	1,045 7 9½	.....	5a. 10g. Ijmali share	Rama Sundari Gupta and others.	359 5 5½	.....	72 1 11½
1916	Ditto ditto ...	1,045 7 9½	.....	6a. 15g. share under separate account.	Kailash Chandra Sen Majumdar and others.	441 1 8½	.....	59 13 0½
3255	Pergunnah Ratandi Kalikapur, hissa 2a.	3,154 11 5	.....	7a. 6½g. 2kts. Ijmali share.	Umesh Chandra Roy Choudhuri and others.	1,445 14 5	.....	403 9 7
3257	Pergunnah Ratandi Kalikapur, hissa 4a.	6,309 6 10	.....	10g. Ijmali share ...	Jagadiswari Debya ...	107 2 6	.....	67 5 5
3258	Ditto ditto ...	6,309 6 10	.....	6½g. 2kts. Ijmali share	Ditto ..	131 7 4	.....	43 15 11
4345	Padma *alias* Ramjanpur, pergunnah Kashimpur Silapatti.	5,383 0 0	Whole estate.	.....	Abinash Chandra Ghosal and others.	... ..	421 8 0	... ..
4550	Kukua Khag Dom, Domingo Manual, DeSilva, Braja Mohan Sen, Durga Mohan Das, Muammat Krishna Mohini Dast taluq, pergunnah Bozergomedpur.	9,706 0 0	Ditto ..	.. ...	Jagadeswari Debya and others.	.....	For 1888-89 8,269 4 4, 1889, Kist September 153 0 0, 1890, kist January 1,224 0 0	.....
4757	Madanpura Chur, pergunnah Ratandi Kalikapur.	1,139 0 0	Ditto ...	.....	Brindaban Chandra Chakervarti Roy Choudhuri and others.	.....	9,646 4 4 371 10 6	...
4897	Tiakheli, pergunnah Chandradwip.	533 14 3	.....	10a. 5g. Ijmali share	Nistarini and others	342 0 4	.....	32 0 6
4897	Ditto ditto ...	533 14 3	.....	1a. 15g. share under separate account.	Tarini Charan Somoddar.	58 6 4	.....	5 7 6
5008	Chak Barguna, Haola No. 16.	668 0 0	Haoladari right of the whole Haola.	.....	Ramjan Haoladar and others.	.....	167 0 0	.....
5193	Ramdeb Datta taluq, mouzah Harahipur, pergunnah Gopalpur Mrijanagar.	699 0 0	Whole estate.	.. ...	Jearuddin Haoladar and others.	.....	0 10 6	.....
5231	Kumaga Chur, hissa 1a. 18½g. 1kt., pergunnah Uttar Shahabazpur	1,169 0 0	.....	3a. 8g. 2kt. 11½til. Ijmali share.	Durga Prosonna Roy and others.	250 5 0	.....	178 0 1
5226	Chhota Lumchi Dhali Chur.	1,253 0 0	.....	3a. 8½g. 1kt. 20dhur. Ijmali share.	Mr. A. Toms, executor of estate of J. P. Wise and others.	262 11 7	.....	107 7 0
6449	Tappeh Sultanabad, hissa 7½g., Asimannessa Khatun and others.	542 1 4	Whole estate.	.....	Moulvie Abdul Wazed and others.	.....	5 10 4	.. ...

Backergunge Collectorate, the 15th February 1890.

POORNO CHUNDER GUPTA, Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Furreedpore will be put up for sale at the Collector's Office of that district on the 25th March 1890, corresponding to 13th Choitra 1296 (B. S.), for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
249	Panchashazari, pergunnah Chandpratap.	744 0 0	Whole ..	.....	Iswar Chandra Saha and others.	.....	186 0 0	.....
284	Panchashazari, pergunnah Sahajapur.	1,521 0 0	Do. ...	.....	Jadub Chandra Bagchi and others.	.....	300 11 0	.....
3555	Taluq Ratneswar Pal Choudhury, pergunnah Nasirat Shahi.	2,559 13 8	.....	Hissa 4 annas ...	Uma Prosonno Pal Choudhury and others.	630 15 0	.....	61 11 6
3870	Taluq Ram Prosad Rai, pergunnah Kharagpur.	524 12 9½	Whole ...	.....	Abhoy Coomer Rai and others.	.....	27 15 6½	.....
4004	Taluq Kali Sanker Sen, pergunnah Rajnagore.	1,140 4 3½	Do. ...	.....	Kumadini Kant Barujya Choudhuri and others.	.....	128 5 11	.....
4028	Zemindari Basudev Rai, pergunnah Rajnagore.	4,119 4 9½	.....	Hissa 10 annas exceeding the specific share bearing a revenue of Rs. 63-1.	Soshi Mohan Pal Choudhuri and others.	2,574 9 9½	.....	816 5 10
4028	Ditto ditto ...	4,119 4 9½	.....	Hissa 6 annas, ditto.	Gopi Mohan Rai Choudhuri and others.	1,481 10 0	.....	185 13 6
6220	Hissa Nilmoni Sen, pergunnah Rajnagore.	597 12 3	Whole ...	.....	Raj Coomer Pal and others.	.....	82 8 7½	.....
6220	Ditto ditto ...	597 12 3	.....	Hissa 7½ annas ..	Raj Coomer Pal and Mohima Chandra Pal.	280 3 1½	.....	74 0 2½
6220	Ditto ditto ...	597 12 3	Whole ...	.....	Haro Lal Pal and others.	.....	5 7 4½	.....
6220	Ditto ditto ...	597 12 3	.....	Hissa ½ anna ...	Haro Lal Pal ...	18 11 0	...	4 14 11½
6305	Gazhi char, appertaining to char Madan Sankar.	670 12 0	Whole ..	.....	Kripa Moyee Debya, Poorna Chandra Bandopadhya and others.	.....	11 7 3	.....

Furreedpore Collectorate, the 15th February 1890. PURNO CHANDRA RAI, Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Mozufferpore will be put up for sale at the Collector's Office of that district on 27th March 1890, corresponding 21st Chait 1297 Fasli, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue due on the 13th January 1890.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
261	Ibrahcempoor, pergunnah Brail.	535 0 9	.....	12a. 5g. 1k r, 1k. ...	Baisakhi Lall and others.	410 2 9	.....	51 4 0
907	Akhta, pergunnah Babra Chumparun.	1,173 5 9	.....	3a. 12g. 2c. 2k. 12r. ...	Babu Salookat Deo Narayan.	266 8 1	.....	141 8 0½
921	Bazidpoor Dowlat, pergunnah ditto.	4,450 12 3	.....	8a. 1g. 1k. 1d.	Rajcoomar Babu, Deo Nunden Singh and others.	2,240 13 2	.....	113 8 6½
296	Chiknowtah, pergunnah ditto.	3,311 4 10	.....	6a, 1c. 1d.	Babu Shumbhoo Pershad, Chundika Pershad and others.	1,042 14 5	.....	449 8 11½
1099	Maksoodpoor Karriah, pergunnah ditto.	1,067 11 9	.....	7a. 5g.	Rajcoomar Babu, Deo Nunden Singh and others.	483 13 1	.....	25 1 9½
3494	Bidupoor, pergunnah Hajipoor.	1,707 3 3	The whole estate.	....	Ramkishun Panday ..	1,707 3 3	156 12 0	.....
3528	Joorawanpoor, pergunnah ditto.	719 10 7	.....	16g. 2c. 2k. 5r.	Harbuns Singh ..	37 7 8	.....	6 0 8
3528	Ditto	719 10 7	.....	8g. 3c. 3r. ...	Deo Narayan Singh ...	19 11 0	.....	3 7 5
3528	Ditto	719 10 7	.....	19g. 3c. 2k. 2d. 15r. ...	Patul Kuer	45 0 0	.....	4 11 11
3528	Ditto	717 10 7	... ...	2a. 14g. 1k. 5r.	Upnet Narayan ...	121 10 3	.....	17 8 6
3639	Maniarpoor, pergunnah ditto.	1,303 5 11	The whole estate.	.....	Bhagwat Narayan ...	1,303 5 11	295 1 4	.....
5402	Shariffpoor, pergunnah Nanpoor	506 9 1	.....	5a 6g. 2c. 2k.	Sher Bahadur Singh and others.	337 12 8	.....	20 14 5
9462	Erazee Nowberrar-Bungea, pergunnah Gudah Sand.	865 5 0	.....	1a. 6g. 2c. 2k.	Mangul Pershad ...	73 2 2	.....	9 0 4
9462	Ditto	865 5 0	.....	2a. 13g. 1c. 1k. 1d. ...	Debi Dutt Singh ..	144 5 4	.....	8 0 4
9462	Ditto	865 5 0	... ..	5a. 6g. 2c 1k. 2d.	Rachh Pal Singh ...	288 7 0	.....	0 1 4
9462	Ditto	865 5 0	.....	6a. 13g. 1c. 1k.	Braham Deo Narayan Singh.	360 6 6	.....	30 0 6
9894	Raja Pakurchakla, Gurjowl, pergunnah Bisarah.	968 2 8	The whole estate.	.....	Nawnidh Lall and others.	968 2 8	62 6 0	.....

Mozufferpore Collectorate, the 15th February 1890. E. B. HARRIS, Deputy Collector in charge.

NOTICE is hereby given, under section 6, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Hooghly will be put up to public and unreserved sale at the Collector's office of that district on the 24th day of March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of the proprietors of the property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
2	Mukoondopore, pergunnah Chowmahu.	14,550 2 0	The whole estate.	...	Rajindra Narain Nundy and others.	...	450 9 11	...
10	Radhakantobati, pergunnah Pandooa.	624 11 11	...	The entire estate except the share of which separate account has been opened.	Sreehurry Nundy and others.	593 13 11	...	59 6 0
11	Chhalaldiha, pergunnah Pandooa.	707 6 2	...	Ditto ditto	Aisa Khaton *alias* Abadonnessa Bibee and others.	235 13 2	...	25 11 7
26	Malikapore, pergunnah Balagari.	10,595 3 8	...	Ditto ditto	Nil Komul Mitter and others.	4,507 14 8	...	1,683 7 4
49	Hatisala, pergunnah Chowmahu.	11,569 5 0	...	Ditto ditto	Raja Peary Mohun Mookerjee and others.	7,712 14 0	...	1,000 10 0
54	Thaipara pergunnah Pandooa.	1,066 1 0	...	7*a*. 19*g*. 1*k*. 8*til*. 6½ *kag*. share of seventeen mouzahs, "Thaipara and others" of which separate account has been opened and marked A.	Woomadotonnessa Bibee.	476 0 0	...	8 0 0
56	Chairpatati, pergunnah Pandooa.	606 7 2	...	The entire estate except the share of which separate account has been opened.	Bidhoomoni Dassee and others.	598 8 6½	...	170 0 0
65	Nundingram, pergunnah Pandooa.	1,075 9 0	...	8 Annas share of the estate of which separate account has been opened and marked A.	Kesub Chandra Chatterjee.	987 13 0	...	30 0 0
117	Rajhat, pergunnah Khosalpore.	726 0 3	..	The entire estate except the share of which separate account has been opened.	Jeebunkristo Gossain and others.	265 11 3	...	35 11 8
159	Chatra Baday, pergunnah Boro.	740 9 5	...	Ditto ditto	Bhola Nath Mitter and others.	43 15 1	...	0 1 10
159	Ditto ditto	740 9 5	...	2*a*. 13*g*. share of the estate of which separate account has been opened and marked A.	Chandra Kanto Mookerjee and others.	145 9 4	...	4 10 0
191	Haripore, pergunnah Chowmahu.	851 3 2	...	The entire estate except the share of which separate account has been opened.	Suthdoyal Banerjee and others.	728 2 2	...	87 4 10
2074	Jeerat Chur, pergunnah Hatkanda.	533 5 6	The whole estate.	.....	Joy Kristo Mookerjee	...	266 0 0	...
3521	Bigra, pergunnah Boro.	530 3 5	The whole estate.	.....	Ramdoyal Banerjee ...	...	198 0 0	..
3541	Khar Sarai, pergunnah Boro.	1,311 10 0	...	The entire estate except the share of which separate account has been opened.	Ramdoyal Banerjee ...	655 13 6	...	162 8 0
3994	Ramkristopore, pergunnah Boro.	563 14 9	...	8 Annas share of the estate of which separate account has been opened and marked A.	Rance Surnomoyee Dassee.	281 15 0	...	103 0 0
4085	Sheikpore, pergunnah Baira.	10,443 11 0	...	The entire estate except the share of which separate account has been opened.	Girish Chundra Roy and others.	1,740 3 0	..	649 7 2

Hooghly Collectorate, the 14th February 1890. MAHOMED ISRAIL, for Collector of Hooghly.

NOTICE is hereby given, under section 6, Act XI of 1859, section 11, Act VII (B.C.) of 1868, and Act II (B.C.) of 1871, that the undermentioned dependent tenures in the Satkanea Khas Mehal in the district of Chittagong will be put up to public and unreserved sale at the Collector's office of that district on the 26th day of March 1890 for arrears of rent and cesses remaining unpaid after the latest day of payment, the 26th day of December 1889.

Mehal Noabad.

Serial No.	Nos. of tenures on Register No. 1.	Names of tenures and their situations.	ANNUAL RENTAL		THE AMOUNT OF ARREARS FOR WHICH THE TENURES TO BE SOLD.			REMARKS.
			Rent.	Cesses.	Rent.	Cesses.	Total.	
	6	*Thanna Satkanea, mouzah Napora.*	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1	1823	Taluk Raj Kumar Roy and Brojeshwari, baboit taluk Bisheshwari Naba Kumar, No. 541–408.	1,017 2 0	44 8 6	810 0 0	13 7 0	823 7 0	The entire taluks will be sold.
	20	*Thanna Satkanea, mouzah Chambal.*						
2	420	Taluk Tajannissa Chowdhuranee ...	1,193 4 10	176 13 6	745 4 10	110 6 6	855 11 4	

C. P. CASPERSZ, Offg. Collector.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Nuddea will be put up for sale at the Collector's office of that district on the 28th March 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
425	Payerpore, pergunnah Futtehjungpore.	3,414 9 6	.....	5a. 10g. 2k. 17½til share bearing No. 425-0.	Kala Chand Biswas and others.	1,175 6 11	.....	1 3 3
				2nd Class Mehals.				
814	Char Bhabanandadyar, pergunnah Bhabanandadyar.	1,160 5 0	Whole estate.	.....	Messrs. Robert Watson and Co. and others.	.....	7,581 6 0	.....
815	Ditto ditto ...	1,160 5 0	Ditto ...	.....	Sreekrishna Bhowmik and others.	.....	3,077 14 2	.....

Nuddea Collectorate, the 15th February 1890. N. K. BOSE, Covtd. Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, and under Act VII (B.C.) of 1868, that the undermentioned estates or shares of estates in the district of Mymensingh will be put up for sale at the Collector's Office of that district on the 25th March 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
9	Zemindari pergunnah Attiah, hissa 2½ annas.	6,729 2 0	.....	Ejmali share exclusive of the separate accounts opened under sections 10 and 11 of Act 11 of 1859.	Nazamon Nessa Khanum Chowdhurain and others.	2,418 6 0	.....	36 6 6
70	Zemindari pergunnah Juanshaye.	10,525 14 0	.....	Separate share 2 annas 5 gds. 2 cr. 6 dips.	L. M. Pogose, L. G. Mary Pogose and others.	1,503 12 0	.....	372 15 5
96	Zemindari hissa 4½ annas with bejabeta taluq, pergunnah Nasirujial.	7,197 10 0	.....	Separate share 11 gds. 2cr. 2 kg 10 til. of Kismat Singdha.	Sheik Hazari and others.	1 10 0	.....	1 4 0
96	Ditto ditto ...	7,197 10 0	.....	1½as. of taluq Dip Chandra Rai.	Mohim Chandra Roy Chowdhuri.	204 5 0	.....	70 0 0
96	Ditto ditto ...	7,197 10 0	.....	12½gds. share of the estate.	Muhamed Mafidar Rohoman.	230 12 0	.....	79 13 0
121	Thaneswar Badia, pergunnah Nasirujial.	729 10 0	.....	14ans. 19gds. 2cr. 2kg. ejmali share.	Apisullah Bhuya and others.	711 2 0	.....	275 5 0
124	Payandabeg, hissa 13 as. 6 gds. 2 cr. 2 kranta tuppeh Hasradi.	1,796 2 0	.....	7½as. share of Kismat Patua Bhanga, 6½as. share of Nagor Hasradi, 2as. of Bir Masua, 8 gds. of chakley Mahatpur and 16as. of other mouzas.	Upendra Kishore Roy Chowdury and others.	358 15 0	.....	24 9 0
137	Zemindari pergunnah Susung.	1,988 4 0	.....	15gds. 1cr. 2kranta and 16til share of the estate.	Joy Nath Roy ...	96 1 0	.....	33 5 0
	Ditto ditto ...	1,988 4 0	.....	8gds. 1cr. 2kranta 1 til share of the estate.	Biswaswari Debia and others.	52 5 0	.....	29 1 0
144	Zemindari pergunnah Sherepur, hissa 1a. 5g.	2,643 8 0	.....	Joint share exclusive of separate account opened under Act XI of 1859.	Dharani Kanta Chowdhuri and others.	1,614 1 0	.....	3 14 6
144	Ditto ditto ...	2,643 8 0	.....	2a. 14g. 3cr. 3 dips separate share of the estate.	Har Kumar Chowdhuri.	453 3 0	.....	143 9 0
3000	Char Ghugra Kandi, pergunnah Sherepur.	765 15 0	Whole ..	.....	Radha Ballav Chowdhuri and others.	.....	2 0 0	.....
6179	Juar Jagat Char, pergunnah Bardakhat, tuppeh Kurikhayl.	754 8 0	.....	1 anna separate share of the estate.	Ram Keshab Shaha and others.	47 3 0	.....	23 5 0
7503	Taluq Nurunessa Khanum with ejmali mouzah Taratia Digar, tuppeh Ranbhawal.	1,296 0 0	Whole ...	.....	Administrator General of Bengal and others.	.....	140 9 8	.....
				Second class.				
5013	Chak Shakchura, Tuppeh Ranbhawal.	511 0 0	.....	15ans. 17g. share of the estate.	Goloke Chandra Bhattacharjya.	306 4 0	.....	136 6 0
5496	Char Jungaldi and others, pergunnah Sherepur.	1,220 0 0	Whole ...	.....	Kishori Mohan Chowdhuri and others.	.....	104 12 9	.....

Mymensingh Collectorate, the 14th February 1890. JUGGOBONDHU KHAN, Deputy Collector in charge.

NOTICE is hereby given, under sections 6 and 13 of Act XI of 1859, that the undermentioned estates or shares of estates in the district of Tipperah will be put up for sale at the Collector's office of that district on the 26th March 1890, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale.

1	2	3	4	5	6	7	8	9	10
Touji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.	REMARKS.
26	Kismat 1a. 6g. 2c. 1k. 4dt., pergunnah Bardakhat.	Rs. A. P. 13,319 4 9	.....	3a. 1½kara share.	Srimati Barni Khanam and and others.	Rs. A. P. K. 2,508 0 8 2½	Rs. A. P.	Rs. A. P. K. 1,157 1 7 5 due up to Agrahayan 1296 B.S.	Accounts are separated under section 10 of Act XI of 1859.
28	Ditto ...	13,319 4 9	.....	14g. 1kara 2 kurahs 13 gs. 4 kt. share.	Nabin Chandra Das Roy and others.	599 9 2 14½	.....	64 9 5 2 ditto.	Remaining portion that has not been separated.
36	Kismat 3a., pergunnah Choudhrigano.	1,360 0 6	.....	4a. share ...	Amoka Charan Lashker and others.	340 0 0 17½	.....	46 2 0 12½ ditto.	Ditto ditto.
236	Taluk Ramdhan Majumder, pergunnah Mohabutpur.	1,189 13 10	.....	10a. 15g. 1kara 14kt. share.	Alam Rajah alias Idhangazi Chowdry and others.	793 3 11 0	.....	93 9 11 0 ditto.	Ditto ditto.
295	Taluk Shahazadi Khanam, pergunnah Narayanpur.	746 10 8	.....	3a. 11g. 1kara 2dt. share.	Srimati Shafaranessa Bibi and others.	165 14 9 9½	.....	0 8 0 0 ditto.	Ditto ditto.
378	Mousah Ahamudpur, pergunnah Bardakhat.	1,228 6 0	.....	5a. 6g. 2kara 2kt.	Ishan Chandra Roy.	409 7 4 0	.....	139 5 4 0 for kist November 1880.	Ditto ditto.
401	Jowar Bisarah, pergunnah Bardakhat.	3,141 3 0	.....	5a. 6g. 2kara 2kt.	Ditto ..	1,047 1 0 0	.....	356 5 8 0 ditto.	Ditto ditto.
455	Jowar Kaldi Gobindapur, pergunnah Bardakhat.	3,560 0 0	Whole...	.....	Golam Moula ...	.....	110 0 0 for kist November 1889.	.....	.....
1085	Chur Nagarerkandi, No. 211, pergunnah Utter Shahapur, re-aamed under Regulation 2 of 1819.	1,296 10 9	Do. ...	.....	Dr. George Manock and others.	.....	296 3 11 ditto.	.....	Property of individuals settled for 11 years from 1294 to 1304 B.S.
1083	Mousah Gangercoot, pergunnah Bardakhat.	895 0 0	Do.	.....	Braja Nath Roychowdry and others.	..	76 14 5 ditto.	.....	Meadi taluk settled for 17 years from 1288 to 1304 B.S.
1963	Jowar Tinchitta, pergunnah Bardakhat.	603 12 3	Do. ...	.....	Durga Charan Das Majumder and others.	.....	210 5 3 ditto.	.....	Meadi taluk settled for 18 years from 1287 to 1304 B.S.
1933	Mousah Daiarah Chairpara, pergunnah Bardakhat.	1,451 1 3	Do. ..	.....	Kali Das Bhadra and others.	...	277 12 0 ditto.	.....	Meadi taluk settled for 14 years from 1291 to 1304 B.S.
1933	Jowar Rasullabad, pergunnah Bardakhat.	3,969 14 11	Do.	.....	Kamalakanta Padder and others.	.....	1,364 10 6 ditto.	.....	Meadi taluk settled for 13 years from 1292 to 1304 B.S.
1963	Jowar Daulatpur, tappah Kurikhai, pergunnah Bardakhat.	1,436 12 0	Do.	.....	Former owner—Ram Gopal Chakraborty and others. Auction purchaser—Mohesh Chandra Chakravarti. Sale not yet confirmed.	.....	493 14 0 ditto.	.....	Meadi taluk settled for 50 years from 1261 to 1310 B.S.

Tipperah Collectorate, the 15th February 1890. R. T. GREER, Offg. Collector.

NOTICE is hereby given, under sections 6 and 13 of Act XI of 1859, that the undermentioned estates in the district of Moorshedabad will be put up for sale at the Collector's office of that district on 21st March 1890, corresponding with 9th Choitro, Friday, 1296 (B.S.), for arrears of revenue due up to 13th January 1890.

1	2	3	4	5	6	7	8	9	10
Touji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.	REMARKS.
9	Kismut pergunnah Kasipore, pergunnah Kasipore.	Rs. A. P. 8,074 3 0	.....	1a. 8g. 9kgs. ...	Srinath Roy Chowdhury, &c.	Rs. A. P. 720 7 0	Rs. A. P.	Rs. A. P. 83 0 4	Of the entire estate, 1a. 8g. 9kgs. share belonging to Srinath Roy Chowdhury, &c., the sudder jumma of which is Rs. 720-7, will be sold.
268	Kismut Huda Barnagar, pergunnah Muraripore.	4,062 13 1 Police 72 2 4	...	8a. 19g. 2karas	Moharanee Brojo Sundari Debya.	2,277 10 11 Police 40 8 0	.....	963 8 10 Police 10 14 0	Of the entire estate, joint property (ijmali) of 8a. 19g. 2karas belonging to Bro Sundari Debya, th sudder jumma which is Rs. 2,318 11 will be sold.
		4,134 15 5				2,318 2 11		974 6 10	
467	Kismut mousah Syud Kulutia, pergunnah Fatehsinah	570 11 1	Entire mehal.	.....	Syud Fasiel Karim, &c.	.....	15 14 5	.....	
867	Kismut Gunj Jangipore, pergunnah Gonkur.	714 8 11	Ditto	.....	Bepin Behari Nath	.....	179 14 10	.....	
1486	North of kismut Jangipore, char Enayenagar, Balikhata and Khiderpore.	528 2 0	Ditto	.....	Proprietress and settlement-maker, Rukshmini Barmanya.	.....	Current 296 0 0 Arrear 1,430 9 6	.....	The proprietary and settlement right of the estate from 1st April 1887 up to 31st March 1804 will be sold.
							1,833 9 6		

Moorshedabad Collectorate, dated Berhampore, the 13th February 1890. J. G. RITCHIE, Offg. Collector.

NOTICE is hereby given, under section 6, Act XI of 1859, that the undermentioned estates in the district of Midnapur will be put up to public and unreserved sale at the Collector's Office of that district on 25th March 1890, Tuesday, corresponding with Bengali 1296, 13th Chaitro, and Amli 1297, 14th Chaitro, for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue due on the 12th January 1890.

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
41	Pergunnah Khandar, mehal Amra *alias* Bonai (thana Sabung and Midnapur).	Rs. A. P. 1,265 13 2	Entire...	.....	Gopinath Masanto, Nando Lall Masanto and others.	Rs. A. P.	Rs. A. P. 21 15 6	Rs. A. P. .....
45	Pergunnah Khandar, mehal Amonpur (thana Midnapur and Narsingur).	1,356 2 10	.....	9*a.* 1½*g.* 8 are of the joint property.	Baboo Kedarnath Bandopadhya, head assistant, on behalf of the minor of Turka estate, Radha Gobindo Pal, and the Collector of Midnapur on behalf of Haripado Masanto under the Court of Wards.	813 11 4	.....	46 16 10 (Minor has share in the estate.)
73	Pergunnah Kelle: Moinachor, mehal Anondopur (thana Sabung).	5,657 4 9	.....	Separate account— *A. g. k.* Anondopur... 6 5 0 Duborajpur 6 5 0 Madhubchuk 6 5 0 Kolagechea .. 3 2 2 Masomchuk 3 2 2 Shamsundurpur ... 3 2 2	Srimotya Dassi, Moni Dasi, mother and guardian of Sripoti Charan De, minor.	1,795 3 8	.....	616 9 8
80	Pergunnah Moyna, mehal Ankhuachuk Dakhin *alias* Dakhin Ankhua (thana Sabung).	873 13 6	Entire ...	.....	Khem Chandra Bandopadhya, self and Srimotya Nistarini Debya, mother and guardian of Panchanan and Lalit Mohon Bandopadhya, minors	.....	301 15 6	.....
134	Pergunnah Kelle: Midnapur, mehal Badar, thana Kespur.	906 6 1	Do. ...	.....	Brojo Das Datta	.....	310 8 9	.....
143	Pergunnah Sabung, mehal Bohbulpur (thana Sabung, Panskura).	2,698 3 1	.....	Separate account, 3*a.* 2*g.* 2*k.* share of the mehal.	Srimotya Dassi Moni Dassi, mother and guardian of Sripati Charan De, minor.	926 15 11	.....	121 0 11
204	Pergunnah Khandar, mehal Barikbar *alias* Bargones (thana Sabung, Midnapur and Narsingur).	3,496 0 3	.....	Joint property— *A. g. k.* Damudarbar Kelle: ... 4 0 0 Barikbar ... 4 0 0 Beandpur ... 4 0 0 Chowdhrychuk ... 4 0 0 Holodhorchuk 4 0 0 Mohonnondichuk ... 4 0 0 Babon Doluichuk ... 4 0 0 Ram Chandra chuk ... 4 0 0 Anondodoluichuk ... 4 0 0 Jibunchuk ... 4 0 0 Abhiram Bar 4 0 0 Ochuntar .. 4 0 0 Damudarchuk 4 0 0 Arjunchuk .. 4 0 0 Kotai .. ... 4 0 0 Bishtuchuk 4 0 0 Josoageerea .. 4 0 0 Srimontopur 4 0 0 Mawa: Kelle: 4 0 0 Daca ... 4 0 0 Kwazchuk ... 4 0 0 Modnuchukbar 4 0 0 Raghudoluichuk ... 4 0 0 Khordabad chuk ... 4 0 0 Cauk Basdeb 4 0 0 Jeswerea ... 4 0 0 Krorda ... 4 0 0 Biswanath chuk ... 4 0 0 Dordra ... 2 6 1 Dordra chuk Kelle: ... 2 6 1 Lal chuk ... 2 6 1 Salukea ... 2 6 1 Gopal Sing chuk ... 2 6 1	Srimotya Prossono Moyi, Dinabundu Pardi and others.	780 15 6	.....	94 12 9
231	Pergunnah Batitaki, mehal Bural (thana town, Sabung, Narsingur).	1,213 7 5	.....	8*a.* of the joint mehal 8*a.* of the separate account mehal.	Jibun Kristo Ghose ...	606 11 8	.....	120 7 7
					Administrator-General, Calcutta of the estate of Srikristo Ghose.	606 11 9	.....	120 8 1
271	Pergunnah Kelle: Moyna, mehal Borisa *alias* Borisa Ramchuk, (thana Sabung).	2,077 9 5	Entire...	.....	Ramhari Mondul and Sodanand Mondul and others.	.....	534 13 5	.....
323	Pergunnah Egrachor, mehal Bhatda, thana Egra.	3,614 13 4	.....	Joint property— Mouza Tetulea 1, Kesarorang, 2*a.* 7*g.* 3*k.*	Nundo Kumar, Satrughon Acharyya and others.	1,270 13 7	.....	4 11 6

16ff.; Bhatda, 8*a.* 9*g.* 2*k.*; Mirzapur 1; Karokpara 1; Noripur 8*a*; Jhurea 1 mouza; Gopinathpur 1 mouza; Sundurpur 1 mouza, Ke: Kamardeyan 3*a.* 13*g.*; Norohoripur 1 mouza.

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
384	Pergunnah Kelle: Moynachor, mehal Chonera Chuk, thana Sabung.	546 15 8	Entire...	.....	Dinabundhu Jana, Kartik Prosad Jana and others.	.....	0 2 4	.....
386	Pergunnah Kasijora, mehal Dahnapukur, thana Panskura.	618 13 3 with police.	Do. ...	.....	Nemaichand De and Srimotya Dassi Moni Dassi, mother and guardian of Sripoti Charan Dey, minor.	.....	129 0 3 with police.	.....
387	Pergunnah Shahapur, mehal Dinkel, thana Debra.	2,906 3 1	.....	8a. share of the joint mehal.	Jibun Kristo Ghose ...	1,453 1 7	.....	484 3 1
				No. 1. 8a. of the separate account.	Administrator-General, Calcutta, estate Srikristo Ghose.	1,453 1 6	.....	484 2 3
391	Pergunnah Kedar Kund, mehal Duyan (thana Debra).	1,135 8 3	Entire...	....	Sridhorcharan Nundi ...	.....	390 3 3	.....
394	Pergunnah Kelle. Kasijora, mehal Gopalnagur, (thana Panskura).	1,511 0 9	.....	10a. 13g. 1k. 1kr. of the joint mehal.	Doyal Chondra Jana, Bisambur Jana and others.	1,007 5 10	.....	85 14 6
403	Pergunnah Gagnapur, mehal Ghosepur, thana Panskura.	1,208 1 8	..	8a. share of the entire joint estate.	Joint share Jibun Kristo Ghose.	604 0 10	.....	197 1 10
				No. 1, separate account 8a. share.	Administrator-General, Calcutta, estate Srikrishna Ghose.	604 0 10	.....	197 1 10
409	Pergunnah Sabung, mehal Horihurpur, thana Sabung.	2,427 11 0	.....	9a. 15g. share of the entire joint mehal.	Neunaichand Dey ...	1,479 5 11	.....	507 14 1
				No. 1, separate account, 6a 5g. share of the entire mehal.	Srimotya Dassi Moni Dassi, mother and guardian of Sripoti Charan Dey, minor.	948 5 1	.....	325 4 1
427	Pergunnah Chetna, mehal Horiramper, thana Daspur.	25,920 3 9 with police.	.....	8a. share of the mehal.	Joint share Nobolal Khan, Koralipodo Khan and others.	12,960 1 11 with police.	.....	4,895 7 1 with police.
439	Pergunnah Moynachor, mehal Ankhapurbo (thana Tamluk).	1,003 7 2	.....	8a, share of the joint mehal.	Dina Nath Bhuttacharjya	500 11 7	.....	173 1 4
442	Pergunnah Amarsi, mehal Jadubar *alias* Nayabusan, thana Pataspur.	907 12 3	.....	9a. 11g. 3k. 2kag. share of the entire joint mehal.	Promchand, Ishan Chandra Sera and others.	543 4 5	.....	16 6 9
451	Pergunnah Kelle: Kasijora, mehal Janabar, thana Panskura.	1,252 9	Entire .	.....	Kamda Charan Pal, Aiman Nessa Bibi and others.	.....	1 1 3	.....
493	Pergunnah Taruf Jamna, mehal Jamna, thana Sabung.	1,593 14 2	.....	6a. 1g. 3k. 2 kag share of the entire mehal.	Joint share Nemai Charan Dey.	607 14 4	.....	211 2 4
749	Pergunnah Sabung, mehal Khelnachota. thana Sabung.	715 5 10	Entire .	.....	Nemai Chand De and Srimotya Dassi Moni Dassi, mother and guardian of Sripoti Charan De, minor.	.....	149 7 10	.....
804	Pergunnah Kasijora, mehal Kolagechya (thana Panskura Tamluk).	1,149 8 7	.....	Joint property 12a. share of mouza Kollagechya.	Chandhori Nando ..	780 2 10	.....	268 14 10
810	Pergunnah Kelle: Kasijora, mehal Kesapat, thana Panskura.	800 6 2	Entire...	.....	Brojo Das Dutta	.....	275 3 3	.....
841	Pergunnah Moynachor, mehal Kripanandopur, thana Sabung.	673 8 7	Do. ..	.....	Natabur Das Adhikary, Godadhur Das Adhikary and others.	.....	230 15 11	.....
889	Pergunnah Moynachor, mehal Kherai, thana Sabung.	5,951 4 3	... ..	14a. 8g. 3k. share of the joint mehal.	Dinabundhu Nandi, Nemai Chand De and others.	5,370 1 5	.....	1,076 11 11
				No. 1, separate account, 1a. 11g. 1k. share of the entire mehal.	Dassi Moni Dassi, mother and guardian of Sripoti Charan De, minor.	581 2 10	.....	199 4 10
1034	Pergunnah Kasijora, mehal Nohna Kuwar Chuk, thana Panskura.	1 179 13 0 with police.	Entire...	....	Nemai Chand Dey and Srimotya Dassi Moni Dassi, mother and guardian of Sripoti Charan De, minor.	.....	402 9 0	.....
1046	Pergunnah Sabung, mehal Nandobar, thana Sabung.	667 9 11	Do. ...	..... .	Rajiblochon, Modhusudhon Sabud and others.	.....	1 8 11	..
1116	Pergunnah Shahapur, mehal Poponhori Choron *alias* Papon (thana Debra).	571 1 6 with police.	Do. ...	....	Sridhor Charan Nandi ..	.....	195 15 5 with police	.....
1230	Pergunnah Kelle: Kasijora, mehal Ratalea (thana Panskura).	1,135 12 11 with police.	Do. ...	.....	Ditto ditto ...	.....	389 13 11 with police.	..
1260	Pergunnah Moynachor, mehal Ramchondropur, thana Sabung.	1,300 13 9	.....	No. 1, separate account, 10a. 13g. 1k. 1kr. share of the mehal.	Brojo Das Dutta ..	667 3 10	.....	228 15 10
1631	Pergunnah Kasijora, mehal Sridhorbosan *alias* Dhuleara, thana Panskura.	1,456 13 6 with police.	.....	Separate account, mouza Sridhorbosan 1, mouza Dhuleara 8a.	Rishi Kesh Bose ..	503 13 8 with police.	.....	250 3 9 with police

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
1486	Pergunnah Uttor Behar, mehal Shahrdahat *alias* Shahida, thana Datoon.	2,171 4 8	.....	8a. 13g. share of the joint mehal.	Gopinath, Nando Lall Masanto and others.	1,123 13 7	.....	29 11 4
1500	Pergunnah Kasijora, mehal Uttorusutpur, thana Panskura and Tamluk.	3,505 3 1	.....	No. 8, separate account, 8a. share of mouza Uttor usutpur.	Nemai Chand Dey and Dasi Moni Dasi, mother and guardian of Sripoti Charan De, minor.	640 0 0	.....	134 1 0
	Temporarily-settled estate.							
46	Pergunnah Pataspur, mehal Dehat Gokulpur.	23,333 15 3	Entire...	.....	Gopendro Nondon Das Mohapatro.	.....	307 15 8	.....
	Salpai mehal.							
15	Pergunnah Taruf Biswan, mehal Gorahar, thana Khedgree.	814 0 0	Do. ...	.....	Proprietor Government tenant Durga Prosad Mirdha.	.....	179 13 0	.....

Dated Midnapur, the 21st February 1890. G. W. PLACE, for Offg. Collector.

NOTICE is hereby given, under section 6, Act XI of 1859, and section 11 of Act VII of 1868, that the undermentioned mehals and tenures borne in the towji of the district of Noakholly will be put up to public and unreserved sale at the Collector's office of that district, on Wednesday, the 26th March 1890, corresponding with 14th Choitra 1296 B S., for arrears of revenue and other demands like revenue recoverable under the law in force due for kist 12th January 1890.

1	2	3	4	5	6	7	8	9
Towji No.	Name of pergunnah, mehal and tenure.	Sudder jumma of entire estate or tenure.	Whether the whole estate to be sold or part thereof.	If only a share is to be sold, specification of such share or shares.	Names of proprietors or tenure-holders of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
1551	No. 14, Gayer makarari meadi (temporary) howla Abdul Rahaman in chur Shulukya, *alias* Sunya, chur pergunnah Bhooloah.	565 15 11	Whole ...	.....	Wazuddin Maghi ...	.....	241 11 6	.....
1602	No. 80, Gayer makarari meadi (temporary) howla Aamatullah, Shubal Chandra Guha in chur Magdhara, pergunnah Sundip.	708 14 7	Do. ...	.....	Uma Charan Guha ...	.....	26 0 0	.....
1671	No. 1, Mudafat Mohammed Manwar, Mohammed Kalim, Akramuddin, Gayer makarari meadi (temporary) abadkari howla Anwaruddin, Kali Das, Modan Nath in chur Gazi, pergunnah Jaira.	1,049 5 9	Do. .	.....	Isapali Maghi ...	.....	679 4 6	.....
1671	Mudafat Mohammed Manwar, Mohammed Kalim, Akramaddin, No. 3, Gayer makarari meadi howla Mohammed Manwar, Mohammed Kalim, Akramaddin, in chur Gazi, pergunnah Jaira.	1,283 9 0	Do.	.....	Srimati Halimennessa Chowdhurany.	.....	519 10 6	.....
1671	No. 45, Gayer makarari meadi howla Sarfaddin, Kalimaddin, Sua Gazi, Kachim No. 270 Dakhal in chur Gazi, pergunnah Jaira.	555 9 7	Do. ..	.....	Asimaddin Patwari, Anursan Bibi, mother and guardian of Aminullah and Mofzil, minors, Chuny, Moti Meah, Kachim Karimunnessa, Munsarali, Samadali, Tazemaddin, Umedali, Manoo Meah, Abdul Meah, Fasarally, Halimennessa, Kadirbaksh, anbaksh Amzad, Asabuddy Monharah.	.....	102 2 1	.....

Noakhally Collectorate, the 16th February 1890. C. R MARRIOTT, Offg Collector.

NOTICE is hereby given, under section 6, Act XI of 1859, that the undermentioned mehal, borne in the towji of the district of Noakholly, will be put up to public and unreserved sale at the Collector's Office of that district on Wednesday, the 26th March 1890, corresponding with 14th Chaitra 1296 B S., for arrears of revenue recoverable under the law in force due for kist 28th September 1889:—

1	2	3	4	5	6	7		
Towji No.	Name of pergunnah, mehal, and tenure.	Sudder jumma of entire estate or tenure.	Whether the whole estate is to be sold or part thereof.	If only a share is to be sold, specification of such share or shares.	Names of proprietors or tenure-holders of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A.
45	Kishmut Mohendra Narayan, pergunnah Shundeep.	837 1 11	Whole ..	.....	Chandra Mohan Nandy.	.....	109 7 3	.....

Noakholly Collectorate, the 16th February 1890. M. M. CHUCKERBUTTY, Dy Collr., for Offg. Collr.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Sarun will be put up for sale at the Collector's Office of that district on the 17th March 1890, corresponding with 11th Cheyt 1297F. (Monday), for arrears of revenue and other demands due on 28th September 1889, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

When in columns 5, 7, and 9 of the appended statement it is stated that only a share is to be sold, a separate account is kept for such share, and the other share or shares in the estate are excluded from the sale :—

1	2	3	4	5	6	7	8	9
Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors of property to be sold.	If only a share is to be sold, the sudder jumma of such share.	If the whole estate is to be sold, the arrears due from it.	If only a share is to be sold, the arrears due from it.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
78	Deopur, pergunnah Ander.	3,309 12 10½	.....	*Ijmali.*—16*a.* in mouzah Izara; 4*a.* in Patar; 4*a.* in Pachbemia; 16*a.* in Deopur; 4*a.* in Seari.	Rampria Saru ...	1,048 7 3½	.....	338 0 8½
242	Siswa, pergunnah Ander.	821 5 4½	.....	*Ijmali.*—16*a.* in mouzah Hoosaina; 16*a.* in mouzah Siswa; 16*a.* in mouzah Kandh Puker; 16*a.* in mouzah Bowandih; 16*a.* in mouzah Kusila; 4*a.* in mouzah Meerpur Jitwar; 16*a.* in mouzah Uperwar; 16*a.* in mouzah Moglaripur; 16*a.* in mouzah Harnathpur; 4*a.* in mouzah Chandouli Puti.	Sheikh Goolam Hoosein and others.	628 14 10½	.....	25 2 11½
324	Umdha Phakooli, pergunnah Bal.	1,040 0 0	.....	*Ijmali.*—7*a.* in mouzah Umdha; 7*a.* in mouzah Phakooli.	Ram Govind Sahoo and others.	975 3 0	.....	152 11 5
386	Bolesra, pergunnah Bal.	811 2 10½	.....	*Ijmali.*—14*a.* 8*p.* 5*k.* 4*m.* 2*d.* 10*kag.* in mouzah Bolesra.	Kerat Chand Mohto.	744 11 10½	.....	4 0 9½
657	Khaira Kuchnar, pergunnah Bal.	5,048 12 9½	Whole estate.	.....	Ganga Parshad Singh and others.	.....	0 2 3	.....
726	Mirzapur, pergunnah Bal.	1,546 10 8½	.....	*Ijmali.*—16*a.* in mouzah Mirzapur; 16*a.* in mouzah Narown Narainpur Mirapur Gopalpur; 16*a.* in mouzah Runwari Basunt; 16*a.* in mouzah Ramgadha; 16*a.* in mouzah Bakunthpur; 16*a.* in mouzah Gungajul.	Dil Raj Singh and Barmna Singh and others.	1,138 1 8½	.....	0 1 5½
830	Rusulpur, pergunnah Bal.	1,296 0 0	.....	*Ijmali.*—16*a.* in mouzah Belkonda; 8*a.* 6*p.* in Bishunpur; 1*a.* in Parsa; 16*a.* in Chandpura; 8*a.* 6*p.* in Chhitrowlia; 16*a.* in Rampur Nurnaggar; 8*a.* 6*p.* in Rusulpur; 8*a.* 6*p.* in Saria; 8*a.* 6*p.* in Kotnea; 1*a.* 6*p.* in Mirzapur; 8*a.* 6*p.* in Manikpur.	Baboo Chandreesur Persad Narain Singh.	696 9 5½	.....	28 8 10½
1781	Shampur, pergunnah Barul.	1,013 3 3	.....	*Ijmali.*—12*a.* in mouzah Samerdeh; 8*a.* in mouzah Shampur; 16*a.* in mouzah Shampur Talab Doem, 8*a.* in mouzah Balapati; 16*a.* in mouzah Sultanpur; 8*a.* in mouzah Shekhpur.	Shunker Parshad and others.	547 7 2	.....	34 10 10
2715	Karar Mahamedpur, pergunnah Goa.	724 15 0	Whole estate.	.....	Ram Parshad Sahoo, Ganga Parshad Sahoo and others.	.....	339 9 9	.....
2763	Sagoni *alias* Burghi, pergunnah Goa.	1,536 0 0	.....	*Ijmali.*—13*a.* 9*p.* in mouzah Sagoni; 12*a.* 9*p.* in mouzah Burghi; 12*a.* 9*p.* in mouzah Chandpara; 12*a.* 9*p.* in mouzah Harakhpara; 16*a.* in mouzah Lorna; 13*a.* 9*p.* in mouzah Rajmara Mokimpur; 13*a.* 9*p.* in mouzah Senepatna.	Ram Nanaj Kuer and Ram Saran Singh, &c.	1,394 7 11½	.....	7 2 7
2872	Sondhani, pergunnah Goa.	6,866 1 11	.....	*Ijmali* share	Durga Singh and Jado Lal.	837 5 5	.....	213 10 0 2 *powa.*
2035	Kharika, pergunnah Kasmir.	612 2 4½	Whole estate.	.....	Sugao Ali Khan and Jamao Ali Khan and others.	.....	100 11 4½	.....
3175	Salehpur, pergunnah Kasmir.	1,110 0 0	Ditto ..	.....	Ram Parsun Singh, auction purchaser.	.....	201 13 0	.....
3176	Ditto	649 0 0	.....	*Ijmali.*—16*a.* in mouzah Salehpur Dara-Sikah; 16*a.* in mouzah Chander Chanpur; 16*a.* in mouzah Chak Chhiter Madhooker.	Padaguth Tewari, auction purchaser.	604 0 0	.....	113 4 0
3177	Ditto	650 0 0	.....	*Ijmali.*—16*a.* in mouzah Salehpur Dara-Sikah; 16*a.* in mouzah Chander Chanpur; 16*a.* in mouzah Chak Chhiter Madhooker.	Sheo Karun Singh, auction purchaser.	605 0 0	.....	113 6 11½
3472	Doomria, pergunnah Madhul.	533 5 4	Whole estate.	.....	Thakur Parshad Singh and others	.....	95 13 6	.....
3513	Indai, pergunnah Manjhi.	633 9 7	.....	*Ijmali.*—13*a.* 10*g.* 1*k.* in mouzah Indai.	Ram Anugrah Rai and Ram Barun Rai, and others.	540 15 8	.....	32 12 0
3689	Lachhipur, pergunnah Narhun.	2,026 10 8	Whole estate.	.....	Laloo Singh and Fetch Narain Singh and others.	.....	0 0 4½	.....
3932	Jira-Dai, pergunnah Pachlukh.	624 1 3½	Ditto...	.....	Mossamut Raghoobunsi Kuer and others.	.....	7 3 1	.....
3938	Bisoonpur Mehwa, pergunnah Sipah.	777 15 2½	Ditto .	.....	Baboo Janki Parshad Sahee and Bhairo Parshad Sahee and others	.....	0 2 2½	.....

Sarun Collectorate, the 22nd February 1890.

RAGHU NATH SHAHI, Dy. Collr., for Collr.

NOTICE is hereby given, under sections 6 and 13, Act XI of 1859, that the undermentioned estates or shares of estates in the district of Cuttack will be put up for sale at the Collector's Office of that district on the 7th April 1890 for arrears of revenue and other demands, which, by the Regulations and Acts in force, are directed to be realized in the same manner as arrears of revenue.

Towji No.	Name of mehal and pergunnah.	Sudder jumma of the whole estate.	Whether the whole estate is to be sold.	If only a share is to be sold, specification of such share or shares.	Names of proprietors.	If a share is to be sold, the sudder jumma of such share or shares.	If the whole estate is to be sold, the arrears due from it.	If a share is to be sold, the arrears due from such share or shares.
		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
59	Kismut talook Kalimegha, pergunnah Jajpoor.	1,198 7 4	.....	Out of the estate kismut, 11*a.* 9*p.* 15*k.* 2*b.* 10*g.* share of Ananta Panda and others.	Ananta Panda, Kanhai Panda and others.	891 3 0	.....	9 0 5
656	Kismut mouzah Nagapur, pergunnah Suhang.	928 13 7½	.....	Out of the estate kismut, 15*a.* 2*p.* 9*k.* 2*b.* 12*g.* 3*kauri* share of Chandhari Juggernath Santra Mahapater and others.	Kripa Sindhu Chaudhari and others.	882 11 0	.....	1 5 7½
742	Kismut mouzah Barahipur, pergunnah Sughunda.	531 4 10	Whole estate	.....	Gobind Chandra Puharaj and others.	.....	16 7 7	.....
744	Talook Manda, pergunnah Sughunda.	1,615 14 1	Ditto ...	.....	Juggernath Santra Mohapater and others.	.....	23 6 2	.....
1328	Talook Upper Barnan, pergunnah Barnan.	590 4 9	Ditto ...	.....	Daya Nidhi Dubai and others.	.....	20 7 10	.....
1981	Kismut mouzah Aitpur, pergunnah Kodinda.	655 10 6	.....	Out of the estate kismut 14 annas share of Radha Madhob Santra and others.	Radha Madhob Santra and others.	573 11 2	.....	81 2 3
2034	Kismut talook Rajhungsa, pergunnah Kodinda.	1,095 3 10	Whole estate	.....	Radha Madhob Santra, Hurra Kristo Mohanty and others.	.....	211 14 3	.....
2071	Talook Sree Sanderpur, pergunnah Silo.	980 2 0½	.....	Out of the estate kismut 13 annas share of Kasi Nath Dass and Surja Mani Dio and others.	Syed Abdul Kadar and others.	796 5 7½	.....	20 7 4½
2498	Talook Bisnabar, pergunnah Bakhrabad.	2,886 1 1½	Whole estate.	.....	Radha Madhob Santra and others.	.....	250 11 8½	.....
2737	Mouzah Kantisal, pergunnah Kuta.	505 10 2	Ditto ..	.....	Kanhoo Charan Chaudhary and others.	.....	3 5 4	.....
3525	Kismut mouzah Narigan, pergunnah Katia.	720 14 7	Ditto .	.....	Janardan Mahapater and others.	.....	1 14 11	.....
3844	Talook Balabhadra, pergunnah Tikan.	1,106 12 4½	Ditto ...	.....	Chandbaranee Madha Dei, grandmother and guardian of Madan Mohan Das, minor.	.....	191 12 8½	.....

Cuttack Collectorate, the 20th February 1890. A. C. SEN, for Collector.

Notice.

PURSUANT to the orders of Government, dated the 29th June 1881, particulars of the undernoted items of articles held by the Port Commissioners as Receivers of Wrecks, each article being of value above Rs. 100, are published for general information in accordance with the provisions of section 76, Act VII of 1880.

Date.	Recovery number.	Description of articles.	Weight.	Approximate value.	Where recovered.	Where lying.
		Port Approaches.	Cwt. qr. lbs.	Rs.		
16th August 1889 ...	10 P. A.	One country anchor	45 0 0	225	Poojally Creek	Port Commissioners' Works and Anchor yard.
22nd ,, ,, ...	11 ,,	One Rodgers' patent anchor	15 0 0	260	Ditto ...	Ditto.
		One chain 1⅛" of 30 fathoms	37 2 3			
27th ,, ,, ...	12 ,,	One Rodgers' patent anchor	50 0 0	150	Shibbaria	Ditto.
4th September ,, ...	13 ,,	One English anchor	27 0 0	215	Budge-Budge	Ditto.
		One chain 1⅞" of 15 fathoms	16 1 10			
11th ,, ,, ...	14 ,,	One anchor	60 0 0	300	Binelipatam	Ditto.
27th November ,, ...	17 ,,	One English anchor	40 0 0	330	Kulpee	Ditto.
		One chain 1⅜" of 15 fathoms	26 3 26			
3rd December ,, ...	19 ,,	One country anchor	23 0 0	210	Do. ...	Ditto.
		One chain 1⅛" of 33 fathoms	35 3 22			
27th ,, ,, ...	21 ,,	One Rodgers' patent anchor	30 0 0	390	Saugor ...	Ditto.
		One chain 1¼" of 32 fathoms	48 3 0			
27th ,, ,, ...	22 ,,	One country anchor	50 0 0	1,060	Ditto ...	Ditto.
		One wooden stock	.. .. ..			
		One chain 1⅝" of 80 fathoms	162 3 12			
27th ,, ,, ...	23 ,,	One country anchor	58 0 4	960	Ditto ...	Ditto.
		One chain 1⅜" of 86 fathoms	154 2 25			
8th January 1890 ...	26 ,,	One country anchor	15 0 0	245	Ditto ...	Ditto.
		One chain 1⅛" of 56 fathoms	34 1 24			
10th ,, ,, ...	27 ,,	One Rodgers' patent anchor	36 3 8	1,585	Ditto ...	Ditto.
		One stock	.. .. ..			
		One chain 1⅝" of 135 fathoms	274 3 8			
13th ,, ,, ...	28 ,,	One English anchor	43 1 23	1,580	Ditto ...	Ditto.
		One stock	8 2 0			
		One chain 2⅛" of 125 fathoms	255 3 26			
10th February ,, ...	31 ,,	One country anchor	12 0 0	305	Ditto ...	Ditto.
		One chain 1⅜" of 62 fathoms	49 0 26			
10th ,, ,, ...	32 ,,	One country anchor	13 0 0	110	Ditto ...	Ditto.
		One chain 1⅛" of 12 fathoms	0 2 3			
10th ,, ,, ...	33 ,,	One English anchor	42 0 0	230	Ditto ...	Ditto.
		One chain 1⅛" of 10 fathoms	17 3 27			

Port Commissioners' Office, Calcutta, the 11th February 1890. E. J. BEAUMONT, Asst. Conservator.

Excise.

NOTIFICATION.

1. The right of retail sale of the Liquors and Drugs specified below will be put up to auction at the Opium Sale-room, Board of Revenue, 2, Bankshall Street, on Tuesday, the 4th March 1890, and subsequent days, in the following order :—

Name of article.	Date of sale.
Ganja, Siddhi, Charas, Majum ...	Tuesday, the 4th March 1890.
Opium, Madak, Chandu	Wednesday, the 5th ditto.
Tari	Saturday, the 8th ditto.
Country Spirit, Rum and Imported Liquor by glass.	Monday, Tuesday, and Wednesday, the 10th, 11th and 12th March 1890.

2. A complete list of all the shops for which licenses will be offered and a copy of each form of license are open to general inspection at the Office of the Superintendent of Excise Revenue, 4, Bankshall Street, and the number of these shops is not under any circumstances to be increased during the term of three years ending the 31st March 1893, except under the Board's sanction in each case. The Superintendent of Excise Revenue, however, reserves to himself the right, in case of combination, or for other cause, to transfer (subject to there being no objection on police grounds), either before or after its settlement, any shop from the site specified in the list to some other site, provided that the new site, if it is more than 100 yards from the advertised one, does not bring the shop within a quarter of a mile of any other similar shop whose term of license is unexpired.

3. It is not at present intended to open any other shop during the term of the license; but the Superintendent of Excise Revenue does not absolutely bind himself in this respect. On special cause shown, and with the sanction of the Board of Revenue in each case, the number of shops may be increased: provided, however, that, whenever a new shop is opened, it will be optional to the holder of a similar license for the sale of Liquor or Drugs, if his shop is within a quarter of a mile of the new shop, to surrender his license without forfeiting his advance, when the Superintendent of Excise Revenue is to re-settle the shop by auction or otherwise.

4. The right of retail sale of the Liquors and Drugs is to be put up to auction at the sanctioned upset prices.

5. The right of retail sale of the Liquors and Drugs is to be put up to auction in separate lots of one or more shops, either in the order specified in the list, or in such other order as the officer conducting the sale may deem fit. When one lot has been sold, the next lot is not to be put up until the sum payable in advance on account of the lot already sold has been actually paid: provided, however, that, where the sum payable exceeds Rs. 25, a promissory note may be taken from any respectable and well-known purchaser in lieu of cash payment.

6. The purchasers of the right of retail sale of Country Spirit, Rum, and Imported Liquors are entitled to sell Imported Liquors by the glass only, the liquor to be drunk *on* the premises.

7. The auction is to be held subject to the following conditions :—

(*a*)—That the Superintendent of Excise Revenue does not bind himself to accept the highest or any bid.

(*b*)—That the settlement with each accepted purchaser will, in Calcutta and the Suburbs, be contingent on the production by him of the usual Police certificate or license, as the case may be, viz.—

For Excise licenses for— Doasta ... ... Rum ... Imported Liquors by glass Tari ... Ganja ... Siddhi ... Charas ... Majum	If to be held in Calcutta, a Police certificate in the form prescribed by section 36, Act IV (B.C.) of 1866, must be produced; and if to be held in the Suburbs, a Police certificate in the form prescribed by section 19, Act II (B.C.) of 1866, must be produced.
For Excise licenses for— Opium ... ... Madak ... ... Chandu	If to be held in Calcutta, a Police license in the from prescribed by section 39, Act IV (B.C.) of 1866, must be produced; and if to be held in the Suburbs, a Police license in the form prescribed by section 23 of Act II (B.C.) of 1866, must be produced.

(*c*)—That the person accepted as the purchaser is to state in writing, within seven days from the date of settlement, in what building he purposes to open his shop, and is at the same time to submit a plan showing clearly and distinctly what building or portion thereof he desires to be covered by the license, it being understood that the removal of shops to other premises than those named in the list attached to this notification will be contingent on the approval of both the Excise and Police authorities, and that any sum which has been paid as an advance of the license fee under the provisions of clause (*d*) of these conditions will be returned to any person to whom a license may be subsequently refused for Police reasons.

(*d*)—That the term of the license is to be for three years ending the 31st March 1893, and that, except in the case of Tari, the license fee for that period is to be paid in advance in the following instalments :—namely, the sum equivalent to the fee for two months, at the time of sale, and one month's fee on the date on which the currency of the license commences, and one month's fee on the 1st day of every succeeding month, until the whole of the fee due on the license shall have been paid. In the case of Tari only one month's fee

is to be paid in advance at the time of sale, and fifteen days' fee on the date on which the currency of the license commences, and the rest of the fee in half-monthly instalments, viz., on the 1st and 16th day of every month, until the whole of the fee due on the license shall have been paid. This condition is to be strictly enforced in future, and failure to comply with it is to be met by immediate cancelment of the license.

(*e*)—That the purchaser is not to be entitled to receive back any portion of his advance in the event of his shop being closed before the expiration of the term of the license on violation of any of the conditions of the license, or his being convicted of a non-bailable criminal offence, or of any offence against the Excise laws or rules; and in the case of the surrender of a license under Act VII (B.C.) of 1878, the licensee is to give fifteen days' previous notice in writing to the Superintendent of Excise Revenue, and pay a sum equal to the license fee for fifteen days, over and above the amounts already paid in advance; and in the case of the surrender of a license under Act I of 1878, the licensee is to give one month's previous notice in writing to the Superintendent of Excise Revenue, and pay such fine not exceeding six months' license fees as the Superintendent of Excise Revenue may adjudge, over and above the amounts already paid in advance.

(*f*)—That the currency of the license is to commence on the 1st April 1890, on which date the purchaser is to open his shop, in all respects prepared for the accommodation of customers, to be certified by an Excise Officer—failure to comply with this condition is to be met by the immediate cancelment of the license, the forfeiture of the deposit, and the levy of the fees for the month except in the case of delay caused by the non-issue of the Police certificate or Police license, for which a reasonable extension of time may be allowed upon application and cause shown to the Superintendent of Excise Revenue.

(*g*)—That where the amount of the sum payable in advance is required to be paid at once in cash, and the bidder fails to make such payment, the officer conducting the sale is either immediately to put up the lot again for sale, or after the other lots in the list have been disposed of, or he may postpone the sale to such future date as he shall then and there notify; and the defaulting purchaser is to be debarred from bidding for such lot, or for any other lot, and he is not to be allowed to remain in the auction-room; and that the defaulting purchaser will be liable for any loss that may accrue to Government in case it becomes necessary to re-sell a lot at a lower rate, either in consequence of his failure to deposit the sum payable at the time of sale, or to redeem his promissory note on or before 4 P.M. on the day following that on which the note was signed.

(*h*)—That the purchasers are to adhere to all the provisions of the Opium, Excise and Police laws, and of the rules which have been or may from time to time be prescribed by the Board of Revenue.

8. All sales subsequent to the date of the triennial sale in March are to be held subject to the conditions contained in this notification, so far as they may be applicable.

9. Any further information regarding the auction may be had on application at the Office of the Superintendent of Excise Revenue.

D. G. BONNERJEE,
Superintendent of Excise Revenue,
Calcutta, the Suburbs, Howrah, and Bally.

OFFICE OF THE SUPDT. OF EXCISE REVENUE; 4, BANKSHALL STREET, CALCUTTA, *the 14th February* 1890.

Statement of the Affairs of the Bank of Bengal for the week ending 18th February 1890.

LIABILITIES.				ASSETS.			
	Rs.	A.	P.		Rs.	A.	P.
Capital paid up	2,00,00,000	0	0	Government Securities	20,25,057	8	0
Reserve Fund	58,00,000	0	0	Other authorized Investments	71,51,776	0	0
Public Deposits at Head Office ... ... Rs. 1,05,12,398 13 1				Loans on Government and other authorized Securities	1,92,98,639	0	9
Ditto ditto at Branches ... 94,66,405 7 2	1,99,78,804	4	3	Accounts of credit on ditto ditto	1,06,58,969	4	9
Other Deposits at Head Office and Branches	3,02,51,538	13	0	Bills discounted and purchased	1,92,88,542	8	6
Bank Post Bills, &c.	4,27,782	6	4	Balances with other Banks	7,66,833	2	11
Sundries	6,50,373	3	5	Bullion	54,029	3	11
				Dead Stock	12,25,904	5	11
				Stamps	12,367	6	0
				Sundries	3,02,438	4	3
					6,07,87,456	13	0
				Cash and Currency Notes at Head Office ... Rs. 56,06,475 10 5			
				Cash and Currency Notes at Branches ... ... ,, 1,07,14,566 3 7	1,63,21,041	14	0
Rupees ...	7,71,08,498	11	0	Rupees ...	7,71,08,498	11	0

By order of the Directors,
W. D. CRUICKSHANK,
Secy. and Treasurer.

F. T. LEWIS, Offg. Chief Accte
Rate for Demand Loans 10 per cent.
Percentage 31·3.

BANK OF BENGAL,
Calcutta, 20th February 1890.

(3564-1)

Commissioners for making Improvements in the Port of Calcutta.

NOTICE

UNDER SECTION 69 OF ACT V (B.C.) OF 1870.

THE following packages, landed at the Jetties from the undermentioned ships, have been removed to the Commissioners' Import Warehouse, where they remain at the risk and expense of the owners. If not cleared within two months from the date stated against each item, they will be sold under section 72 of the said Act :—

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1890.			
Feb. 12	12 Sleepers, I S R	Order ...	S. S. "City of Venice
,, 12	1 Cask, D M in a diamond	Ditto ...	Ditto.
,, 12	2 Casks, 745 in a diamond, E S top ...	Ditto ...	Ditto.
,, 12	3 Cases, F E R E in a diamond ...	Ditto ...	Ditto.
,, 12	1 Case, 53 in a diamond, G S below ...	Ditto ...	Ditto.
,, 12	50 Cases, J W in a diamond ...	Ditto ...	Ditto.
,, 12	6 Bales, J T in a block, T P top ...	Ditto ...	Ditto.
,, 12	3 Cases, 8561 in a diamond, L S & Co. outside	Ditto ...	Ditto.
,, 12	4 Bales, P in a triangle, T C top ...	Ditto ...	Ditto.
,, 12	1 Case, S L B D in a diamond, S K & Co. outside	Ditto ...	Ditto.
,, 12	3 Casks, 87 in a diamond, T top ...	Ditto ...	Ditto.
,, 12	9 Casks, W L in a diamond, C below ...	Ditto ...	Ditto.
,, 12	1 Case, 1276 in a block within a triangle	Ditto ...	Ditto.
,, 12	1 Case, 600 in a diamond, W below ...	Ditto ...	Ditto.
,, 12	451 Packages, no mark	Ditto ...	Ditto.
,, 12	1 Parcel, S	Ditto ...	Ditto.
,, 12	1 Parcel, Mr. C. W. White	Addressed ...	Ditto.
,, 12	1 Chest, Captain Benches	Ditto ...	Ditto.
,, 12	1 Parcel, D in a triangle, J C top ...	Order ...	Ditto.
,, 12	1 Casting, A R T C by T R & Co. ...	Ditto ...	Ditto.
,, 12	3 Iron pipes, S	Ditto ...	Ditto.
,, 12	3 Iron pipes, S J F C	Ditto ...	Ditto.
,, 16	5 Cases, C in a diamond, E H F M or no mark	Ditto ...	Ditto.
,, 16	1 Case, M M J in a diamond, U H C outside	Ditto ...	Ditto.
,, 16	1 Piece pipe, M & E	Ditto ...	Ditto.
,, 15	1 Rundlet, B B	Ditto ...	Ditto.
,, 12	2 Cases, 8231 in a block, B L B outside	Ditto	S. S. "Inventor."
,, 12	3 Cases, 8098 in a block, B L B outside	Ditto	Ditto.
,, 12	11 Bales, H M S in a heart	Ditto	Ditto.
,, 12	1 Case, M O M I in a diamond ...	Ditto	Ditto.
,, 12	1 Case, 234 in a diamond, N P & G outside	Ditto	Ditto.
,, 12	3 Bales, S M I by 583 in a [illegible]ock	Ditto	Ditto.
,, 12	10 Bales, W in a double triangle, D below	Ditto	Ditto.
,, 12	1 Case, 525 in a diamond, W M M M outside	Ditto	Ditto.
,, 12	1 Parcel, Mr. G. W. Warburton, Adabarie Tea Estate, Tezpur.	Addressed	Ditto.
,, 12	3 Bars T-iron, M P	Order	Ditto.
,, 12	1 Iron chain, K by 34 in a diamond, S S top ...	Ditto	Ditto.
,, 12	1 Bundle flat iron, no mark	Ditto	Ditto.
,, 12	11 Sheet-iron, J C by G	Ditto	Ditto.
,, 13	250 Kegs, H V in a diamond	Ditto	S.S. "Clan Mackenzie.
,, 13	1 Case, 55 in a diamond, T below	Ditto	Ditto.
,, 13	1 Hogshead, Y in a diamond, R M top or no mark...	Ditto	Ditto.
,, 13	65 Packages no mark	Ditto	Ditto.
,, 13	1 Case, Messrs. Whiteaway, Laidlaw & Co., Chowringhee.	Addressed	Ditto.
,, 13	175 Bars flat iron, diamond W N below or no mark ...	Order	Ditto.
,, 13	29 Casks, C in a diamond	Ditto	S S. "Karamania."
,, 13	2 Cases, H & G in a diamond, G below... ...	Ditto	Ditto.
,, 13	2 Packages, W in a diamond, K D top	Ditto	Ditto.
,, 13	5 Bundles sheet-iron no mark	Ditto	Ditto.
,, 13	9 Bales, J T in a block, T P top	Ditto	Ditto.
,, 13	2 Cases, L N B K in a diamond, Delhi below, G A & Co. outside.	Ditto	Ditto.
,, 13	1 Case, 908 in a diamond, L B top	Ditto	Ditto.
,, 13	1 Case, L O C K E	Ditto	Ditto.
,, 13	1 Case, M O M I in a diamond, G A & Co. outside.	Ditto	Ditto.
,, 13	1 Bale, Miss Marton, Zenana Mission House, Lucknow.	Addressed	Ditto.
,, 13	3 Casks, 179 in a diamond, N P & G outside	Order	Ditto.
,, 13	16 Bales, P in a triangle, T C top ...	Ditto	Ditto.
,, 13	25 Bales, W in a double triangle, D below	Ditto	Ditto.
,, 13	20 Casks, W L in a diamond, C below ...	Ditto	Ditto.
,, 13	1 Case, 793 in a diamond, W L below ...	Ditto	Ditto.
,, 13	1 Case, K F	Ditto	Ditto.
,, 13	2 Cases, Brojo in a block	Ditto	S.S. "Niobe."
,, 13	1 Case, B C	Ditto	Ditto.
,, 13	2 Cases, H & C in a triangle ...	Ditto	Ditto.

Date of removal to Import Warehouse.	Number, mark and description.	Consignees.	Ships.
1890.			
Feb. 15	1 Case, S by 40 in a diamond, C H top	Order ...	S S. "Niobe."
„ 15	3 Cases, S by 51 in a diamond, C H top ...	Ditto ...	Ditto.
„ 15	2 Cases, S by 48 in a diamond, C C C H outside ...	Ditto ...	Ditto.
„ 15	5 Cases, S by 50 in a diamond, C C C H outside ...	Ditto ...	Ditto.
„ 15	1 Case, 27 in a block within a triangle, W H N below	Ditto ...	Ditto.
„ 15	1 Parcel, Baboo K L Dass & Son	Addressed ...	Ditto.
„ 15	1 Case, E. Abricht, care of Messrs. Albert Fetterli & Co., 14, Clive Row.	Ditto ...	Ditto.
„ 15	1 Case, 3046 in a diamond, A S E A outside ...	Order ...	Ditto.
„ 15	1 Case, 3054 in a diamond, A S top	Ditto ...	Ditto.
„ 15	1 Case, 3010 in a diamond, A S top	Ditto ...	Ditto.
„ 15	1 Case, B N	Ditto ...	Ditto.
„ 15	1 Case, B D by 87 in a diamond	Ditto ...	Ditto.
„ 15	1 Case, C R	Ditto ...	Ditto.
„ 15	1 Case, 625 in a diamond	Ditto ...	Ditto.
„ 15	3 Cases, D & C	Ditto ...	Ditto.
„ 15	1 Case, H E	Ditto ...	Ditto.
„ 15	1 Case, 2014 in triangle, H R & Co. below ...	Ditto ...	Ditto.
„ 15	1 Case, N S in a diamond, U H C outside ...	Ditto ...	Ditto.
„ 15	3 Cases, S J	Ditto ...	Ditto.
„ 15	2 Bundles hoop iron, no mark	Ditto ...	Ditto.

Port Commrs.' Office, Calcutta, the 22nd February 1890. (3565—1) G. H. SIMMONS, Vice-Chairman.

Oudh Forest Department.

BAHRAMGHAT DEPOT.

ON THE OUDH AND ROHILKHAND RAILWAY.

FROM this date the prices of sâl beams and scantlings supplied from this depôt will be as follows:—

BEAMS.—21 feet length, at Rs. 2-10 per cubic foot.
22 „ „ 2-12 „
23 „ „ 2-14 „
24 „ „ 3 „

Above the length given two annas per foot run will be charged. Any inches over the foot will be charged as a foot.

SCANTLINGS—From 12 to 20 feet, at Rs. 2-8 per c. ft.
Under 12 and over 7 „ 2-4 „
Under 7 feet „ 2 „

The above prices are for ordinary building purposes For *Planking Sleepers*, &c., special rates will be fixed by agreement.

The Department will still take orders for buildings all over at Rs. 2-4 per cubic foot, provided the scantlings are taken in fair proportion.

Second and Third Class Timber will be sold and price fixed by agreement.

Auction Sales will be held from time to time to clear off stock.

For further particulars apply to the Officer in charge.

By order of the Conservator of Forests, N. W. P. and Oudh, Oudh Circle.

KANHYA LAL,
Sub-Assistant Conservator of Forests,
Bahramghat Division.

Barhamghat, the 1st April 1886.

Government Cinchona Febrifuge.

THIS preparation is an efficient substitute for Quinine and can be purchased by Government officers for public and charitable purposes, and by any one taking *twenty pounds* at a time from the Superintendent, Botanic Garden, Calcutta, *for cash only*, at the following rates:—per four ounce tin, *Rs.* 3-14; per eight ounce tin, *Rs.* 7-4; per pound tin, *Rs.* 14. The general public can be supplied by the Superintendent, Botanic Garden, *for cash only*, at the undernoted rates:—per four ounce tin, *Rs.* 4-14; per eight ounce tin, *Rs.* 9-8; per pound tin, Rs. 17-8. This medicine is also sold by the principal European and Native druggists in Calcutta. Postage four annas per 4 oz. tin, eight annas per 8 oz. tin, and twelve annas per pound tin in addition to the foregoing rates.

TARA PRASANNA GUHA, B.L., intends to apply for enrolment as a Vakeel of the High Court. (3496—4)

Wanted

A CASHIER for the Patna Municipality on salary of Rs. 50 per month. Applicants must possess a good knowledge of English and Hindee, and should be well versed in municipal rules and forms. A security of Rs. 3,000 in cash, or landed property, is also required. Applications with testimonials will be received by the undersigned up to 28th February 1890.

SYUD FUZL IMAM, Vice-Chairman.

Patna Municipality, the 14th February 1890. (3557—2)

Notice.

WANTED three Peshkars or Inspectors, on salaries of Rs. 30 per mensem, for settlement work in the Sonthal Pergunnahs. None need apply who have not a knowledge of plane-table, of compass-surveying and experience in settlement work. Applications with copies of certificates to be sent to the undersigned at once.

J. A. CRAVEN, Settlement Officer.

Damp Camp Deoghur, the 10th February 1890.

Notice.

WANTED a Draftsman and Estimator for the District Engineer's Office, Dinagepore, on a salary of Rs. 50 (fifty rupees only) per mensem.

Applications, with copies of testimonials and drawings, will be received by the undersigned up to 15th March next. An experienced English-knowing man will be preferred.

A. K. MOOKERJEE, District Engineer. (3563—2)

In the Court of Baboo Shamboo Chandra Nag, Subordinate Judge of Hooghly, Third Court.

RENT EXECUTION CASE No. 58 of 1889.

Nabo Kristo Mookerjee, decree-holder, *versus* Dyal Nath Bhattacharjee and others, judgment-debtors.

THE advertised property of the above judgment-debtors will be put up to sale in the highest bid on the 10th day of March 1890, at 12 o'clock noon, by the Nazir of the District Judge's Court, Hooghly, in the sale-room of the Court-house:—

Schedule of Property to be sold.

Two annas thirteen gundas one cowree one krantee share of lot Bundeipore, bearing towji No. 77 of the Collectorate of Hooghly, situated in pergunnah Bundeipore, zillah Hooghly, sudder jumma of the whole 16 annas being Rs. 14,782-4-2, the upset value given by the decree-holder is **Rs. (5,000)**, five thousand.

SHAMBOO CHANDRA NAG, Subordinate Judge.

Hooghly, the 7th February 1890. (3529—3)

Notification.

THE Zemindari Dák Tax in the district of Sarun, for the year 1890-91, is fixed at the rate of 12 annas per cent. per annum on the sudder jamma of estates paying a revenue amounting to Rs. 50 and over.

The amount due for each estate is payable in two instalments—the first being due on the 28th March 1890, and the second on the 28th September 1890.

B. G. GEIDT, For Magistrate.

Notification.

IT is hereby notified for general information that, under section 46 of the Local Self-Government Act, No. III (B.C.), the District Board of Rajshahye, by a resolution of their meeting, held on the 22nd February 1890, have determined to levy road cess for the year 1890-91 at the maximum rate of 2 pice per rupee on the annual value of land.

J. C. PRICE, Chairman, District Board, Rajshahye.

The 22nd February 1890.

Road Cess Notification.

IT is hereby notified for general information that, under section 46 of the Bengal Local Self-Government Act, No. III (B.C.) of 1885, the District Board of Purneah, by a resolution of their meeting of the 3rd February 1890, have determined to levy road cess for the year 1890-91 at the full rate, *i.e.*, 2 pice per rupee on the annual value of land, &c.

SURENDRA NATH MOZUMDAR, Vice-Chairman, District Board.

Purneah District Board's Office, the 5th February 1890.

Road Cess Notification.

IT is hereby notified for general information that, under section 46 of the Bengal Local Self-Government Act, No. III (B.C.) of 1885, the District Board of Durbhunga, by a resolution of their meeting of the 10th February 1890, have determined to levy road cess for the year 1890-91 at the maximum rate, *i.e.*, 2 pice per rupee on the annual value of land, &c.

H. S BEADON, Chairman.

Durbhunga District Board's Office, the 21st February 1890.

Road Cess Notification.

DISTRICT 24-PERGUNNAHS.

IT is hereby notified that under Section 46, Act III (B.C.) of 1885, the District Board, 24 Pergunnahs, have, at a meeting held on the 21st February 1890, determined to levy road cess during the ensuing year 1890-91 at the maximum rate, namely, at the rate of one-half anna on each rupee of the annual value of land in the district.

RAJENDRA NATH MITRA, for Chairman.

Alipur, the 21st February 1890.

High Court Notice.

ESTATE RAJAH RAJ KISSEN.

Maharajah Sibkristo Bahadoor, *vs.* Kristo Chunder Ghose.

NOTICE is hereby given that on Wednesday, the 12th March next, at the hour of 1 o'clock in the afternoon, the Receiver of the High Court will put up for auction, at his office on the third floor of the Court-house, a lease for six years from the 1st Bysack 1297, corresponding with the 13th April 1890, of the undermentioned property, on the terms and conditions of a draft lease which may be inspected at the said office.

In Zillah Tipperah, Pergunnah Gungamundle, recorded in the Register of the Collector as Towji No 545, including the Churs appertaining thereto, viz., Nobbo Chur No. 1290, Chur Bahur *alias* Tootoor Chur No. 1608, Chur Surjo and Chur Sunjoora No. 1964, Chur Assad and Doobur Chur No. 21.

In Zillah Dacca, Chur Goagachia No. 10503, Chur Jamalpur No. 10505

For conditions of auction and further particulars apply to the Receiver of the High Court.

J. C. MACGREGOR, Receiver High Court.

High Court Receiver's office, the 18th February 1890.

(3562—4)

Lost.

THE lower halves of the Government Promissory Notes Nos. 236782 and 236783 of the 4 per cent. loan of 1865 for Rs. 500 each, originally standing in the name of the Bank of Bengal, and last endorsed to General Dumber Shum Shere Jung Bahadur Rana, the proprietor, by whom it was never endorsed to any other person, having been lost, notice is hereby given that payment of the above notes and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, Calcutta, and that application is about to be made for the issue of a duplicate in favour of the proprietor The public are cautioned against purchasing or otherwise dealing with the abovementioned securities.

RAKHAL CHUNDRA CHATTERJEE, Secretary to the Representative of the Government of Nepal.

78, Dhurumtola Street, the 6th February 1890.

(3520—3)

Lost.

THE Government Promissory Note No. 238858 of 4 per cent. of 1865, for Rs. 500, originally standing in the name of Debnath Sreemany and last endorsed to Russick Lall Dutt the proprietor, by whom it was never endorsed to any other person; and also the Government Promissory Note No. 188252 of 4 per cent. of 1865, for Rs. 500, originally standing in the name of Kheeromoney Dassee, the proprietress, by whom it was never endorsed to any other person. Payment of the above notes and the interests thereupon have been stopped at the Public Debt Office, Bank of Bengal, and applications are about to be made for the issue of duplicates in favour of the proprietor and the proprietress.

RUSSICK LAUL DUTT, Bally, District Howrah.

(3550—3)

Stolen.

THE Government Promissory Note No. 220972 of the 4 per cent of 1865 for Rs. 500, originally standing in the name of Modhu Sudhir Kowar, and last endorsed to Kedar Nath Majumdar, the proprietor, by whom it was never endorsed to any other person. Payment of the above note and the interest thereupon have been stopped at the Public Debt Office, Bank of Bengal, and application is to be made for accrued interest and for issue of duplicates in favour of the proprietor after two years from date of last advertisement.

KEDAR NATH MAJUMDAR, Cooch Behar.

(3197—3)

Notification.

TO be peremptorily sold pursuant to an order and decree of the Calcutta High Court, Original Civil Jurisdiction, made in suit No. 130 of 1886 (wherein Sharat Chunder Mitter was plaintiff and Lall Behary Dey was defendant), and dated, respectively, the 18th of April 1888 and 27th of May 1886, by the Registrar of the said Court in his sale-room at the said Court-house on Saturday, the 22nd of March next, at 12 o'clock noon, the following property :—

Lot 1.—No. 24 (formerly No. 19), Shambazar Street, Calcutta, being a brick-built house and the land appertaining thereto, the area of which is about 16 cottahs, and which property is bounded on the north by Shambazar Street; on the east partly by the house of Wooma Churn Chatterjee and partly by the house of Ramtanoo Chatterjee; on the south by a house and tank belonging to the estate of Kristo Mohun Biswas, deceased; and on the west by the house of Gopee Nauth Moitra.

The abstract of title and condition of sale may be seen at the Office of the Registrar, High Court, Original Jurisdiction, or at the Office of Mr. N. C. Bose, Attorney for the plaintiff, at No. 3, Hastings Street, on any day before the sale and will be produced at the sale.

R BELCHAMBERS, Registrar.

N. C. BOSE, Plaintiff's Attorney.

High Court, Original Side, the February 1890.

(3554—1)

Notification.

TO be peremptorily sold by the Registrar of the Calcutta High Court, Original Side, in his sale-room in the Court-house, on Saturday, the 15th of March next, at the hour of 12 o'clock at noon, pursuant to the decree made by the First Subordinate Judge of 24-Pergunnahs in suit No. 77 of 1885 (wherein Rakhal Dass Mullick is plaintiff and Makhan Lall Chatterjee and others are defendants), and dated 26th January 1886, and the order made by this Court in the said suit, and dated 17th March 1888, the following properties:—

Lot No. 1.—No. 32, Jaliatollah Street, Calcutta, being a two-storied brick-built dwelling-house and premises with the land thereunto belonging, and on part whereof the same is erected and built, containing by estimation 4 cottahs and 12 chittacks or thereabouts, and which is bounded on the north by Dookhiram Ghose's house; on the south by Beni Madhub Ghose's house; on the east by a lane and the house of Gooroo Churn Dey; and on the west by the ryotee land of Gungaram Ghose.

Lot No. 2.—No. 24, Chasadhobaparah Street in Calcutta, being a two-storied brick-built dwelling-house and premises with the land thereunto belonging, and on part whereof the same is erected and built, containing by estimation 7 cottahs and 3 powas or thereabouts, and which is bounded on the north by the land and house purchased by Manick Chunder Mukherjee and a lane; on the east by the ancestral land of Bollye Chand Sing; on the south by the land of the said Sings and a public drain; and on the west by the house of Madhub Chunder Mundle.

The abstract of title and the conditions of sale may be seen at the Office of the Registrar, High Court, Original Side, and at the Office of Baboo Dwarka Nauth Dutt, Attorney for the plaintiff, at No. 5, Old Post Office Street in Calcutta, on any day before the sale, and will be produced at the sale.

R. BELCHAMBERS, Registrar.

Dwarka Nauth Dutt, Plaintiff's Attorney.

Calcutta High Court, Original Jurisdiction, the 16th January 1890. (3566—1)

Execution Case No. 903 of 1889.

IT is hereby notified that the following property belonging to the judgment-debtor (Sridhar Churn Nundi) will be sold by public auction by the Nazir of the District Judge of Midnapore, on the 15th day of March 1890, in the Court-house, in execution of a decree held by Iswar Chunder Chukrabatty for the realization of Rs. 823-1-3:—

Property.—Towji No. 1230, A register No. 2375, mehal Ratanea, pergunnah Kasijora, in the district of Midnapore, the Government annual revenue of which is Rs. 1,135-13.

PULIN BEHARY BOSE, First Munsif.

(3560—1)

Execution Case No. 905 of 1889.

IT is hereby notified that the following property belonging to the judgment-debtor (Sridhar Churn Nundi) will be sold by public auction by the Nazir of the District Judge of Midnapore, on the 15th day of March 1890, in the Court-house, in execution of a decree held by Srinath Chunder Chakrabati, for the realization of Rs. 807-3-6:—

Property. Towji No. 1118, A register No. 2185, mehal Papan Hari Churn *alias* Papan, pergunnah Shahapore, in the district of Midnapore, the Government annual revenue of which is Rs. 571-1-7.

PULIN BEHARY BOSE, First Munsif.

(3561—1)

Notification.

THE District Board of Hooghly, at a meeting held on the 17th February 1890, has fixed the rate of road cess to be levied in the district of Hooghly for the year 1890-91 at 6 pie per rupee on the annual value of lands and on the annual net profit of Mines, Quarries, Tramways, Railways and other immoveable property as prescribed in the law.

S. D. ROY, for Chairman.

Notice.

In the Court of the Subordinate Judge of First Court, Shahabad.

EXECUTION CASE No. 284 OF 1889.

Baboo Luchhmi Pershad Singh and another, decree-holders, *versus* Baboo Shiu Lochun Singh, judgment-debtor.

TO be sold by the Nazir of the District Judge's Court, Shahabad, on the 3rd March 1890, at 12 A.M., in the Subordinate Judge's Court-house at Arrah, the undermentioned property of the judgment-debtor Baboo Shiu Lochun Singh for satisfaction of a judgment-debt, Rs. 77,449-2:—

Ten annas and eight pies out of sixteen annas Mahal Laheri, asli with dakhli, bearing former towji No. 2656 and present towji No. 5540 of the Shahabad Collectorate, pergunnah Sasseram and sub-registry Sasseram. The annual revenue payable to Government for the entire sixteen annas mahal is Rs. 1,259-11-9.

DWARKANATH MITTER, Subordinate Judge, First Court.

Arrah, the 13th February 1890. (3568—1)

INSOLVENT NOTICES.

In the Court for the Relief of Insolvent Debtors at Calcutta.

In the matter of JOHN HENRY GRACIES, an insolvent.

Notice that an application for an *ad interim* protection order has been this day made by the said insolvent, and that such application will be heard and disposed of by the Acting Commissioner of the Insolvent Court on Monday, the 3rd day of March next, at the hour of half past 10 o'clock in the forenoon.

☞ "Any creditor of the said insolvent desirous of opposing such application must appear before the said Court at the time and place aforesaid."

Insolvent in person. (3569-1)

In the matter of RIDHKURRUN, an insolvent.

Notice that an application for an *ad interim* protection order has been this day made by the said insolvent, and that such application will be heard and disposed of by the Acting Commissioner of the Insolvent Court on Monday, the 3rd day of March next, at the hour of half past 10 o'clock in the forenoon.

☞ "Any creditor of the said insolvent desirous of opposing such application must appear before the said Court at the time and place aforesaid."

H. C. Chick, Attorney. (3570—1)

In the matter of NUNDO LALL DEY and MANIK LALL DEY, insolvents.

On Saturday, the 24th day of November 1888, by an order of this Court, the said insolvents were adjudged entitled to their personal discharge under the Act XI Vic., Chapter XXI as to all persons named in their schedule as creditors or claiming to be creditors respectively.

Insolvents in person. (3571—1)

In the matter of SHIBCHUNDER DASS, an insolvent.

On Saturday, the 11th day of January last, it was ordered that Saturday, the 19th day of April next, be appointed for the further hearing of this matter, and that, unless cause be shewn to the contrary on that day, the said insolvent be discharged personally as well as to his after-acquired property from all liabilities for debts, claims and demands of and against the said insolvent at the time of the filing of his petition for relief.

Insolvent in person. (3572—2)

In the matter of HURDOYAL, KANNOYALALL, SODARAM SHAM LALL, DOONGOORSEEDASS, SREENEEBASH, BUNGSHEDHUR and SUJUNCOOMAR of No. 90, Soolapatty, in co-partnership as piece-goods dealers, under the style or firm of Heemutram, Sujuncoomar, insolvents.

On Tuesday, the 28th day of January last, it was, on the petition of Nitram, a creditor of the said insolvents, adjudged that the said insolvents have committed an act of insolvency under the provisions of the Act XI Vic., Chapter XXI, and by another order of the same date the estate and effects of the said insolvents were vested in the Official Assignee.

Wilson and Chatterjee, Attorneys. (3573—2)

In the matter of ROBERT WALTER HALL, a European British subject, Commander of the India General Steam Navigation Company's Flat "Borelli," at present lying in the river Hooghly in the jurisdiction of the High Court, Calcutta, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Saturday, the 8th day of February instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

C. T. GEDDES, Attorney, (3574—1)

In the matter of NORRIS GRIFFITHS, residing at No. 16, Chowringhee, in Calcutta, carrying on business in co-partnership with Harry Etherington as proprietors of the Melbourne Switchback Railway at Sealdah in the Suburbs of Calcutta, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Thursday, the 6th day of February instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Wilson and Chatterjee, Attorneys. (3575—1)

In the matter of HORINATH SHAHA and MODUN MOHUN SHAHA, of No. 72, Harkutta Lane, Bow Bazar Street, in the town of Calcutta, formerly dealers in potatoes, latterly performing work on commission, and at present without work, insolvents.

Notice that the petition of the said insolvents seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Saturday, the 8th day of February instant, and by an order of the same date the estate and effects of the said insolvents were vested in the Official Assignee.

Insolvents in person. (3576—1)

In the matter of BHOOBUN MOHUN BOSE, of No. 76, Hurry Ghose's Street, in the town of Calcutta, a clerk in the service of the Municipality of Calcutta, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Monday, the 10th day of February instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3577—1)

In the matter of ROGER GEORGE SETON CHEW, of No. 29, Wellesley Street, in Calcutta, a Doctor of Medicine and Surgery, and an Analytical Chemist (late Analyst to the Corporation of Calcutta), an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Tuesday, the 11th day of February instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3578-1)

In the matter of GEORGE ROBERT CLAMPITT, a ticket-collector in the East Indian Railway, lately of Dinapore, then of Jamalpore, and at present of No. 7, Beparetola Lane in the town of Calcutta, an insolvent,

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in Office of the Chief Clerk on Tuesday, the 11th day of February instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3579—1)

In the matter of HEROMBO CHUNDER BOSE, of No. 65, Kamardangah Road in Entally in the town of Calcutta, a clerk in the office of the Comptroller of India Treasuries, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Friday, the 17th day of January last, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Pran Nath Paul, Attorney (3580—1)

In the matter of GOBINDO CHUNDER MITTER and GOPAUL CHUNDER MITTER, both residing at No. 70, Shambazar Street, in the Town of Calcutta, carrying on business of order-suppliers, insolvents.

Notice that the petition of the said insolvents seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Thursday, the 23rd day of January last, and by an order of the same date the estate and effects of the said insolvents were vested in the Official Assignee.

N. G. Newgy, Attorney. (3581—1)

In the matter of DAVID JOSEPH ROBINSON, of No. 33, Serang's Lane in the town of Calcutta, an Engineer in the service of the Port Commissioners, Calcutta, an insolvent.

Notice that the petition of the said insolvent, seeking the benefit of the Act XI Vic, Chapter XXI, was filed in the Office of the Chief Clerk on Monday, the 17th day of February instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3582—1)

In the matter of JOHN HENRY GRACIES of No. 2, Chandney Choke, 1st Lane, in the town of Calcutta, a steam-crane driver in the service of the Port Commissioners, Calcutta, an insolvent.

Notice that the petition of the said insolvent seeking the benefit of the Act XI Vic., Chapter XXI, was filed in the Office of the Chief Clerk on Thursday, the 13th day of February instant, and by an order of the same date the estate and effects of the said insolvent were vested in the Official Assignee.

Insolvent in person. (3583—1)

Chief Clerk's Office, the 25th day of February 1890.

Notice.

In the matter of KALI DAS CHOKROBORTI, an insolvent.

KALI DAS CHOKROBORTI, son of Radha Gobinda Chokroborti, deceased, of Bhitadia, topa Hazradi, district Mymensingh, has been declared an insolvent and discharged.

H. PETERSON, Officiating District Judge.

Mymensingh, Judge's Office, the 7th February 1890. (3541—1)

POSTAL NOTICES.

Mails for	Date of closing at Calcutta.	Route by which despatched
	1890.	
Egypt, Europe, America, Cape Colonies through United Kingdom.	4th March...	Per P. & O. steamer from Bombay.
Ditto (book-post and pattern packets).	3rd ,, ...	Ditto.
Ceylon, Straits Settlements, Netherlands India, Labuan, Bankok (Siam), Philippine Islands, China and Japan.	10th ,, ...	Ditto.
Australia, New Zealand, and Tasmania.	10th ,, ...	Ditto.
Madras and Colombo ...	5th ,, ...	Per P. & O. steamer *Chusan*.
Straits, China and Japan ...	27th Feb. ...	Per str. *Wingsang*.
Rangoon and Moulmein ...	26th ,, ...	Ditto *Chanda*.
Ditto ditto ...	28th ,, ...	Ditto *Palitana*.
Akyab, Kyaukpyu, Sandoway and Rangoon.	26th ,, ...	Ditto *Euphrates*.
Port Blair ...	27th ,, ...	Ditto *Peshwa*.
Natal and Mauritius ...	28th ,, ...	Ditto *Warora*.

N.B.—The letter-box for inland articles (including articles for Burma and Port Blair and for Ceylon by land route) will be cleared for the last time for articles without the late-fee at 7 P.M. precisely, after which hour inland letters and papers fully prepaid and bearing an extra postage stamp of half-anna will be received up to 7-30 P.M.

On the day of despatch of the Mail for Europe, the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 8-30 P.M., and late letters and papers will be received up to 9 P.M. On other days the letter-box for foreign articles will be cleared for the last time for articles without the late-fee at 7 P.M., and foreign letters and papers fully prepaid, bearing an extra stamp of four annas, will be received up to 7-30 P.M. for despatch by any Foreign Mails despatched the same night.

E. HUTTON, Presidency Postmaster.

General Post Office, the 24th February 1890.

Unclaimed Letters held in the Calcutta General Post Office on 25th February 1890.

Alderson & Co.
Barook & Co.
Chuffoux, B.
Cockell, N. A. L. Q.
Cristal Tea Co.
Glasier, H.
Golmer, E.
Gunter, McInnes & Co.
Pirrie, J. S.
Presgrave, Richard Duncan.
Richards, Mrs.
Rowe, E. F.
Whittingham, Mrs.

Letters marked Care of "Post Office."

Allen, C. H.
Babonau, E. Hugh,
Baggs, Mrs.
Bain, Donald M.
Baldwin, W. H.
Barangerey, L.
Barker, F. W.
Barnafoom, F.
Barnes, W.
Baxter, Mrs.
Belitski, R.
Berkeley, C. M.
Bery, Adolph.
Brinckman, Captain.
Brown, W.
Bruce, R. G.
Carbery, Lady.
Chatterton, J.
Close, Henry.
Cooper, W.
Courage, R.
Crump, Mrs. E.
DePalma, Urbans.
Dickson, Mrs. E.
Douglas, G. P. H.
Drakeford, A.
Duclere, G. P.
Dunlo, Viscount.
Dymond, G. F.
Elliott, K.
Elmore, John S.
Fergusson, J. H. and Co.
Fisk, F. M.
Flaherty, O. H.
Forshaw, H.
Fraiser, H. C.
Fraiser, Miss F.
Francis, A. M.
Galbraith, Mr.
Gantzman, Charles.
Gifford, H. J.
Glover, W. E.
Godwin, George.
Green, W. W.
Grove, Henry.
Hamilton, C. J.
Hamilton, J. R.
Handcock, J. G.
Hardy, Mrs. M.
Hawksworth, Mrs.
Hewett, F. J.
Higgins, C. C.
Horus, Miss M. L.
Humphries, Mrs. H.
Hunter, H. C.
Jackson, T.
Jenkins, Miss M. R.
Johannessen, O. C.
Kennard, F.
Keogh, Mrs. M. E.
Lach, R.
Lamb, E. G.
Langer, J. O.
Lindeman, L. K.
Linton, C. E.
Livesey, Thomas.
Long, W.
Macdonald, E. B. D.
Mackenzie, J.
MacMaster, Donald.
Major, A.
Manual, A. M.
Matthews, J. R.
Mathewson, F.
Maxwell, Sir J. S.
May, J. J.
McAdoo, Mr.
McNair, Miss.
McSmith, D.
Menexis, Mrs. C.
Menzies, C.
Mifsud George.
Mole, P. C.
Morgan, Mrs. R.
Morshead, L.
Murphy, John.
Newby, C. R. A.
O'Mealy, Capt. D'Oyly.
Payne, E. H.
Penn, Mrs.
Platts, Mrs. S. K.
Potokie, Count, J.
Powell, F.
Prenter, Miss.
Remmington, Captain F. A.
Rennick, F. B. M.
Rennard, J. R.
Robart, P.
Robinson, G.
Rodnor, W. H.
Rosenstern, Otto.
Roskell, Richard.
Rubie, Phil C.
Sano, T.
Searle, F. W.
Sheumon, John.
Shrewsbury, Miss.
Shworth, T. K.
Sisam, Rev. W. B.
Soler, M.
Stebbing, Captain A. E.
Stretton, W. G.
Taylor, C.
Thomson, Captain W. A.
Thompson, D.
Thompson, G.
Tullock, Herbert.
Ursite, Johan.
Walter, F.
Walter, Amherst.
Weatherels, Harry.
Webster, Mrs.
Whittenberry, A. P.

Registered Letters.

Angri, Sig Natale.
Chiodetti, A.
Edwards, C.
Guiseppe, Celestini.
Leonard, C. B.
MacLeod, D. J.
MacMaster, Donald.
Marsland, W.
Mifsud, George.

Unclaimed Letters held in the Barrackpore Post Office on the 24th February 1890.

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Barns, A.
Bart, G. K.
Blackwell, Sergt. W.
Chadburn, Mrs. J. E.
Ferguson. H. F.
Harding, H. R.
Harvey Sergt.
Haswell, G.
Johastun, J.
Kindersley, C. E.
Lindsay, W. C.
McMinn, J.
Mertan, C. W.
Palore, L.
Stevens, Mrs. C.
Thompson, Jas

E. HUTTON
Presidency Postmaster, Calcutta.

Nuddea Rivers.

Report showing the least depths of water for the week ending Friday, the 21st February 1890.

Name of river.	Reach of river.	Least depth of water sounded.	Remarks.
		Ft. In.	
Bhagirati.	Entrance from Ganges ...	0 6	At mouth entrance practically closed.
	Thence to Nurpur ...	0 6	Dhopipara.
	From Nurpur to Jungipur ...	0 9	Bangabari
	„ Jungipur to Berhampur	0 10	Kesadanga.
	„ Berhampur to Cutwa ...	1 6	Kaligunge.
	„ Cutwa to Nuddea ...	2 0	Karkoria.
Bhyrub-Jelinghi.	Entrance from Ganges ...	5 0	
	Thence to Akriganj	4 9	
	Akriganj to junction of the Bhyrub and Jelinghi ...	3 9	Paharpore.
	Thence to Patkabari	4 6	Lalnagore.
	Patkabari to Nuddea	3 9	Punditpore.
Matabanga.	Entrance from Ganges ...	2 0	
	Thence to Chuypara ...	0 5	Sircarpara.
	From Chuypara to Shikarpur	0 6	Prapore.
	„ Shikarpur to Boalia ...	0 6	Shampore.
	„ Boalia to Chuadanga ...	2 6	Sialmari.
	„ Chuadanga to Kissenganj and Hanskhali...	2 3	Bastupore.

Gauge Readings.

	Locality.	Date.	Hour.	Height above zero.	Height above mean sea level.	Remarks.
			A. M.	Feet.	Feet.	
Ganges.	Sahebganj ...	22-2-90	0	1·92	66 0	Below zero.
	Rampore Boalia	23-2-90	12	0·52	42·52	
	Entrance of Bhagirati ...	22-2-90	7	1·65	46·66	
	Entrance of Bhyrub-Jelinghi ..	22-2-90	...	0·29	44·05	
	Entrance of Matabanga ...	22-2-90	...	2·25	.....	
Bhagirati...	Berhampur ...	24-2-90	12	2·08	35·87	
Jelinghi ...	Kishnaghur ...	21-2-90	...	3·50	12·39	
	Saroopgunge ...	22-2-90	6	3·33	7·63	
Matabanga	Hanskhali ...	21-2-90	...	2·66	13 51	

PURNA CHANDRA BOSE, *Accountant, for Exe. Engr., Nudded Rivers Division.*
Berhampore, the 24th February 1890.

Annual Statement of the Seaborne Trade and Navigation of the Bengal Presidency and of its Chief Port (Calcutta) and each of its Subordinate Ports (Chittagong, Balasore, Cuttack, Pooree, and Naraingunge). Volumes I and II. Price Rs. 20 for 1888-89. Published at the Calcutta Custom House. Previous years volumes can also be obtained at the same price.

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PART V.

Acts of the Governor General's Council assented to by the Governor General.

GOVERNMENT OF INDIA.

LEGISLATIVE DEPARTMENT.

The following Act of the Governor General of India in Council received the assent of His Excellency the Governor General on the 21st February, 1890, and, is hereby promulgated for general information :—

ACT NO. III OF 1890.

An Act to amend Acts VI and VII of 1884.

WHEREAS it is expedient to amend the Inland Steam-vessels Act, 1884, and the Indian Steamships Act, 1884, in manner hereinafter appearing; It is hereby enacted as follows :—

1884. 1884.

Inland Steam-vessels Act, 1884.

1. For the definition of "inland water" in section 5, clause (*3*), of the Inland Steam-vessels Act, 1884, the following shall be substituted, namely :—

Amendment of section 5 (3), Act VI, 1884.

"(*3*) "inland water" means any canal, river, lake or navigable water in British India :"

2. After section 8 of the said Act the following shall be inserted, namely :—

Insertion of new section after section 8.

"8A. Before a survey under this Act is commenced, the owner or master of the steam-vessel to be surveyed shall pay to such officer as the Local Government, from time to time, appoints in this behalf—

Fees in respect of surveys.

(*a*) a fee calculated on the tonnage of the steam-vessel according to the rates in the second schedule hereto annexed, or according to any other prescribed rates; and,

(*b*) when the survey is to be made in any place of survey other than Calcutta, Madras, Bombay or Rangoon, such additional fee in respect of the expense (if any) of the journey of the surveyor to the place as the Local Government, from time to time, by notification in the official Gazette, directs."

3. In section 10, sub-section (*3*), of the said Act the words "in addition to the fee payable for the certificate" are hereby repealed.

Repeal of part of section 10 (3), Act VI, 1884.

4. (*1*) In section 11, sub-section (*1*), of the said Act the words "fees and other" are hereby repealed.

Amendment of, and addition to, section 11, Act VI, 1884.

(*2*) To the same section the following sub-section shall be added, namely :—

"(*4*) The Local Government may, from time to time, delegate,—

(*a*) with the previous sanction of the Governor General in Council, to any person, by name or as holding an office, the function, assigned to the Local Government by sub-section (*1*), of granting a certificate of survey under that sub-section ;

(*b*) of its own authority, to any person, by name or as holding an office, the function, assigned to the Local Government by sub-section (*3*), of causing notice to be given of a certificate of survey being ready for delivery :

Provided, with respect to clause (*a*) of this sub-section, that no delegation of the function mentioned in that clause shall be construed to authorise the grant of a certificate of survey by the surveyor who gave the declaration of survey under section 9."

5. Section 12 of the said Act is hereby repealed.

Repeal of section 12, Act VI, 1884.

6. In section 17 of the said Act, between the word "which" and the word "granted", in both places where the expression

Amendment of section 17, Act VI, 1884.

"which granted" occurs, the words "or whose delegate" shall be inserted.

Amendment of section 19, Act VI, 1884.

7. In section 19, sub-section (*1*), of the said Act, after the words "on the application of the owner or master," the words "and the payment by him of such fee, not exceeding twice the amount of the fee for the previous survey, as the Local Government may require," shall be inserted.

Amendment of section 21, Act VI, 1884.

8. In section 21, sub-section (*2*), clause (*d*), of the said Act, for the words "for certificates of survey" the words in respect of surveys" shall be substituted.

Insertion of new section after section 25, Act VI, 1884.

9. After section 25 of the said Act the following shall be inserted, namely:—

Grant of certificates of service.

"25A. (*1*) The Local Government may in its discretion grant without examination to any person who has served as a master, or as an engineer, or as an engine-driver, of an inland steam-vessel before the first day of April, 1890, a certificate of service to the effect that he may act as a first-class or second-class master, or as an engineer, or as an engine-driver, as the case may be, of an inland steam-vessel.

(*2*) A certificate of service so granted shall have the same effect as a certificate of competency granted under this Act after examination."

Amendment of section 26, Act VI, 1884.

10. In section 26 of the said Act the words "or service" shall be inserted after the word "competency".

Addition to section 29, Act VI, 1884.

11. To section 29 of the said Act the following shall be added, namely:—

"The Local Government may also make rules with respect to the grant of certificates of service under this Act, and may by such rules—

(*a*) fix the fees to be paid for such certificates, and

(*b*) prescribe the form in which such certificates are to be framed and the manner in which the copy of the certificate which is kept by the Local Government is to be recorded."

Addition to Chapter VII, Act VI, 1884.

12. To Chapter VII of the said Act the following shall be added, namely:—

Power for Local Government to make rules for protection of passengers.

"51A. (*1*) The Local Government may also make rules for the protection of passengers in inland steam-vessels, and may by such rules require, among other matters, a sufficient quantity of fresh water to be provided free of charge in such vessels for the use of passengers, and the prices of passenger-tickets to be printed or otherwise denoted on such tickets.

(*2*) Any rule under this section may contain a provision that any owner, master or passenger committing a breach of it shall be punished with fine which may extend to fifty rupees."

Insertion of new section after section 54, Act VI, 1884.

13. After section 54 of the said Act the following shall be inserted, namely:—

Penalty for having excessive number of passengers on board.

"54A. If an inland steam-vessel has on board thereof or on or in any part thereof a number of passengers which is greater than the number of passengers set forth in the certificate of survey as the number which the vessel or the part thereof is, in the judgment of the surveyor, fit to carry, the owner and master shall, for every passenger over and above that number, be each liable to a fine which may extend to ten rupees."

Amendment of heading to second schedule, Act VI, 1884.

14. In the second schedule to the said Act, for the words and figures "*See section 12*" the words, figure and letter "*See section 8A*" shall be substituted.

Indian Steamships Act, 1884.

Insertion of new section after section 10, Act VII, 1884.

15. After section 10 of the said Act the following shall be inserted, namely:—

Fees in respect of surveys.

"10A. Before a survey under this Act is commenced, the owner or master of the steamship to be surveyed shall pay to such officer as the Local Government, from time to time, appoints in this behalf—

(*a*) a fee calculated on the tonnage of the steamship according to the rates in the schedule hereto annexed or according to any other prescribed rates and

(*b*) when the survey is to be made in any port of survey other than Calcutta, Madras, Bombay or Rangoon, such additional fee, in respect of the expense (if any) of the journey of the surveyor to the port, as the Local Government, from time to time, by notification in the official Gazette, directs."

Repeal of part of section 12 (3), Act VII, 1884.

16. In section 12, sub-section (*3*), of the said Act, the words "in addition to the fee payable for the certificate" are hereby repealed.

Amendment of, and addition to, section 13, Act VII, 1884.

17. (*1*) In section 13, sub-section (*1*), of the said Act the words "fees and other" are hereby repealed.

(*2*) To the same section the following sub-section shall be added, namely:—

"(*4*) The Local Government may, from time to time, delegate,—

(*a*) with the previous sanction of the Governor General in Council, to any person, by name or as holding an office, the function, assigned to the Local Government by sub-section (*1*), of granting a certificate of survey under that sub-section;

(*b*) of its own authority, to any person, by name or as holding an office, the function, assigned to the Local Government by sub-section (*3*), of causing notice to be given of a certificate of survey being ready for delivery;

Provided, with respect to clause (*a*) of this sub-section, that no delegation of the function mentioned in that clause shall be construed to authorise the grant of a certificate of survey by the surveyor who gave the declaration of survey under section 11."

Repeal of section 14, Act VII, 1884.

18. Section 14 of the said Act is hereby repealed.

Amendment of section 19, Act VII, 1884.

19. In section 19 of the said Act, between the word "which" and the word "granted", in both the places where the expression "which granted" occurs, the words "or whose delegate" shall be inserted.

Amendment of section 21, Act VII, 1884.

20. In section 21, sub-section (*1*), of the said Act, after the words "on the application of the owner or master," the words "and the payment by him of such fee, not exceeding twice the amount of the fee for the previous survey, as the Local Government may require," shall be inserted.

Amendment of section 24, Act VII, 1884.

21. In section 24, sub-section (*2*), clause (*d*), for the words "for certificates of survey" the words "in respect of surveys" shall be substituted.

Amendment of heading to second schedule, Act VII, 1884.

22. In the schedule to the said Act, for the words and figures "*See section 14*" the words, figures and letter "*See section 10A*" shall be substituted.

S. HARVEY JAMES,
Secretary to the Government of India.



APPENDIX TO

The Calcutta Gazette.

WEDNESDAY, FEBRUARY 26, 1890.

SECOND QUARTER.

BENGAL LIBRARY CATALOGUE OF BOOKS

FOR THE

Second Quarter ending the 30th June 1889.

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						ARABIC
	RELIGION.					
33	Adab Ul Mufrad. Lessons on Morals and Manners.	Arabic...	Hafiz Muhammad.	Religion, M.	Lithographed and published at Arrah.	Lithographed by Muhammad Idris, and published by Abu Muhammad Ibrahim.
34	Al Musnad o Lel Imam Safái. Imam Safái's Throne.	ditto ...	Abu Abdulla Muhammad.	ditto ...	ditto ditto ...	ditto ditto ...
						ASSAMESE
	ART.					
	The following work is designed for educational purposes.					
186	Saral Bhúmi Parimán. Simple Mensuration.	Assamese.	Prabhát Chandra Sarasvatí.	Art ...	Printed at 46, Pánchánantala Lane, Calcutta, and published at Gauhati.	Printed by 'Sánnyál & Co., and published by Prabhát Chandra Sarasvatí.
	DRAMA.					
187	Bhram Ranga. The Comedy of Errors. (T.)	ditto ...	Translated by Ratnadhar Barua and others.	Drama ...	Printed and published at 100, Bowbazar Street, Calcutta.	Printed and published by B. C. Sarkár.
	MISCELLANEOUS.					
	The following work is designed for educational purposes.					
188	Kárya Shikshá. Instruction in Business.	ditto ...	Kálirám Baruá.	Miscellaneous.	Printed at 84, Raja Rajballabh's Street, Calcutta, and published at Kámrup, Gauhati.	Printed by Naba Kumár Bose, and published by Kálirán Baruá.
	POETRY.					
189	Mahájan. The Great Man.	ditto ...	Dibákar Sharmá.	Poetry ...	Printed at 132, Maniktala Street, Calcutta, and published at Jorehat, Assam.	Printed by Harihar Nandi, and published by Dibákar Sharmá.
	RELIGION.					
190	Kán Khoá o Rás Kriyá. The Ear Eating Demon and the Rása sports of Krishna. (R).	ditto ...	Sankar Deb and Sridhar Kandali.	Religion, H.	Printed at 333, Upper Chitpore Road, Calcutta, and published at Barpeta, Assam.	Printed by Binod Bihári Sil, and published by Dáibar Rám Byápári.
	SCIENCE (MATHEMATICAL.)					
	The following work is designed for educational purposes.					
191	Dhárápát. Arithmetical Tables.	ditto ...	Kálirám Barua	Science (Mathematical.)	Printed at 84, Raja Rajballabh's Street, Calcutta, and published at Kamrup, Gauhati.	Printed by Nabakumár Bose, and published by Kálirám Barua.
						BENGALI
	ART.					
8471	Saral Púrtta Shikshá. Easy Knowledge of Public Works. Parts II, III, IV.	Bengali.	Kunjabiharí Chaudhúrí.	Art ...	Printed and published at Bhawanipore.	Printed and published by Nabin Krishna Mukharji.

Quarter ending 30th June 1889.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication	Number of sheets, leaves, or pages.	Size.	First second, or other edition.	Number of copies of which the edition consists.	Printed or litho-graphed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks	Number.
BOOKS.									
1889.	Pages.					Rs. A. P.			
April, 7th	196	11 × 7 ...	1st ...	1,050	Litho-graphed.	1 12 0	Abu Muhammad Ibrahim, Arrah.	Based on the Hadis... ...	33
Mar., 20th	220	11 × 7 ...	1st ...	1,050	ditto ...	1 12 0	ditto ...	The standard work of Iman Sáfáí's school of Sunnism. It is based on the Hadis.	34
BOOKS.									
1889.									
Mar., 19th	71	12mo dy	2nd ...	1,000	Printed	0 6 0	Prabhát Chandra Sarasvati, Gauhati.	.....	186
April, 17th	101.	12mo dy	1st ...	500	ditto ...	0 6 0	R. D. Barua, R.K. Barkákati, G. N. Barua, and G. S. Barua, 40, Panchánantala Lane, Calcutta.	An Assamese translation of Shakespeare's Comedy of Errors.	187
May, 21st	74	8vo dy...	15th .	3,000	ditto ...	0 6 0	Kálirám Baruá. Kamrup, Gauhati.	.....	188
„ 14th	10	12mo dy	1st ...	1,000	ditto ..	0 1 0	Dibákar Sharmá, Sibságar, Assam.	The writer thinks that a man who is virtuous, fears God, and sympathises with the sufferings of others, is a great man.	189
April, 26th	38	12mo dy	New	1,000	ditto ..	0 4 0	Dáibar Rám Byápári, Barpeta, Assam.	Kán Khoá is a demon who is supposed to eat the ears of children. Jasodá wants to frighten the infant Krishna by inspiring him with a dread of this demon; but Krishna says he knows nothing about him.	190
May, 6th	24	8vo dy	2nd ...	4,000	ditto ...	0 1 6	Kálirám Barua Kamrup, Gauhati.	.....	191
BOOKS.									
June, 15th	156	12mo dy	1st ...	1,000	ditto ...	1 8 0	Kunjabiharí Chaudhuri.	A manual of Civil Engineering. The present work treats of the construction of roads and bridges and of the excavation of tanks. It contains a number of illustrations and diagrams.	8471

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	ART—*concld.*					
	The following works are designed for educational purposes.					
8472	Parimiti. Mensuration	Bengali .	P. Ghosh ...	Art ...	Printed and published at 28 Convent Road, Entally.	Printed and published by Dwaraká Náth Nandan.
8473	Saral Parimiti. Simple Mensuration.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8474	Sahaj Parimiti. Easy Mensuration.	ditto ...	Brajapati Banerji.	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Jadu Nath Sil, and published by the Sanskrit Press Depository.
8475	Saral Sámatalik Parimiti. Simple Mensuration of Plane Surfaces.	ditto ...	Srinath Dé ...	ditto ...	Printed at 6, Balaram De's Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by H. M. Mukharji and Company, and published by the Sanskrit Press Depository.
8476	Ditto ditto ...	ditto ..	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
8477	Deshiya Jarip. The Indigenous Method of Surveying.	ditto ...	Rájeswar Gupta.	ditto ..	Printed and published at 2, Benetola Lane, Calcutta.	Printed and published by Natabar Chakrabartí.
8478	Hastalipir Adarsha. A Copy-book.	ditto ...	Rajanikánta Chatterji.	ditto ...	Printed and published at the Amar Press, Komilla.	Printed and published by Nilambar Datta.
8479	Krishi Sopán. Elementary Treatise on Agriculture.	ditto ...	G. C. Bose ..	ditto ..	Printed and published at Serampore.	Printed and published by Jitendra Náth De.
	BIOGRAPHY.					
8480	Kabiranjan Rámprasád Sener Jiban Brittánta. A Biography of Rámprasád Sen.	litto ..	Shántirám De.	Biography.	Printed at 374, and published at 112, Chitpore Road, Calcutta.	Printed by Hara Chandra Das, and published by Shántiram De.
8481	Jiban Charit ...	ditto ..	Ajimuddin Muhammad Chaudhuri.	ditto ...	Printed and published at Barisal.	Printed by Iswar Chandra Kar, and published by Kází Afzaluddin.
	DRAMA.					
8482	Mahábhárat Nátya Kábya. The Mahábhárata A Drama. Vol. II. Part 6.	ditto ...	Prafulla Chandra Mukharji.	Drama ...	Printed at 4, Garstin's Place, and published at 22, Beadon Street, Calcutta.	Printed by Nandamohan Banerji, and published by Prafulla Chandra Mukharji.
8483	Ditto ditto. Vol. II. Part 7.	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...
8484	Bichitra Bichár Nátak. A Drama describing a Curious Trial.	ditto ...	Nabakrishna Banerji.	ditto ...	Printed at 3, Beadon Square, and published at 34, Nemu Gosain's Lane, Calcutta.	Printed by Biharilál Das, and published by Haridás Bhattácháryya.
8485	Rában Badh. The Fall of Rában.	ditto ...	Jnánendra Mohan Shet.	ditto ...	Printed at 333, and published at 118, Upper Chitpore Road, Calcutta.	Printed by Binod Bihari Sil, and published by Jnánendra Mohan Shet.
8486	Kalikáler Rasik Meye Bhátárpáne Dekhená Cheye. The Flirts of the Kalijuga utterly disregard their husbands.	ditto ...	Hárána Shashi De.	ditto ..	Printed at 339, Chitpore Road, and published at 19, Brindaban Basak's Lane, Calcutta.	Printed by Kaliprasanna Raya, and published by Láibihari Sen.
8487	Jayadratha Badha Játrá. A Melodrama describing the fall of Jayadratha.	ditto ...	Tinkarí Biswas.	ditto ...	ditto ditto ...	ditto ditto ...
8488	Skul mástár. The Schoolmaster.	ditto ...	Ashutosh Sen	ditto ...	Printed at 221, Cornwallis Street, and published at 50, Guruprasad Chaudhuri's Lane, Calcutta.	Printed by Matilál Mandal, and published by Ashutosh Sen.

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar., 29th	274	16mo ...	2nd ..	3,000	Printed	0 12 0	P. Ghosh, 28, Convent Road, Entally.	.....	8472
„ 10th	74	16mo ...	2nd ...	5,000	ditto ...	0 3 0	ditto ...	.....	8473
April, 10th	42	12mo dy	7th ...	2,000	ditto ...	0 2 0	Brajapati Banerji, Gauhati, Assam.	.....	8474
„ 6th	98	12mo ...	7th ...	2,000	ditto ...	0 4 0	Srinath Dé, Bogra.	.....	8475
May, 16th	98	12mo ...	8th ...	3,000	ditto ...	0 4 0	ditto ...	.....	8476
April, 10th	46	8vo dy	2nd ...	1,000	ditto ...	0 5 0	Rajeswar Gupta, Chittagong.	.....	8477
May, 5th	20	12mo dy	5th ...	500	ditto ...	0 1 3	.....	.....	8478
April, 29th	125	16mo rl	1st ...	500	ditto ...	0 8 0	G. C. Bose, 116, Bow Bazar Street, Calcutta.	"Adapted for use in elementary schools or classes in Bengal."	8479
1889. May, 13th	45	12mo ..	1st ...	1,000	ditto ...	0 4 0	.....	Contains much interesting information about the life and writings of Rámprasád Sen, a Bengali poet of the last century.	8480
April, 25th	156	9 × 6	1st ...	500	ditto ..	0 12 0	.....	The Autobiography of a Mahomedan head-constable of the Barisal Police. It is an interesting work as giving an insight into respectable Mahomedan life, and also into the working of the old and the new police systems.	8481
„ 5th	32	8vo dy...	1st ...	500	ditto ...	0 2 0	.....	Goes on with the *Sambhabaparbádhyáya* of the *Adiparba*.	8482
May, 6th	32	8vo dy...	1st ...	500	ditto ...	0 2 0	.....	ditto ditto ...	8483
„ 14th	92	12mo dy	2nd ...	1,000	ditto ...	1 0 0	Haridás Bhattácháryya, Calcutta.	Noticed	8484
April, 16th	46	12mo rl	2nd ...	1,000	ditto ...	0 8 0	Jnánendra Mohan Shet.	A mythological drama ..	8485
June, 3rd	12	12mo dy	2nd ...	1,000	ditto ...	0 0 3	Lálbiharí Sen, Calcutta.	Street literature	8486
May, 26th	48	12mo rl	Revised.	1,000	ditto ...	0 6 0	ditto ...	Based on the story of the fall of Jayadratha, the brother-in-law of Durjodhana, as given in the Mahabharata.	8187
Mar., 20th	34	12mo dy	1st ...	1,000	ditto ...	0 2 6	.....	Complains of the absolute want of discipline in some of the schools under private management in Calcutta. The managers look more to the financial success of their institutions, and sacrifice discipline, morality, and education to money.	8488

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	DRAMA—*contd.*					
8489	Shashi Mukhi. (A Name)	Bengali	Siddheswar Chatterji.	Drama ...	Printed at the Gupta Press, and published at 5, Panchu Dutt's Lane, Calcutta.	Printed by Abhayacharan Gupta, and published by Harimani Dasi.
	pays everything he gets by this means to women of ill-fame. Shashimukhi, thus deserted, stung with remorse devotions gather a large number of female devotees round her, and she preaches a form of Durga worship. Her					
8490	Prabhás Jajna Játrá. A Melo-drama describing the Sacrifice at Prabhás.	ditto ...	Jiban Krishna Chatterji.	ditto ...	Printed at 6, Garanhata Street, and published at 19, Brindaban Basak's Lane, Calcutta.	Printed by Gobinda Chandra Datta, and published by Gangádhar Sil.
8491	Jagaddhátri. (A Name)	ditto ...	Haripada Chatterji.	ditto ...	Printed at 80, Muktarám Babu's Street, and published at 133, Canning Street, Calcutta.	Printed by Bagalá Charan Batabyál, and published by Haripada Chatterji.
8492	Chandrahansa. (A Name)	ditto ...	Jogendra Nath Mukharji.	ditto ...	Printed at 109, College Street, and published at 58, Patuatola Lane, Calcutta.	Printed by Umá Charan Chakrabarti, and published by Sitanáth Bhattácharyya.
	buddhi, acting under the advice of his still more wicked friend Lubdhaka. The Rani fled to the forest and pre- who banished his own son-in-law, and was the cause of the death of his daughter and of one of his wives, wanted master's son.					
8493	Golebakáali Nátak. Of Bakáwali. A Drama.	ditto ...	Kedar Nath Ganguli.	ditto ...	Printed at 68, Nimu Gosain's Lane, and published at 19, Brindaban Basak's Lane, Calcutta.	Printed by Kaliprasanna Ráya, and published by Upendra Nath Mukharji.
8494	Bharat Bilap. The Lament of Bharat.	ditto ..	ditto ...	ditto ...	Printed at 68, Nimu Gosain's Lane, and published at 326, Upper Chitpore Road, Calcutta.	Printed by Kaliprasanna Ráya, and published by Shyámlál Sil.
8495	Lampater Náke Khat. Woe to the Licentious.	ditto ..	Gaurdas Bairági.	ditto ...	Printed at 68, Nimu Gosain's Lane, and published at 5, Rammohan Saha's Lane, Calcutta.	Printed by Kaliprasanna Ráya, and published by Giridhári Bairági.
8496	Sati Nátak. A Drama describing the death of Sati.	ditto ...	Mahesh Chandra Dás De.	ditto ...	Printed at 68, Nimu Gosain's Lane, and published at 108, Upper Chitpore Road, Calcutta.	Printed by Kaliprasanna Ráya, and published by Sarat Chandra Bhattácháryya.
8497	Tarani Sen Badh Nátak. A Drama describing the Fall of Tarani Sen.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8498	Prahlád Charitra Nátak. A Drama Describing the Career of Prahlád.	ditto ...	ditto ...	ditto ...	ditto ditto ...	Printed by Kaliprasanna Ráya, and published by Devendranáth Chatterji.
8499	Sati. The Chaste One ...	ditto ...	Háridás Bhattácháryya.	ditto ...	Printed at 3, Beadon Square, and published at 37, Nimu Gosain's Lane, Calcutta.	Printed by Biharilál Dás, and published by Haridás Bhattácháryya.
8500	Golap Ful. The Rose ..	ditto ...	Hárána Shashi De.	ditto ...	Printed and published at 3, Beadon Square, Calcutta.	Printed and published by Biharilál Dás.
8501	Pándava Nirbásan Gitábhinaya. Exile of the Pandavas. An Opera.	ditto ...	Matilál Ráya...	ditto ...	Printed at 6, Balaram De's Street, and published at Bhatsálá.	Printed by H. M. Mukharji & Co., and published by Dharmadás Ráya
8502	Bijay Chandi Gitábhinaya. The Victorious Chandi. An Opera.	ditto ...	ditto ...	ditto ...	Printed at 6, Balaram De's Street, and published at 57, College Street, Calcutta.	Printed by H. M. Mukharji & Co., and published by Shri Rám Chandra Bhattácháryya.
8503	Báránasi Bilás. Sports at Banarás.	ditto ...	Nagendra Nath Ghosh.	ditto ...	Printed and published at 132, Amherst Street, Calcutta.	Printed by H. C. Datta & Co., and published by Táráprasanna Mitra.
8504	Chakshusthir Nátak. A Drama describing the condition of being stunned.	ditto ...	Kshetra Mohan Chakrabarti.	ditto ...	Printed at 54, Balarám De's Street, and published at 98-3, Chitpore Road, Garanhátá, Calcutta.	Printed by Rákhál Chandra Das, and published by Ram Kánái Dás.
8505	Mág Sarbaswa. The Henpecked Husband.	ditto ...	Ram Kánái Das	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
May, 26th	52	12mo ...	1st ...	1,000	Printed	1 0 0	Siddheswar Chatterji and Harimani Dasi, 5, Panchu Dutt's Lane, Calcutta.	The story of a *Kulin's* daughter deserted by her husband, who marries any number of girls for money, charges an exorbitant fee for visiting them, and renounces the world, and devotes herself to the service of Durgá, who manifests herself before her. Her husband joins her followers, and they are reunited.	8489
„ 14th	48	12mo dy	3rd ...	1,000	ditto ...	0 6 0	Gangádhar Sil, Calcutta.	Often noticed	8490
„ 3rd	57	12mo dy	1st ..	1,000	ditto ...	0 4 0	.....	The story of an educated midwife, named Jagaddhátri, who remarries at the instance of her stepson at a time when nothing is known as to the whereabouts of her husband. After remarriage she leads an exceedingly dissolute life.	8491
Mar., 1st	123	8vo dy	1st ...	500	ditto ...	0 12 0	Jogendra Nath Mukharji, 58, Patuatola Lane, Calcutta.	The story of Chandrahansa, whose father, Raja Dadhimukha, was dethroned and killed by his wicked minister Dhristabuddhi, who served the life of Chandrahansa, who grew up without knowing who his father was. The wicked Dhristabuddhi, to kill Chandrahansa also, but he was not successful. He was at last compelled to abdicate in favour of his	8492
April, 24th	72	12mo rl	Revised	1,000	ditto ...	0 8 0	Upendra Nath Mukharji, Calcutta.	One of the well-known Persian tales dramatised.	8493
Mar., 5th	48	12mo rl	do. ...	1,000	ditto ...	0 6 0	Shyámlál Sil ...	.....	8494
May, 4th	18	12mo dy	1st ...	1,000	ditto ...	0 1 0	Giridhári Bairági, Calcutta.	Street literature	8495
April, 26th	96	12mo rl	Revised.	1,000	ditto ...	0 12 0	Sarat Chandra Bhattácháryya, Calcutta.	.....	8496
„ 27th	44	12mo rl	do. ...	1,000	ditto ..	0 6 0	ditto ...	.....	8497
„ 27th	48	12mo rl	do. ...	1,000	ditto ..	0 6 0	Devendranáth Chatterji, Calcutta.	.....	8498
May, 18th	20	12mo dy	1st ...	1,000	ditto ...	0 3 0	Haridás Bhattácháryya, Calcutta.	The story of a rich mofussil zemindar who attempts without success to violate the honour of a chaste lady, the wife of a poor Brahmin, living on his land,	8499
April, 13th	30	16mo dy	1st ..	1,000	ditto ...	0 2 0	Biharilál Das, Calcutta.	Golap Ful, a lady comes on board a boat from the sea without a companion. A company of girls pick her up, and she is married to Jogesh, the Prince of Gaur. She falls into the hands of dacoits, and is rescued by her husband.	8500
„ 27th	138	3vo dy	2nd ...	2,000	ditto ..	1 4 0	Matilál Raya, Bhatsálá (Burdwan).	.....	8501
Mar., 2nd	147	8vo dy	4th ...	2,000	ditto ..	1 4 0	ditto ...	A well-known work	8502
April, 26th	74	12mo dy	1st ...	500	ditto ...	0 8 0	Nagendra Nath Ghosh, Bhowanipore.	A mythological drama. Based, it appears, on Bhárat Chandra's Annadá Mangal.	8503
May, 15th	36	12mo dy	4th ...	1,000	ditto ...	0 4 0	Ram Kánai Dás ...	.....	8504
„ 10th	36	12mo ...	7th ...	1,000	ditto ...	0 2 0	ditto ...	.....	8505

CATALOGUE OF BOOKS for the Second

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	DRAMA—*concld.*					
8506	Gádhá O Tumi. You and Ass.	Bengali	.....	Drama ...	Printed at 3, Beadon Square, and published at 18, Banstalá Street, Calcutta.	Printed by Bihari Lál Das, and published by Matindra Nath Mukharji.
	FICTION.					
8507	Sainik Ramani. The Soldier's Wife. (T.)	ditto ...	Jogendra Nath De	Fiction ...	Printed and published at 18, Cossipore Ghât Road.	Printed by Brajagopal Shet, and published by Jogendra Náth De.
8508	Chandra Sekhar. (A Name).	ditto ...	Bankim Chandra Chatterji.	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at 5, Pratap Chatterji's Lane, Calcutta.	Printed by Jadunáth Sil, and published by Umácharan Banerji.
8509	Turaska Upanyás. Turkish Tales. (T.)	ditto ...	Sarat Chandra Deva Sharmá.	ditto ...	Printed at 45, Maniktalá Street, and published at Narail.	Printed by Kshirod Nath Ghosh, and published by Sarat Chandra Deva Sharmá.
8510	Páhâre Meye. The Terrible Woman.	ditto ..	Priya Nath Mukharji.	ditto ..	Printed at 34, Benetola Lane, and published at 58, College Street, Calcutta.	Printed by Ashutosh Banerji, and published by Kalidás Lahiri.
8511	Galpa Kalpataru. Tritiya Kusum Shánti Kutir. The Desire-fulfilling Tree of Stories. The Third Flower. The Cottage of Peace.	ditto ...	Rajkrishna Ráya.	ditto ...	Printed at 37, Mechua Bazar Street, and published at 201, Cornwallis Street, Calcutta.	Printed by Sarat Chandra Deva, and published by Gurudás Chatterji.
8512	Galpa Kalpataru. Chaturtha Kusum. Adbhut Dakát. The Desire-Fulfilling Tree of Stories. The Fourth Flower. The Terrible Dacoit.	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
8513	Upanyás Málá. A collection of Stories. Part I.	ditto ...	R. L. Biswás	ditto ..	Printed at the Chitpore New Prákrita Press, and published at Bagbazar.	Printed by Rakhal Chandra Das, and published by R. L. Biswás.
8514	Ditto ditto. Part II.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8515	Ditto ditto. Part III.	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8516	Basanta Kumár. The Son of the Spring.	ditto ...	Sarat Chandra Sarkár.	ditto ...	Printed at 3, Beadon Square, and published at 37, Nimu Gosain's Lane, Calcutta.	Printed by Biharilál Das, and published by Haridas Bhattácháryya.
8517	Bángáli Meye. Bengali Girl.	ditto ...	.....	ditto ...	Printed and published at 3, Beadon Square, Calcutta.	Printed and published by Biharilál Das.
8518	Bau Kathá Kao. Speak, O Young Bride.	ditto ...	.....	ditto ...	ditto ditto ...	Printed by Bihari Lál Das, and published by Upendra Nath Mukharji.
	his wife speaking to his friend Ganesh. As a modest Hindu lady, she refuses to do so. Ganesh sees her and to shake off her bashfulness. They come to Calcutta. Gopal had a widowed sister. Ganesh wants to marry her his absence, and attempts to dishonour his wife. Unsuccessful in this, he accuses her of unchastity, and Gopal, and commits suicide. Gopal's sister accuses Ganesh of various crimes, and gets him transported for life.					
8519	Bibir Nách. The Ball ...	ditto ...	.....	ditto ...	ditto ditto ...	ditto ditto ...
	Anglicised young man, reluctantly performs the funeral ceremony of his mother according to Hindu rites, but patrimony and proceeds to Calcutta, educates his wife as an emancipated girl, and goes to preach Brahmoism his wife takes all sorts of liberties with her male friends, and becomes a proficient in the European art of and he drowns himself in the river.					

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 21st	40	12mo dy	1st ...	1,000	Printed	0 2 0	Matindra Náth Mukharji.	This appears to be written in reply to a dramatic work entitled *Dádá O Ami* noticed in the previous catalogue	8506
The present work is designed to hold up to ridicule the Anglicised Bengali gentlemen returned from England.									
Mar., 24th	200	12mo dy	1st ...	1,000	ditto ..	1 0 0	Jogendra Náth De, Cossipore Ghát Road.	A translation of Reynolds' work entitled "The Soldier's Wife."	8507
April, 22nd	240	12mo dy	3rd ..	1,000	ditto ..	1 8 0	Bankim Chandra Chatterji, 6, Pratap Chatterji's Lane, Calcutta.	A well-known work ...	8508
Mar., 24th	184	8vo dy	1st ...	1,000	ditto ...	1 0 0	Sarat Chandra Deva Sharmá.	A translation of the Turkish Tales.	8509
April, 26th	202	32mo rl	1st ...	1,000	ditto ..	0 8 0	Kalidas Lahiri, 58, College Street, Calcutta.	The story of Trailokya, a prostitute of Calcutta, who murdered another prostitute living in the same house with her and was sentenced to death by Mr. Justice Norris	8510
Feb., 27th	116	12mo dy	1st ...	500	ditto ..	0 8 0	Sarat Chandra Deb, Calcutta.	This is the third part of a series of stories. The first two parts being, as the author says, the *Hiranmayi* and the *Kiranmayi* works, which appeared some years ago. It is a story of the	8511
happy union of the different members of the Royal Family of Amarapattana, after long separation and after the loss of their kingdom, at Pushkara, a place of pilgrimage in Rajputana.									
„ 26th	188	12mo dy	1st ...	500	ditto ...	0 10 0	Rajkrishna Ráya	This is the fourth part of the same series. The story is that of a dacoit of the Robin Hood type. Ratneswar Sinha Ráya,	8512
being deprived of his share of a rich patrimony, becomes the head of a band of dacoits. He robs rich people and supports the poor. When strong enough, he regains his inheritance and makes it over to his daughter.									
Mar., 23rd	381	8vo ...	1st ...	500	ditto ...	4 12 0	R. L. Biswás, Bagbazar.	A series of stories from a variety of sources. This part contains Persian tales and the story of Nagendra Nandini.	8513
„ 23rd	268	8vo ...	1st ...	500	ditto ...	2 4 0	ditto ...	Contains Nagendra Nandini and Ascharya Guptakathá.	8514
„ 23rd	512	8vo ...	1st ...	500	ditto ...	4 12 0	ditto ...	The Arabian Nights' Entertainments.	8515
May, 16th	217	12mo dy	1st ...	1,000	ditto ...	1 8 0	Haridas Bhattácharyya, Calcutta.	Basanta Kumar is not the most	8516
important character in the work though the writer has chosen to name the book after him. It gives a faithful picture of native family life in its various phases, and deals impartial poetical justice to all the characters concerned. The object of the work is to describe how goodness triumphs over wickedness.									
April, 25th	72	16mo dy	New...	1,000	ditto ...	0 4 0	Biharilál Das, Calcutta.	Indranáth goes to a mofussil	8517
village for the purpose of collecting subscriptions to help Babu Surendra Nath Banerji in his appeal against the sentence of imprisonment passed on him by the High Court. There he sees Saralá, and they fall in love. Indranath's father does not agree to the match, and Saralá is married to another. Saralá feels very miserable, but determines at last to devote herself to the service of her husband.									
„ 17th	24	12mo dy	New	1,000	ditto ...	0 6 0	Upendra Nath Mukharji.	Aimed at the female emancipation and widow remarriage movement. Gopal insists upon	8518
falls in love. He induces Gopal to take her to Calcutta, where the company of enlightened ladies, he said, would enable her simply to obtain an admission into the family; but the lady baffles Ganesh's intention. Ganesh then enters Gopal's room in who never liked his wife, beats her to death. Ganesh informs the police about the murder. Gopal beats Ganesh									
„ 26th	34	12mo dy	New	1,000	ditto ...	0 6 0	ditto ...	Aimed at the female emancipation movement. Kanai, an	8519
will not attend his father's sick-bed lest he be compelled to perform the same barbarous ceremony again. He sells his at Bankura. His immoral conduct there procures his expulsion from the *Samaj*. During his absence at Bankura dancing. She too is expelled from the *Samaj*. They live in misery, and in the course of time she commits suicide									

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						BENGALI
	FICTION—*concluded.*					
8520	Meja Bau. The Second Daughter-in-law.	Bengali	Shiba Náth Shástri.	Fiction ..	Printed and published at 13, Cornwallis Street, Calcutta.	Printed and published by K. C. Datta.
8521	Kalpataru. The Desire-fulfilling Tree.	ditto ...	Indra Nath Banerji.	ditto ...	Printed and published at 34-1, Colootola Street, Calcutta.	Printed and published by Bihari Lal Sarkar.
8522	Hátim Tai. (A Name). (T.)	ditto ...	Bijaya Náth Mukharji.	ditto ...	Printed at 147, and published at 333, Upper Chitpore Road, Calcutta.	Printed by Umesh Chandra Pal, and published by Kánáilal Sil and Brothers.
8523	Dekhle Hási Páya. The sight provokes laughter.	ditto ...	Jadunath Bhattácháryya.	ditto ...	Printed at 54, Balaram De's Street, and published at 98-3, Chitpore Road, Calcutta.	Printed by Rákhál Chandra Das, and published by Ramkánái Das.
8524	Háya ki Holo! Alas! what is this?	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8525	Saroj Pratimá. The Image of the Lotus.	ditto ...	Rádhá Binod Haldar.	ditto ...	Printed at 61, Ahiritola Street, and published at 111, Upper Chitpore Road, Calcutta.	Printed by Mahendranath De, and published by S. S. Chandra.
8526	Tárátirtha. The Temple Dedicated to Tára's Memory.	ditto ...	Rádhánáth Mitra.	ditto ...	Printed at 147, Upper Chitpore Road, and published at 141, Old China Bazar, Calcutta.	Printed by Umesh Chandra Pal, and published by Amritalal Mukharji.
	before her marriage. The scandal of her birth was hushed up by Chandra Shekhar carrying the child a woman who eked out her livelihood by needle work. On her death she fell into the hands of some bad men shopkeeper. Her mother was married to the Rája of Kanchanpore. The excellence of her needle work attract- stepson was actuated by a very different feeling, and through his agency the poor girl was kidnapped and find out the place of her confinement, and at last with the help of a *sannyási* who afterwards proved to be open Tara was mortally wounded. At her father's request a temple was dedicated to her memory named Tara.					
	HISTORY (INCLUDING GEOGRAPHY).					
8527	Káyastha Káriká O Bansábali. History and Genealogy of the Káyasthas. Part III. Nos. 68 and 69.	ditto ...	Dina Bandhu Ghatak Ishan Chandra Ghatak, and Bijaya Krishna Ghatak.	History (including Geography).	Printed at 78, Amherst Street, and published at 65, Bagbazar Street, Calcutta.	Printed by Kalicharan Das, and published by the Kayastha Kula Sanrakshini Sabha.
8528	Rajábali. The Line of Rajás. (R.)	ditto ...	Mrityunjaya Sharmá.	ditto ...	Printed at 34, and published at 52, Rajballabh's Street, Calcutta.	Printed by Nabakumar Bose, and published by Bihárilal Chatterji.
	The following works are designed for educational purposes.					
8529	Bangadesh O Asamer Samkshipta Bibaran. A short account of Bengal and Assam.	ditto ...	Dinanath Sen	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at Gendaria, Dacca.	Printed by Jadu Náth Sil, and published by Girish Chandra Sen.
8530	Pratham Shikshá Bhugol. First Geography for Children.	ditto ...	Chandrakánta Ganguli.	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at 148, Baranási Ghosh's Street, Calcutta.	Printed by Jadu Náth Sil, and published by the Sanskrit Press Depository.
8531	Bharat Barsher Itihás. History of British India.	ditto ...	Krishna Chandra Ráya.	ditto ...	Printed at 44, Amherst Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Biharikál Banerji, and published by the Sanskrit Press Depository.
8532	Shishu Ranjan Bharat Itihás. History of India for the entertainment of boys.	ditto ...	Dámodar Mukharji, M.R.A.S.	ditto ...	Printed and published at 6, Balaram De's Street, Calcutta.	Printed and published by H. M. Mukharji and Co.

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright or any portion of it.	Remarks.	Number
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 23rd	86	8vo dy	6th ...	1,000	Printed	0 10 0	Shiba Náth Shástri.	A well-known work	8520
Mar., 28th	191	12mo dy	3rd ...	900	ditto ..	0 12 0	Jogendra Chandra Bose, 34-1, Colootola Street, Calcutta.	A well-known work of humour .	8521
„ 5th	280	8vo dy	2nd ...	1,200	ditto ...	0 8 0	Surya Kumar Mukharji, 21, Sankar Haldar's Lane, Calcutta.	A well-known Persian tale. In making the translation the writer has consulted the Urdu, the Bengali, and the Musalmani-Bengali versions of the story.	8522
May, 12th	24	12mo dy	4th ...	1,000	ditto ...	0 2 0	Ramkánái Das ..	A humorous story. One of the Folk tales of Bengal.	8523
„ 16th	23	12mo dy	Revised	1,000	ditto ...	0 2 0	ditto ...	ditto ditto ...	8524
Mar., 25th	197	12mo dy	1st ...	1,000	ditto ...	1 10 0	S. S. Chandra, 111 Upper Chitpore Road, Calcutta.	A story of love and adventure, the materials of which have been collected from the Folk tales of Bengal, the annals of Rajputana, the stories of the Betalpanchisi, and so on.	8525
April, 12th	328	12mo dy	1st ..	1,000	ditto ...	1 8 0	Suryya Kumar Mukharji, 21, Sankar Haldar's Lane, Calcutta.	Tárá was the illegitimate daughter of Chandra Shekhar, the Minister of Subarnapore, by the Princess of that place	8526

to his mother, and himself renouncing the world. The old lady died by an accident, and Tara was taken care of by who took her to Kanchanpore, where she left their vicious company and lived under the protection of a virtuous old ed the attention of the Ráni, who sent for her, and at once conceived a great affection for her. But the Rani's kept in the custody of a prostitute. The Rajá was greatly enraged at this act of violence, and spared no pains to Tara's father, the prostitute's house was surrounded. In the scuffle that ensued at the time when the door was broken tirtha with the image of Tara enshrined in it.

Mar., 14th	48	4to rl	1st ...	500	ditto ...	0 8 0	Kayastha Kula Sanrakshini Sabhá, 65, Bagbazar Street, Calcutta.	The usual contents	8527
.....	171	8vo dy	5th ...	.....	ditto ...	1 0 0	.....	This is one of the first Bengali works in prose. It was published in 1810 for the use of the students of the Fort William College.	8528
April, 28th	72	12mo dy	4th ...	5,000	ditto ...	0 6 0	Dinanath Sen, Dacca.	A well-known school book ...	8529
Mar., 26th	32	12mo dy	15th...	5,000	ditto ...	0 1 6	Rai Radhikaprasanna Mukharji Báhádur, 30, Bechu Chatterji's Street, Calcutta.	.....	8530
„ 23rd	265	12mo ...	25th,.	3,000	ditto ...	0 12 0	Krishna Chandra Ráyá, 36, Amherst Street, Calcutta,	A well-known school book ..	8531
April, 20th	138	16mo rl	4th ...	2,000	ditto ...	0 4 0	Nabadwip Chandra Ráya, 5, Ashutosh Deb's Lane, Calcutta	.....	8532

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						BENGALI
	HISTORY (INCLUDING GEOGRAPHY)—*concld.*					
8533	Mána Chitra Shikshá. Map-pointing.	Bengali	Kishori Mohan Básu.	History (including Geography.)	Printed and published at the Syamantaka Press, Dacca.	Printed and published by Gopináth Barák.
8534	Pratham Bhág Bangálá Itiháser Prashnottara An Catechism of the History of Bengal Part I.	ditto ..	Kunja Bihari Banikya.	ditto ...	Printed and published at the Dacca Girish Press.	Printed by Munshi Kalimuddin and published by Kunja Bihari Banikya.
8535	Purábritta Sárer Prashnottara. A Catechism of Purábritta Sára.	ditto ...	Abalá Kánta Sen.	ditto ...	Printed and published at 66, Beadon Street, Calcutta.	Printed and published by Chandi Charan Ráya.
8536	Pratham Shikshá Bangálá Itiháser Prashnottara. A Catechism of the History of Bengal.	ditto ...	ditto ..	ditto ...	ditto ditto ..	ditto ditto ...
	LANGUAGE.					
	The following works are designed for educational purposes.					
8537	Barnaparichaya. An Alphabetical Primer. Part. I.	ditto ..	Ishwara Chandra Bidyáságara.	Language	Printed at 62, Amherst Street, and published at 25, Suken's Street, Calcutta.	Printed by Jajneswar Mukharji, and published by the Calcutta Library.
8538	Ditto ditto. Part II.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8539	Bodhodaya. Rudiments of Knowledge.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8540	Akhyána Manjarí. A Collection of Anecdotes. Part II.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8541	Ditto ditto Part III.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8542	Jíban Charit. Biography.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8543	Shishu Shikshá. The Infant Instructor. Part III.	ditto ...	Madan Mohan Tarkálankára.	ditto ...	ditto ditto ..	ditto ditto ...
8544	Ditto ditto. Part III.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8545	Barnajnán Knowledge of Letters.	ditto ..	Bhabání Kánta Bhattáchárryya.	ditto ..	Printed and published at Serajgunj.	Printed by Mohini Mohan Son, and published by Bhabáni Kanta Bhattácháryya.
8546	Kabitá Kusumer Artha A Key to Kabitá Kusum.	ditto ...	Umacharan Banerji.	ditto ...	ditto ditto ...	ditto ditto ...
8547	Bangíya Sabda Sár. A Bengali Dictionary.	ditto ...	Abalúkánta Son	ditto ...	Printed and published at 66, Beadon Street, Calcutta.	Printed and published by Chandi Charan Ráya.
8548	Padyasárer Sárthak Anwaya O Byákhyá. A key to Padyasára.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8549	Sáhitya Kusumer Suchára Byákhyá. A key to Sáhitya Kusum.	ditto ..	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8550	Prabandha Málár Suchára Byákhyá. A key to Prabandhamálá.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8551	Rámchariter Sucháru Byákhyá. A key to Rámcharit	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8552	Padyapáth Dwitíya Bhager Sárthak Anwaya Byákhyá O Padapari-chaya. A key to Padyapáth. Part II.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 10th	46	12mo ...	1st ...	1,000	Printed	0 2 0	.....	A work on map-pointing designed for the use of students of the vernacular schools.	8533
May, 24th	72	12mo ...	1st ..	1,000	ditto ...	0 4 0	.....	A catechism of the elementary history of Bengal by the late Babu Rajkrishna Mukharji, M.A.	8534
Mar. 6th	142	12mo rl	3rd ...	1,000	ditto ...	0 8 0	Abalá Kánta Sen, 50, Baranasi Ghosh's Street, Calcutta.	.....	8535
Feb., 28th	68	12mo rl	2nd ...	2,000	ditto ...	0 4 0	ditto ...	A catechism of the elementary history of Bengal by the late Babu Rajkrishna Mukharji, M.A.	8536
Mar., 30th	38	12mo ...	148th	50,000	ditto ...	0 1 0	Ishwara Chandra Bidyaságara, 25, Brindaban Mallik's Lane, Calcutta.	An alphabetical primer of long standing.	8537
May, 13th	43	12mo ...	137th	30,000	ditto ...	0 1 3	ditto ...	ditto ditto ...	8538
April, 11th	84	12mo ..	104th	30,000	ditto ...	0 3 0	ditto ...	A well-known school book ...	8539
„ 8th	131	12mo ..	3rd ...	5,000	ditto ...	0 6 0	ditto ...	The first part of the work has been, with some additions, divided into two parts, and this is the second part.	8540
„ 26th	180	12mo ...	18th...	5,000	ditto ...	0 8 0	ditto ...	The second part of the work has been styled the third part.	8541
Mar., 28th	144	12mo ...	14th...	5,000	ditto ...	0 8 0	ditto ...	A well-known school book ...	8542
„ 28th	51	12mo ...	102nd	25,000	ditto ...	0 2 0	ditto ...	ditto ditto ...	8543
May, 17th	51	12mo ...	103rd	25,000	ditto ..	0 2 0	ditto ...	ditto ditto ..	8544
April, 16th	8	12mo ...	1st ...	1,000	ditto ...	0 0 3	.....	An alphabetical primer ...	8545
May, 1st	9	8vo ...	1st ...	1,000	ditto ...	0 2 0	.....	A key ...	8546
Mar., 13th	343	12mo dy	2nd ...	2,000	ditto ...	0 12 0	Abalúkánta Sen, 50, Báránasi Ghosh's street, Calcutta.	Noticed	8547
Feb., 25th	62	12mo dy	1st ...	1,000	ditto ...	0 4 0	ditto ...	A key	8548
„ 22nd	230	12mo rl	1st ...	1,500	ditto ...	0 12 0	ditto ...	ditto ...	8549
„ 21st	192	12mo rl	1st ...	1,000	ditto ...	0 8 0	ditto ...	ditto ...	8550
„ 23rd	94	12mo ...	1st ...	1,000	ditto ...	0 8 0	ditto ...	ditto ...	8551
„ 23rd	108	12mo rl	2nd ...	1,000	ditto ...	0 6 0	ditto ...	ditto ...	8552

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	LANGUAGE—*contd.*					
8553	Padyapáth Tritíya Bhág er Sárthak Anwaya Byákhyá O Padaparichaya. A key to Padyapáth. Part III.	Bengali.	Abalákánta Sen.	Language.	Printed and published at 66, Beadon Street, Calcutta.	Printed and published by Chandi Charan Raya.
8554	Kabitáhár Pratham Bhág er Sárthak Anwaya O Byákhyá. A key to Kabitáhár. Part I.	ditto ...	ditto ...	ditto ...	dto ditto ...	ditto ditto ...
8555	Kabigáthár Sárthák Anwaya Byákhyá O Padaparichaya. A key to Kabigáthá.	ditto ...	ditto ...	ditto ...	dito ditto ...	ditto ditto ...
8556	Rámbanabáser Sucháru Byákhyá. A key to Rambanabás.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8557	Bodhodayer Sárthak Prasnottara. A key to, and a Catechism of, Bodhodaya.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8558	Sáhitya Shikshár Sucháru Byákhyá. A key to Sáhitya Shikshá.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8559	Cháru Bodh. Entertaining knowledge. Part I.	ditto ...	Shashibhusan Chatterji.	ditto ...	Printed and published at 8, Dixon's Lane, Calcutta.	Printed and published by B. L. Chakrabarti.
8560	Bálya Shikshá. Infant Instructor.	ditto ...	Ramsundar Basak.	ditto ...	ditto ditto ...	ditto ditto ...
8561	Chárubodh Prakáshiká. A key to Chárubodh.	ditto ...	Kshetra Mohan Sen Gupta.	ditto ...	ditto ditto ...	ditto ditto ...
8562	Subjects of Examination in the Bengali language appointed by the Senate of the Calcutta University for the Entrance Examination of 1890.	ditto ...	Nilmani Mukherji, M.A.	ditto ...	ditto ditto ...	ditto ditto ...
8563	Nítipáthártha. A key to Nítipáth.	ditto ...	Umácharan Banerji.	ditto ...	Printed at 333, Upper Chitpore Road, Calcutta, and published at Serajganj. Maniharipati.	Printed by Binod Bihari Sil, and published by Umácharan Banerji.
8564	Shikshásopán Tritíya-bhágártha. A key to Shikshá Sopan. Part III.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8565	Páth Málártha. A key to Pathmálá.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8566	Prathambhág Páthamálartha. A key to Páthamálá. Part II.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8567	Shishu Bodhak. The Infant Instructor.	ditto ...	.....	ditto ...	Printed at 333, and published at 188, Upper Chitpore Road, Calcutta.	Printed and published by Binod Bihari Sil.
8568	Bodhodayer Artha Pustaka. A key to Bodhodaya.	ditto ...	Krishnadhan Bidyápati.	ditto ...	Printed and published at 117, Chipore Road, Calcutta.	Printed and published by Trailokya Náth Datta.
8569	Tritíya Bhág Shishu Shikshar Arthapustak A key to Shishu Shiksha. Part III	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8570	Shishu Bodhak. The Infant Instructor.	ditto ...	.....	ditto ...	ditto ditto ...	ditto ditto ...
8571	Ditto ditto ...	ditto ...	.....	ditto ...	Printed at 54, Balarám De's Street, and published at 98-3, Chitpore Road, Calcutta.	Printed by Rakhal Chandra Das, and published by Rámkánái Das.
8572	Nitípatha Bibodhini. A key to Nitípatha.	ditto ...	Bishnukishor Chakrabarti.	ditto ...	Printed and published at 100, Bowbazar Street, Calcutta.	Printed and published by B. C. Sarkar.
8573	Priyapáth. A Beloved Reader.	ditto ...	Lalit Chandra Mazumdar.	ditto ...	Printed and published at 2, Benetola Lane, Calcutta.	Printed and published by Natabar Chakrabartí.

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar., 18th	320	12mo rl	3rd ...	2,000	Printed.	0 12 0	Abalákánta Sen, 50, Baranasi Ghosh's Street, Calcutta.	A key	8553
Feb., 25th	110	12mo rl	1st ...	1,000	ditto ...	0 6 0	ditto ...	ditto ...	8554
„ 23rd	230	12mo rl	1st ...	1,000	ditto ..	0 12 0	ditto ...	ditto ...	8555
„ 22nd	199	12mo rl	2nd ...	1,000	ditto ...	0 12 0	ditto ...	ditto ...	8556
Mar., 5th	41	12mo rl	1st ...	1,000	ditto ..	0 2 0	ditto ...	ditto ..	8557
Feb., 28th	227	12mo rl	1st ...	1,000	ditto ...	0 12 0	ditto ...	ditto ...	8558
Mar., 19th	124	12mo ...	17th...	5,000	ditto ...	0 5 0	Shashibhusan Chatterji, Calcutta.	A well-known school-book ...	8559
„ 20th	58	12mo ...	42nd	20,000	ditto ...	0 1 6	Ramsundar Basak, Dacca.	ditto ditto ...	8560
„ 24th	87	12mo ...	1st ...	1,000	ditto ...	0 3 0	Kshetra Mohan Sen Gupta, Calcutta	A key	8561
„ 22nd	154	8vo ...	1st ...	1,600	ditto ...	1 8 0	Nilmani Mukharji, Calcutta.	Selected from a large number of standard Bengali works in prose and poetry.	8562
May, 19th	26	12mo rl	New...	1,000	ditto ...	0 4 0	Umácharan Banerji, Serajganj.	A key	8563
April, 22nd	26	8vo rl	New...	1,000	ditto ...	0 3 0	ditto ...	ditto ...	8564
„ 18th	13	8vo ...	New...	1,000	ditto ...	0 3 0	ditto ...	This is a key to the second part of the work.	8565
„ 14th	9	8vo dy	New...	1,000	ditto ...	0 2 0	ditto ...	A key	8566
May, 7th	108	12mo dy	11th...	1,000	ditto ...	0 4 0	.....	An old-fashioned primer ...	8567
„ 4th	12	12mo rl	New	3,000	ditto ...	0 3 0	Trailokya Nath Datta, Calcutta.	A key	8568
„ 2nd	12	12mo rl	1st ...	3,000	ditto ...	0 2 0	ditto ...	ditto ...	8569
April, 21st	120	12mo dy	Revised.	3,000	ditto ...	0 4 0	.....	An old-fashioned primer ...	8570
„ 22nd	126	12mo dy	ditto	2,000	ditto ...	0 3 0	.....	ditto ditto ...	8571
May, 11th	78	12mo dy	1st ...	500	ditto ...	0 4 0	Bishnukishor Chakrabarti, Khamarpara, Barasat.	A key	8572
April, 4th	53	12mo dy	8th ...	2,000	ditto ...	0 3 0	Lalit Chandra Mazumdar, Sakrail.	A school-book	8573

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	LANGUAGE—*contd.*					
8574	Pratham Charitáshtaka. The Eight Characters. Part I.	Bengali	Kálimaya Ghatak.	Language	Printed at 23-1, Bechu Chatterji's Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Jadu Náth Sil, and published by the Sanskrit Press Depository.
8575	Prathampáth. The First Reader.	ditto ...	Satkari Datta	ditto ...	ditto ditto ...	ditto ditto ...
8576	Bangálá Byákaran Prabeshiká. An Introduction to Bengali Grammar.	ditto ...	Jagadbandhu Modak.	ditto ...	ditto ditto ...	ditto ditto ...
8577	Sáhitya Prabesh. An Introduction to Literature.	ditto ..	Prasanna Chandra Bidyáratna.	ditto ..	Printed at 23-1, Bechu Chatterji's Street, Calcutta, and published at the Students' Library, Dacca.	Printed by Jadu Náth Sil, and published by the Students' Library, Dacca.
8578	Námamálá. A Garland of Names.	ditto ...	Madhu Sudan Bhattáchárya.	ditto ..	Printed at 23-1, Bechu Chatterji's Street, and published at Raghunáthganj, Moorshedabad.	Printed by Jadu Náth Sil, and published by Madhusudan Bhattáchárya.
8579	Shikshá Sopán. Step by Step in Learning.	ditto ...	Akrur Chandra Sen.	ditto ...	Printed and published at the Adarsha Press, Armanitola, Dacca.	Printed and published by Lachhman Basak.
8580	Ditto ditto ...	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8581	Sáhitya Páth. Literary Reading.	ditto ...	Manmohan Ráya.	ditto ...	ditto ditto ...	ditto ditto ...
8582	Saral Byákaran. Easy Grammar.	ditto ...	Suryya Kumar Ráya.	ditto ...	ditto ditto ...	ditto ditto ...
8583	Tritíya Bhág Akhyán Manjarí Bodhiní. A Key to Akhyán Manjari. Part III.	ditto ...	Matilal Chakrabarti.	ditto ...	ditto ditto ...	Printed by Lachhman Basák, and published by Jogesh Chandra Chakrabarti.
8584	Jibanamaya Kábya Bodhiní. A key to the work entitled Jibanamaya Kábya.	ditto ...	ditto ..	ditto ..	ditto ditto ...	ditto ditto ...
8585	Shishu Kaumudi. The Moonshine for Boys.	ditto ...	Umákánta Rakshit.	ditto ...	Printed and published at Mymensingh.	Printed and published by Umakánta Rakshit.
8586	Akhyán Manjari Tritíya Bháger Byákhyá A key to Akhyán Manjari. Part III.	litto ...	Hara Kumár Banerji.	ditto ..	ditto ditto ...	Printed by Umakánta Rakshit, and published by Mánik Chandra Bhaumik.
8587	Bodhodayer Artha O Byákhyá. A key to Bodhodaya.	ditto ...	Akshaya Kumar Chatterji.	ditto ...	Printed and published at Barisal.	Printed by Hara Kumar Kar, and published by Akshaya Kumar Chatterji.
8588	Kabitábalí Prabodhiká A key to Kabitábali.	ditto ...	Jánakí Náth Pál.	ditto ..	Printed and published at the Girish Press, Dacca.	Printed and published by Kalimuddin.
8589	Priyapátha Prabodhiká A key to Priyapátha.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8590	Saralpátha Prabodhiká A key to Saral Páth.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8591	Priyapather Bishada Byákhyá. A key to Priyapáth.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8592	Komalkabitá Prabodhiká A key to Komalkabita.	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
8593	Akhyán Manjari Prabodhiká. A key to Akhyán Manjari.	ditto ...	ditto ..	ditto ..	ditto ditto ...	ditto ditto ...
8594	Priyapáth Bibriti. A key to Priyapáth.	ditto ...	Rám Chandra Chakrabarti.	ditto ..	ditto ditto ...	Printed by Kalimuddin, and published by the Dacca Students' Library.
8595	Bodhodaya Sikshá. A key to Bodhodaya.	ditto ...	Dinabandhu Basak.	ditto ...	ditto ditto ...	Printed by Kalimuddin, and published by Dinabandhu Basak.
8596	Prathambhág Akhyán Manjarír Shabdártha. A key to Akhyán Manjari. Part I.	ditto ...	Kunjabihari Banikya.	ditto ...	ditto ditto ...	Printed by Kalimuddin, and published by Kunjabihari Banikya.
8597	Kathámálár Byákhyá Saha Artha Pustaka. A key to Kathámálá.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 10th	174	12mo dy	8th ...	2,000	Printed	0 8 0	Kálímaya Ghatak, Ranaghat, Nadia.	A school-book ...	8574
„ 10th	32	12mo dy	31st ...	10,000	ditto ...	0 1 0	Satkari Datta, Calcutta.	ditto ...	8575
„ 7th	54	12mo dy	7th ...	2,000	ditto ...	0 2 0	Jagadbandhu Modak, Gobardanga.	ditto ..	8576
May, 2nd	260	12mo dy	23rd...	2,000	ditto ...	0 12 0	Prasanna Chandra Bidyáratna, Dacca.	ditto ...	8577
April, 10th	20	12mo dy	2nd ...	3,000	ditto ...	0 1 0	Madhu Súdan Bhattácháryya, Raghunathganj, Moorshedabad.	An alphabetical primer on a new plan. The letters are to be learnt by learning the mode of writing names.	8578
„ 6th	33	12mo dy	15th .	2,000	ditto ...	0 2 0	.....	A well-known school-book ...	8579
April, 12th	92	12mo dy	2nd ...	1,000	ditto ...	0 6 0	.....	ditto ditto ...	8580
May, 31st	33	12mo ...	16th...	2,000	ditto ...	0 2 0	.....	ditto ditto ...	8581
„ 15th	92	12mo ...	11th...	1,000	ditto ...	0 4 0	.....	ditto ditto ...	8582
„ 7th	108	12mo ...	1st ...	1,000	ditto ...	0 10 0	.....	A key ...	8583
April, 6th	120	12mo ...	1st ...	1,000	ditto ...	0 12 0	.....	ditto ...	8584
„ 4th	44	12mo dy	2nd...	800	ditto ...	0 3 0	Umákánta Rakshit, Nasirabad.	Follows the plan of Sanskrit works on Grammar.	8585
Mar., 30th	46	8vo dy	1st ...	2,000	ditto ...	0 6 0	Harakumár Banerji, Hazipur, Mymensingh.	A key ...	8586
April, 13th	42	10×6 ...	1st ...	1,000	ditto ...	0 3 0	.....	ditto ...	8587
„ 21st	18	12mo ...	1st ...	1,000	ditto ...	0 2 0	.....	ditto ...	8588
„ 19th	28	12mo ...	3rd ...	1,000	ditto ...	0 3 0	.....	ditto ...	8589
„ 9th	18	12mo ...	1st ...	1,000	ditto ...	0 3 0	.....	ditto ...	8590
„ 24th	119	12mo ...	3rd ...	1,000	ditto ...	0 10 0	.....	ditto ...	8591
„ 25th	30	12mo ...	1st ...	1,000	ditto ...	0 3 0	.....	ditto ...	8592
„ 30th	40	12mo ...	3rd ...	1,000	ditto ...	0 4 0	.....	ditto ...	8593
„ 30th	108	12mo ...	1st ...	1,000	ditto ...	0 10 0	.....	ditto ...	8594
„ 3rd	88	12mo ...	1st ...	1,000	ditto ...	0 5 0	.....	ditto ...	8595
May, 25th	45	12mo ...	1st ...	1,000	ditto ...	0 4 0	.....	ditto ...	8596
„ 30th	48	12mo ...	1st ...	1,000	ditto ...	0 4 0	.....	ditto ...	8597

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Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	LANGUAGE—*contd.*					
8598	Dwitíya Bhág Chárn Kabitár Bishada Byákhyá. A key to Chárn Kabitá. Part II.	Bengali	Gopi Mohan Datta.	Language	Printed and published at the Girish Press, Dacca.	Printed by Kalimuddin, and published by Gopi Mohan Datta.
8599	Shishu Prabesh. A Primer for Boys.	ditto ...	Prasanna Chandra Bidyáratna.	ditto ...	Printed and published at the Dacca East Bengal Press.	Printed by Nabin Chandra De, and published by the Students' Library, Dacca.
8600	Komal Kabitá Bodhini. A key to Komal Kabitá.	ditto ...	Satish Chandra Chakrabarti.	ditto ...	ditto ditto ...	Printed by Nabin Chandra De, and published by Satish Chandra Chakrabarti.
8601	Nítipáth Bikásh. A key to Nitipáth.	ditto ...	Dina Bandhu Basak.	ditto ...	ditto ditto ...	ditto ditto ...
8602	Priyapátha Bodhini. A key to Priyapátha.	ditto ...	Matilál Chakrabartí	ditto ...	ditto ditto ...	Printed by Nabin Chandra De, and published by Jogesh Chandra Chakrabarti.
8603	Bodhodaya Shikshá. A key to Bodhodaya.	ditto ...	Brajadás Bairagi.	ditto ...	Printed and published at the Dacca Press.	Printed by Digambar Das, and published by Braja Das Bairági.
8604	Akhyán Manjarí Dípiká. A key to Akhyan Manjari.	ditto ...	.....	ditto ...	Printed and published at the Dacca Oriental Press.	Printed and published by Ram Chandra Banik.
8605	Shaishaba Jnána Chandrikár Artha O Byákhyá. A key to Shaishaba Jnána Chandriká.	ditto ...	Harendra Náráyan Chakrabartí.	ditto ...	ditto ditto ...	ditto ditto ...
8606	Nítipáth. Moral Reader	ditto ...	Rájendra Mohan Datta.	ditto ...	Printed and published at the Dacca Raghunath Press.	Printed and published by Nandá Kisor Basak.
8607	Komal Byákhyá. A key to Komal Kabitá.	ditto ...	Umesh Chandra Basu.	ditto ...	ditto ditto ...	ditto ditto ...
8608	Komal Kabita Bodhini A key to Komal Kabita.	ditto ...	Kunjabihari Náth.	ditto ...	ditto ditto ...	ditto ditto ...
8609	Shikshá Sopáner Saral Artha O Byákhyá. A key to Shikshá Sopan.	ditto ...	Brajendra Mohan Datta.	ditto ...	ditto ditto ...	ditto ditto ...
8610	Shikshá Sopán Prabodhika. A key to Shikshá Sopán.	ditto ...	Jánaki Nath Pál.	ditto ...	Printed and published at the Syamantak Press, Dacca.	Printed and published by Gopináth Basak.
8611	Padya Manjari Bodhini. A key to Padya Manjari.	ditto ...	Kunjabihari Nath.	ditto ...	ditto ditto ...	Printed and published by Gopinath Basak.
8612	Chárn Kabitá Dwitíya Bháger Bishada Byákhyá.	ditto ...	.....	ditto ...	ditto ditto ...	Printed by Gopináth Raya, and published by Kunjabihari Banik.
8613	Shishu Shikshá Tritíya Bháger Prashnottara O Prabodhini Byákhyá Saha Artha Pustaka. A Key to and Catechism of Shishu Shikshá. Part III.	ditto ...	Kunjabihari Shaha Banik.	ditto ...	ditto ditto ...	Printed by Gopináth Basak, and published by Jogesh Chandra Chakrabarti.
8614	Padyajyotih Bodhini. A key to Padyajyotih.	ditto ...	Rádháballabh Chakrabarti.	ditto ...	ditto ditto ...	Printed by Gopináth Basak, and published by Jogesh Chandra Chakrabarti.
8615	Priyapátha Bikásh. A key to Priyapátha.	ditto ...	Akshaya Kumár Shiromani.	ditto ...	ditto ditto ...	Printed by Gopináth Basak, and published by the Dacca Students' Library.
8616	Padya Manjarir Bishada Artha. A key to Padya Manjari.	ditto ...	.....	ditto ...	ditto ditto ...	Printed by Gopináth Basak, and published by Kunjabihari Shaha Banik.
8617	Bodhodaya Bodh. A key to Bodhodaya.	ditto ...	Harendra Kumar Ghosh.	ditto ...	ditto ditto ...	Printed and published by Gopinath Basák.
8618	Saral Kabitábalir Byákhyá Pustak. A key to Saral Kabitábali.	ditto ...	.....	ditto ...	Printed and published at the Pubna Nababibhákar Press.	Printed by Purnánanda Ráya, and published by the Pubna School Book Depository.

Quarter ending 30th June 1889—continued.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar., 29th	63	12mo ...	2nd ...	1,000	Printed	0 6 0	.....	A key ...	8598
April, 1st	41	12mo ...	10th ...	2,000	ditto ...	0 3 0	.....	A well-known work on Bengali Grammar.	8599
„ 1st	68	12mo ...	1st ...	1,000	ditto ...	0 5 0	.....	A key ...	8600
„ 17th	42	12mo ...	3rd ...	1,000	ditto ...	0 5 0	.....	ditto ...	8601
May, 4th	159	12mo ...	2nd ...	1,000	ditto ...	0 12 0	.....	ditto ...	8602
„ 28th	96	12mo ...	5th ...	2,000	ditto ...	0 5 0	.....	ditto ...	8603
„ 2nd	144	12mo ...	1st ...	1,000	ditto ...	0 9 0	.....	ditto ...	8604
„ 5th	36	12mo ...	1st ...	1,000	ditto ...	0 4 0	.....	ditto ...	8605
„ 4th	65	12mo ...	6th ...	2,000	ditto ...	0 4 0	.....	A school-book ...	8606
April, 8th	37	12mo ...	1st ...	1,000	ditto ...	0 2 0	.....	A key ...	8607
„ 8th	24	12mo ...	1st ...	1,000	ditto ...	0 2 0	.....	ditto ...	8608
„ 29th	12	12mo ...	3rd ...	1,000	ditto ...	0 2 0	.....	ditto ...	8609
„ 28th	24	12mo ...	9th ...	2,000	ditto ...	0 2 0	.....	ditto ...	8610
Mar., 26th	14	12mo ...	1st ...	1,000	ditto ...	0 2 0	.....	ditto ...	8611
April, 28th	144	12mo ...	1st ...	1,000	ditto ...	0 10 0	.....	ditto ...	8612
Mar., 8th	44	12mo ...	7th ...	4,000	ditto ...	0 2 0	.....	ditto ...	8613
April, 20th	48	12mo ...	1st ...	1,000	ditto ...	0 6 0	.....	ditto ...	8614
„ 5th	108	12mo ...	1st ...	1,000	ditto ...	0 10 0	.....	ditto ...	8615
May, 15th	12	12mo ...	2nd ...	3,000	ditto ...	0 2 0	.....	ditto ...	8616
June, 9th	72	12mo ...	3rd ...	1,000	ditto ...	0 5 0	.....	ditto ...	8617
April, 18th	60	8vo ...	1st ...	1,000	ditto ...	0 4 0	Pubna School Book Depository.	ditto ...	8618

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	LANGUAGE—*contd.*					
8619	Kabitábali Chandriká. A key to Kabitábali.	Bengali	.....	Language	Printed and published at the Pubna Nababibhákar Press.	Printed by Purnánanda Raya, and published by Satish Chandra Chakrabarti.
8620	Chhátra Bandhu Byákaran. A Bengali Grammar for Children.	ditto ...	Jadunáth Bhattácháryya.	ditto ...	Printed and published at Narail.	Printed by Bishwambhar Biswas, and published by Jadunáth Bhattácháryya.
8621	Sukhapátha Bodh. A key to Sukhapáth.	ditto ...	Chandra Kumar Lahiri. Shashi Bhushan Chakrabarti.	ditto ...	Printed and published at Tangail.	Printed by Chandra Kumar Sarkár, and published by Shashi Bhushan Chakrabarti.
8622	Niti Byákhyá. A key to Niti Shikshá. Part I.	ditto ...	Shashi Bhúshan Das.	ditto ...	ditto ditto ...	Printed and published by Chandra Kumar Sarkár.
8623	Pátha Málá Dwitíya Bháger Prashnottara O Anwaya Saha Artha. A key to Páthamálá. Part II.	ditto ...	Binod Mohan Ráya.	ditto ...	Printed at the Bogra Roy Press, and published at Madlá.	Printed by Binod Bihari Banerji, and published by Binod Mohan Ráya.
8624	Akshara Parichaya. An Acquaintance with Letters. Part II.	ditto ...	Fateh Mandal	ditto ...	Printed and published at the Bogra Roy Press.	Printed by Binod Bihari Mandal, and published by Fateh Mandal.
8625	Shikshá Sopáner Artha. A key to Shikshá Sopan.	ditto ...	Krishna Kumar De.	ditto ...	Printed and published at Chittagong.	Printed by Jagat Chandra Dás, and published by Krishna Kumár Do.
8626	Shishu Shikshá Tritíya Bháger Artha Pustak. A key to Shishu Shikshá. Part III.	ditto ...	Dinakánta Chakrabarti.	ditto ...	Printed and published at the Amar Press, Komilla.	Printed and published by Nilambar Datta.
8627	Barna Bodh. A Knowledge of the Alphabet. Part II.	ditto ...	Rajanikánta Chatterji.	ditto ...	ditto ditto ...	ditto ditto ...
8628	Chárn Prabandha. Interesting Essays in Bengali.	ditto ...	Mathuránáth Barma.	ditto ...	Printed and published at 12-9, Goabagan Street, Calcutta.	Printed by Nibáran Chandra Bhattácháryya, and published by M. N. Barma.
8629	Pátha Málá Dwitíya Bháger Artha Pustak. A key to Pátha Málá. Part II.	ditto ...	Tariníkánta Mazumdar.	ditto ...	Printed and published at 13, Cornwallis Street, Calcutta.	Printed and published by Kártik Chandra Datta.
8630	Pátha Málá Pratham Bháger Artha Pustak. A key to Pátha Málá. Part I.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8631	Pátha Málá Pratham Bháger Artha Pustak. A key to Patha Málá. Part I.	ditto ...	Mukunda Lál Dás.	ditto ...	Printed at 13, Cornwallis Street, and published at Rádhánagar.	Printed by Kártik Chandra Datta, and published by Mukunda Lál Das.
8632	Dwitíya Bhág Akhyán Manjarir Artha Pustak. A key to Akhyán Manjari.	ditto ...	Suresh Chandra Mazumdar.	ditto ...	Printed at 22-2, Jhamapukur Lane, and published at 54-1, College Street, Calcutta.	Printed and published by Baradáprasád Mazumdar.
8633	Pratham Bhág Akhyán Manjarir Artha Pustak. A key to Akhyán Manjari. Part I.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8634	Dwitíya Bhág Chárn Bodher Artha Pustak. A key to Chárn Bodh. Part II.	ditto ...	Mákhan Lál Chaudhuri.	ditto ...	ditto ditto ...	ditto ditto ...
8635	Dwitiya Bhág Akhyán Manjarir Artha Pustak. A key to Akhyan Manjari. Part II.	ditto ...	Suresh Chandra Mazumdar.	ditto ...	ditto ditto ...	ditto ditto ...
8636	Charitábalír Artha Pustak. A key to Charitabali.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8637	Abhisheka Darpan. A key to Ramer Rájyábhisheka.	ditto ...	Harílál Sháhá	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	REMARKS.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April 18th	72	8vo ..	1st ...	1,000	Printed	0 4 0	.....	A key ...	8619
May, 17th	60	12mo dy	1st ...	1,000	ditto ...	0 4 0	Jadunáth Bhattácháryya, Nawhatta.	In the form of a dialogue ...	8620
,, 23rd	17	12mo ...	1st ...	1,000	ditto ...	0 3 0	Chandra Bhushan Lahiri and Shashi Bhushan Chakrabarti, Tangail.	A key	8621
April, 17th	22	12mo ...	1st ...	1,000	ditto ..	0 2 0	Shashi Bhushan Das, Tangail.	ditto ...	8622
June, 9th	17	12mo ...	1st ...	1,000	ditto ..	0 2 0	.....	ditto ..	8623
Mar., 16th	34	12mo ...	1st ...	1,000	ditto ...	0 1 0	.....	An Alphabetical Primer ...	8624
,, 26th	8	8vo dy...	1st ...	500	ditto ..	0 2 0	Krishna Kumár De, Noakhali.	A key	8625
May, 7th	22	8vo ...	2nd ...	1,000	ditto ...	0 2 0	.....	ditto ...	8626
Mar., 20th	24	12mo ...	2nd ...	1,000	ditto ..	0 1 0	.....	An Alphabetical Primer ...	8627
,, 25th	168	12mo dy	2nd ...	5,000	ditto ..	0 11 0	Mathuranáth Barma, 12-9, Goabagan Street, Calcutta.	A Bengali Reader ...	8628
April, 11th	21	12mo rl	1st ...	3,000	ditto ...	0 2 6	Tarinikánta Mazumdar.	A key ...	8629
,, 9th	20	12mo rl	1st ...	3,000	ditto ...	0 2 0	ditto ...	ditto ..	8630
,, 29th	8	12mo rl	1st ...	1,000	ditto ...	0 2 0	Mukunda Lál Dás.	ditto ...	8631
Mar., 29th	56	12mo ...	2nd ...	2,000	ditto ...	0 3 0	Baradáprasád Mazumdar, 22-2, Jhamapukur Lane, Calcutta.	ditto ...	8632
April, 20th	34	12mo ...	2nd ...	1,000	ditto ...	0 4 0	ditto ...	ditto ...	8633
,, 20th	84	12mo ...	2nd ...	1,000	ditto ...	0 6 0	ditto ...	ditto ..	8634
,, 25th	56	12mo ...	3rd ...	1,000	ditto ..	0 3 0	ditto ..	ditto ...	8635
,, 25th	39	12mo ...	1st ...	1,000	ditto ..	0 2 0	ditto ...	ditto ..	8636
May, 20th	230	12mo ..	1st ...	1,000	ditto ...	0 12 0	ditto ..	ditto .	8637

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Number.	Title (to be translated into English when the title page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	LANGUAGE—*contd.*					
8638	Aryapáth. The Aryan Reader.	Bengali	Bireswar Pande	Language.	Printed at 24, Beadon Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Manimohan Rakshit, and published by the Sanskrit Press Depository.
8639	Aryashikshá. The Aryan Education.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8640	Arya Charit. The Aryan Characters.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8641	Barnajog O Námlikhan. Of Spelling and Writing of Names. Parts I and II.	ditto ...	Jashodá Nandan Sarkar.	ditto ...	Printed and published at 24, Beadon Street, Calcutta.	Printed and published by Manimohan Rakshit.
8642	Aryapáth Bibek. A key to Aryapáth.	ditto ...	Rameswar Banerji.	ditto ...	ditto ditto ...	ditto ditto ...
8643	Kishor Kusum. A Flower for Youth.	ditto ...	Brajamohan Dás.	ditto ...	Printed at 5, Nilmadhab Sen's Lane, Calcutta, and published at Goalpara.	Printed by A. G. Sen and Co., and published by Gopal Chandra Das.
8644	Saral Kabitá Mayir Artha. A key to Saral Kabitá Mayí.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8645	Bályapáthártha. A key to Bályapáth.	ditto ..	Matíndra Mohan Basu.	ditto ..	Printed at 5, Nilmadhab Sen's Lane, and published at 71-1, Sitárám Ghosh's Street, Calcutta.	Printed by A. G. Sen and Co., and published by Matindra Mohan Basu.
8646	Níti Shikshár Artha Pustak. A key to Niti Shikshá.	ditto ...	L. Basu ...	ditto ...	ditto ditto ...	Printed by A. G. Sen and Co., and published by L. Basu.
8647	Nítipátha Prabeshiká A key to Nitipath.	ditto	Pyári Mohan Gupta.	ditto ..	Printed at 5, Nilmadhab Sen's Lane, and published at 98, College Street, Calcutta.	Printed by A. G. Sen and Co., and published by Gobinda Chandra Sen.
8648	Byákaranánkur. A Sprout of Grammar.	ditto ..	Swarupa Chandra Raya.	ditto ...	Printed and published at 5, Nilmadhab Sen's Lane, Calcutta.	Printed and published by A. G. Sen and Co.
8649	Chárupraboudher Bíshada Byákhyá. A key to Charuprabandha.	ditto ..	Kunjabihari Banerji.	ditto ...	Printed at 84, Rájá Rájballabh's Street, and published at 176—H17, Chitpore Road, Calcutta.	Printed by Naba Kumar Basu, and published by Kunjabihari Banerji.
8650	Naba-Barna-Parichaya. A new Alphabetical Primer.	ditto .	Umesh Chandra Bhattácháryya.	ditto ...	Printed at 2, Tarak Chatterji's Lane, and published at 115, Upper Chitpore Road, Calcutta.	Printed by Naba Kumar Basu, and published by Umesh Chandra Bhattácháryya.
8651	Dwitiya Bhág Shishu Shikshár Arthapustak. A key to Shishu Shikshá Part II.	ditto ..	.....	ditto ..	ditto ditto ...	ditto ditto ...
8652	Bodhodayer Arthapustak A key to Bodhodaya.	ditto ..	ditto ...	ditto ...	ditto ditto ...	Printed and published by Umesh Chandra Bhattácháryya.
8653	Tritíya Bhág Shishu Shikshár Arthapustak. A key to Shishu Shikshá. Part III.	ditto ..	ditto ...	ditto ..	ditto ditto ..	ditto ditto ...
8654	Chárupáth. Entertaining Lessons. Part II.	ditto ...	Akshaya Kumar Datta.	ditto ...	Printed at 6, Balarám De's Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by H. M. Mukharji & Co., and published by the Sanskrit Press Depository.
8655	Patha Málá. A Bengali Reader. Part I.	ditto ..	Dámodar Mukharji.	ditto ...	Printed and published at 6, Balaram De's Street, Calcutta.	Printed and published by H. M. Mukharji & Co.
8656	Ditto ditto. Part II	ditto ..	ditto ...	ditto ..	ditto ditto ..	ditto ditto ...
8657	Sandarbha Málá. A collection of Essays.	ditto ...	Devendra Náth Mukharji.	ditto ..	Printed and published at 132, Maniktala Street, Calcutta.	Printed and published by Harihar Nandi.

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar., 25th	44	12mo ...	2nd ...	1,000	Printed	0 6 0	Bireswar Pande, 29, Krishna Sinha's Lane, Calcutta.	A school-book ...	8638
May, 4th	150	12mo ...	2nd ...	1,000	ditto ...	0 10 0	ditto ..	ditto ...	8639
April, 15th	88	12mo ...	7th ...	1,000	ditto ...	0 4 0	ditto ..	ditto ...	8640
„ 20th	46	16mo dy	1st ...	1,000	ditto ...	0 1 3	.....	Of simple and compound letters	8641
„ 28th	108	12mo dy	1st ...	1,000	ditto ...	0 5 0	.....	A key ...	8642
May, 7th	36	12mo ..	1st ...	1,000	ditto ...	0 3 0	Brajamohan Das, Goalpara.	Easy lessons suited to boys of tender years.	8643
„ 5th	24	12mo ...	1st ...	1,000	ditto ...	0 2 0	Brajamohan Das	A key ...	8644
„ 15th	24	12mo ...	1st ...	1,000	ditto ...	0 4 0	Matíndra Mohan Basu, 71-1, Sítáram Ghosh's Street, Calcutta.	ditto ...	8645
„ 25th	24	12mo ...	1st ...	1,000	ditto ...	0 3 0	L. Basu, 71-1, Sítáram Ghosh's Street, Calcutta.	ditto ..	8646
„ 10th	48	12mo ...	1st ...	1,000	ditto ..	0 4 0	Gobinda Chandra Sen, 98, College Street, Calcutta.	ditto ...	8647
April, 30th	72	12mo ...	11th...	3,000	ditto ...	0 3 6	Swarup Chandra Raya.	A well-known work on Bengali Grammar.	8648
May, 15th	68	12mo dy	1st ...	1,000	ditto ...	0 4 0	Kunjabihari Banerji, 176—H17, Chitpore Road, Calcutta	A key	8649
„ 2nd	22	12mo dy	8th ...	1,000	ditto ..	0 1 0	Umesh Chandra Bhattácháryya. Calcutta.	.....	8650
„ 5th	9	12mo dy	3rd ..	1,000	ditto ...	0 1 3	ditto ..	A key	8651
„ 2nd	21	12mo rl	10th...	1,000	ditto ..	0 3 0	ditto ...	ditto	8652
„ 6th	19	12mo rl	9th ...	1,000	ditto ...	0 2 0	ditto ..	ditto	8653
Mar., 22nd	135	12mo ..	27th..	10,000	ditto ..	0 8 0	Biráj Mohin Dási, Nimta, 24-Parganas.	A well-known school book ...	8654
April, 15th	58	16mo FS	6th ...	2,000	ditto ...	0 2 0	Navadwip Chandra Ráya, 5, Ashutosh De's Lane, Calcutta	ditto ditto ..	8655
„ 16th	92	16mo FS	11th ...	2,000	ditto ..	0 3 0	ditto ...	ditto ditto ...	8656
„ 7th	82	12mo dy	1st ..	1,000	ditto ..	0 6 0	S. B. Basu 13, Shibnarayan Das's Lane, and D. N. Mukharji, 48, Guruprasad Chaudhuri's Lane, Calcutta	ditto ditto ...	8657

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						BENGALI
	LANGUAGE—*contd.*					
8658	Nútan Dwitíya Bhág Akhyánamanjarír Sucháru Byákhyá. A key to new Akhyánamanjarí. Part II.	Bengali	Kalidás Ghosh.	Language	Printed at 23, Jugal Kishor Das' Lane, and published at 54-1, College Street, Calcutta.	Printed by Udaya Charan Pal, and published by Purna Chandra Basu.
8659	Nabapátha. New Lessons. Part II.	ditto ...	Kalikrishna Bhattácháryya.	ditto ..	Printed and published at 24, Grish Bidyaratna's Lane, Calcutta.	Printed by Shashi Bhushan Bhattácháryya, and published by Harish Chandra Kabiratna.
8660	Ditto ditto. Part I	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8661	Bangálá Byákarana. A Bengali Grammar.	ditto ...	Tárini Sankar Sanyal.	ditto ...	ditto ditto ...	Printed and published by Sashi Bhushan Bhattácháryya.
8662	Nitipáth. Moral Reader.	ditto ...	Rájendra Mohan Datta.	ditto ..	Printed at 24, Girish Bidyáratna's Lane, and published at the Dacca Students' Library.	Printed by Sashi Bhushan Bhattácháryya, and published by the Students' Library, Dacca.
8663	Pratham Bhág Saral Kabitábalir Byákhyá. A key to Saral Kabitabali. Part I	ditto ...	Jadab Chandra Goswami.	ditto ..	Printed at 44, Amherst Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Biharilal Banerji, and published by the Sanskrit Press Depository.
8664	Padya Chandriká. A key to Padyapáth. Part III.	ditto ..	.....	ditto ..	ditto ditto ...	ditto ditto ...
8665	Kabitá Kusum Bodhini. A key to Kabitá Kusum.	ditto ..	L. Basu ..	ditto ..	Printed at 14, Mirjafar's Lane, and published at 71-1, Sitarám Ghosh's Street, Calcutta.	Printed by P. N. Biswas, and published by L. Basu.
8666	Ditto ditto ...	ditto ...	ditto ..	ditto ..	ditto ditto ..	ditto ditto ...
8667	Páth Málártha. A key to Páth Málá. Part II.	ditto ...	Matíndra Mohan Basu.	ditto ..	ditto ditto ..	Printed by P. N. Biswas, and published by Matíndra Mohan Basu.
8668	Ditto ditto. Part II	ditto ...	ditto ..	ditto ...	ditto ditto ..	ditto ditto ...
8669	Ditto ditto. Part I	ditto ..	Tarip Muhammad Mandal.	ditto ..	Printed at 14, Mirjafar's Lane, and published at Nowgong.	Printed by P. N. Biswas, and published by Tarip Muhammad Mandal.
8670	Nitipátha Subodhiní A key to Nitipatha.	ditto ...	Rajendra Kumar Basu.	ditto ..	Printed at 14, Mirjafar's Lane, and published at 55, College Street, Calcutta.	Printed by P. N. Biswas, and published by M. M. Mazumdar.
8671	Rájyábhishek Prakashiká. A key to Rámer Rajyábhishek.	ditto ...	Kshetra Mohan Sen Gupta Bidyáratna.	ditto ...	Printed and published at 92, Bowbazar Street, Calcutta.	Printed and published by Kishori Mohan Sen.
8672	Kabitá Kaumudí Pratham Bháger Artha O Bishada Byákhyá.	ditto ...	Atul Chandra Chakrabartí.	ditto ...	Printed at 221, Cornwallis Street, and published at Islampore, Dacca.	Printed by Abhaya Charan Gupta, and published by Atul Chandra Chakrabartí.
8673	Nitipátha Chandriká. A key to Nitipatha.	ditto ...	Prasanna Kumar Pandit.	ditto ..	Printed at 2, Nawabdi Ostagar's Lane, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Pítambar Banerji, and published by the Sanskrit Press Depository.
8674	Padyapátha Chandriká. A key to Padyapátha. Part I.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8675	Jíban Charit Bodhiní. A key to Jiban Charit.	ditto ...	L. Bose ...	ditto ...	Printed at 5, Nilmadhab Sen's Lane, and published at 71, Sitárám Ghosh's Street, Calcutta.	Printed by A. G. Sen and Company, and published by L. Bose.
8676	Jnánánkur. The Sprout of Knowledge. Part III.	ditto ...	Dr. Bhárat Chandra Banerji.	ditto ...	Printed and published at 46, Panchánantala Lane, Calcutta.	Printed and published by Sannyal and Company.
8677	Shishu Shikshá Tritíya Bhager Shabdártha. A key to Shishu Shikshá. Part III.	ditto ...	Srinath Bhattácharya.	ditto ...	ditto ditto ..	ditto ditto ...

Quarter ending 30th June 1889—continued.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 15th	40	12mo dy	2nd ...	2,000	Printed	0 4 0	Purna Chandra Basu, 54-1, College Street, Calcutta.	A key	8658
Mar., 14th	120	12mo dy	4th ..	1,000	ditto ...	0 4 0	Kalikrishna Bhattácháryya, Harinabhi.	A school book	8659
,, 29th	96	12mo dy	9th ..	2,000	ditto ...	0 3 0	ditto	ditto	8660
May, 18th	96	12mo dy	8th ...	5,000	ditto ...	0 4 0	Tarini Sankar Sanyal, Salap. Pubna.	ditto	8661
April, 28th	72	12mo dy	6th ...	2,000	ditto ..	0 4 0	Rajendra Mohan Datta, Dacca.	ditto	8662
,, 30th	28	12mo ...	1st ...	2,000	ditto ...	0 3 0	Jadab Chandra Goswami, Pubna.	A key	8663
Mar., 29th	207	12mo ...	2nd ...	2,000	ditto ...	0 10 0	Abinásh Chandra Mukharji, Belpukuria, Nuddea.	ditto	8664
May, 5th	32	12mo dy	1st ...	1,000	ditto ...	0 3 0	L. Basu, 71-1, Sitaram Ghosh's Street, Calcutta.	ditto	8665
June, 8th	32	12mo dy	2nd ..	1,000	ditto ...	0 3 0	ditto ...	ditto	8666
April, 1st	35	12mo dy	1st ..	1,000	ditto ...	0 4 0	Matindra Mohan Basu, 71-1, Sitaram Ghosh's Street, Calcutta.	ditto	8667
May, 6th	35	12mo dy	2nd ...	1,000	ditto ...	0 4 0	ditto ...	ditto	8668
April, 9th	14	12mo dy	1st ...	1,000	ditto ...	0 3 0	Tarip Muhammad Mandal, Nowgong.	ditto	8669
May, 5th	70	12mo dy	1st ...	1,000	ditto ...	0 5 0	M. M. Mazumdar, 55, College Street, Calcutta.	ditto	8670
April, 22nd	136	12mo dy	1st ...	2,000	ditto ..	0 8 0	Kshetra Mohan Sen Gupta, 34-1, Suri's Tank Lane, Calcutta.	ditto	8671
May, 5th	31	8vo ...	1st ...	1,000	ditto ...	0 4 0	Iswara Chandra Chatterji, 49, Bansitala Street, Calcutta.	ditto	8672
April, 5th	48	12mo ...	1st ..	2,000	ditto ...	0 3 0	Prasanna Kumar Pandit, Belpukur, Nadia.	ditto	8673
,, 5th	49	12mo ...	1st ...	1,000	ditto ...	0 2 0	ditto ..	ditto	8674
,, 25th	92	12mo ...	1st ...	1,000	ditto ...	0 8 0	L. Bose, 71-1, Sitárám Ghosh's Street, Calcutta.	ditto	8675
Mar., 26th	94	12mo dy	2nd ...	2,000	ditto ..	0 4 0	Bhárat Chandra Banerji, Dacca.	A school-book	8676
May, 7th	20	12mo dy	3rd ...	3,000	ditto ...	0 1 6	Srinath Bhattácháryya, Mymensingh.	A key	8677

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						BENGALI
	LANGUAGE—*concld.*					
8678	Byákaran Manjúshá. A Grammatical Chest.	Bengali	Umesh Chandra Gupta.	Language	Printed at 46, Panchánantalá Lane, Calcutta, and published at Mymensingh.	Printed by Sannyal and Company, and published by Srináth Bhátta-cháryya.
8679	Rámer Rájyábhisheker Sahháru Byákhyá. A key to Rámer Rajyábhisheka.	ditto ..	Káliprasanna Bidyáratna.	ditto ...	Printed at 30, Fakir Chand Chakrabarti's Lane, and published at 115, Chitpore Road, Calcutta.	Printed by Naba Kumár Basu, and published by Umesh Chandra Bhattá-cháryya.
8680	Saral Shishu Shikshá Pratham Bhág. New Shishu Shikshá. Part I.	ditto ...	.....	ditto ...	Printed at 68, Nimu Gosain's Lane, and published at 108, Upper Chitpore, Road, Calcutta.	Printed by Kaliprasanna Raya, and published by Sarat Chandra Bhattá-cháryya.
	LAW.					
8681	Miunisipyál Byabasthá Darpan. The Mirror of Municipal Provisions. (T.)	ditto ...	Bihari Lal Mitra.	Law ...	Printed and published at 7, Thakurdas Palit's Lane, Calcutta.	Printed and published by Haridas De.
	MEDICINE.					
8682	Homiopyáthi Mate Griha Chikitsá. A Homœopathic Treatise on Domestic Medicine.	ditto ...	Jagadish Chandra Lahiri.	Medicine, E.	Printed at 109, and published at 101, College Street, Calcutta.	Printed by Umácharan Chakrabartí. and published by Lahiri and Company.
8683	Bángálá Gárhasthya Chikitsá. A Treatise on Domestic Medicine according to the Ayurvedic System.	ditto ...	Satya Charan Barát.	Medicine, N.	Printed at 22-2, Jhamapukur Lane, and published at 54-1, College Street, Calcutta.	Printed by Baradaprasád Mazumdar, and published by the Anglo-Vernacular Depository.
8684	Bhaishajya Sára. Abstract of Materia Medica.	ditto ..	Mahendra Nath Gupta.	Medicine, E.	Printed at 7, Thakurdas Palit's Lane, and published at the Campbell Medical School, Calcutta.	Printed by Haridas De, and published by Mahendra Nath Gupta.
8685	Sabirám O Aparápar Jwara O Anusangik Roger Bhaishajyaguna Sangraha. A Materia Medica of Intermittent and other Fevers and their concomitant complications.	ditto ...	Kali Krishna Mitra.	ditto ..	Printed at 132, Amherst Street, and published at 1, Upper Circular Road, Calcutta.	Printed by H. C. Datta and Company, and published by L. V. Mitra and Company.
8686	Pármákopiyá. Homiopethik Kramaprastuta Paddhati. The Process of Preparing Dilutions of Homœopathic Medicines.	ditto ...	Kishori Mohan Mukharji.	ditto ..	Printed and published at 4, College Square, Calcutta.	Printed and published by Nibáran Chandra Ghosh.
	MISCELLANEOUS.					
8687	Adbhut Juyáchuri Shikshá Excellent Training in the Art of Cheating.	ditto ...	Durgádás Lahiri.	Miscellaneous.	Printed at 34, Beniatola Lane, and published at 58, College Street, Calcutta.	Printed by Ashutosh Banerji, and published by Kalidas Lahiri.
8688	Shikshá Dán Bidhá. The Method of Imparting Instruction.	ditto ...	Hárán Chandra Chakrabarti.	ditto ..	Printed at 3, Beadon Square, and published at Jalpaiguri.	Printed by Biharilal Das, and published by Hárán Chandra Chakrabarti.
8689	Bhoj Bidyá. Magic ..	ditto ..	.....	ditto ..	Printed and published at 3, Beadon Square, Calcutta.	Printed and published by Biharilal Das.
8690	Náná Tattwa. A Variety of Subjects.	ditto ...	.....	ditto ..	ditto ditto ..	Printed by Biharilal Das, and published by Upendra Nath Mukharji.
8691	Bárat Ramaní. Indian Females.	litto ..	Manmatha Nath Datta.	ditto ..	ditto ditto ..	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 28th	228	12mo dy	9th ...	3,000	Printed	0 10 0	Srinath Bhattácháryya, Mymensingh.	A well-known Bengali Grammar	8678
May, 17th	140	12mo dy	1st ..	1,000	ditto ...	1 0 0	Umesh Chandra Bhattácháryya, Calcutta.	A key	8679
„ 7th	32	12mo dy	1st ...	1,000	ditto ...	0 1 0	Sarat Chandra Bhattácháryya, Calcutta.	An Alphabetical Primer ...	8680
April, 22nd	236	8vo dy ...	1st ...	1,000	ditto ...	1 0 0	Biharilal Mitra, 34, Kalidas Sinha's Lane, Calcutta.	A Bengali translation of the Calcutta Municipal Consolidation Act II (B.C.) of 1888 with indices.	8681
Mar., 5th	190	12mo fc	2nd ...	1,500	ditto ..	0 8 0	Lahiri and Company, 101, College Street, Calcutta.	An enlarged and improved edition.	8682
May, 20th	362	12mo ...	1st ...	1,000	ditto ...	2 0 0	Baradaprasád Mazumdar, 22-2, Jhamapukur Lane, Calcutta.	Symptoms of diseases, their treatment, diet regulation, the method of feeling the pulse, &c.	8683
April, 2nd	352	8vo dy..	3rd ..	500	ditto ...	3 8 0	Mahendra Nath Gupta, 9, Mirzapore 2nd Lane, Calcutta.	.....	8684
May, 3rd	236	8vo dy...	1st ...	500	ditto ...	2 8 0	Kalikrishna Mitra, Barasat.	A Homœopathic treatise on intermittent and other fevers.	8685
Feb., 29th	72	8vo dy..	1st ...	1,000	ditto ...	1 0 0	Kishori Mohan Mukharji, 34, College Street, Calcutta.	The title explains the object of the work.	8686
April, 24th	258	32mo rl	1st ...	1,000	ditto ...	0 8 0	Durga Dás Lahiri	Sensational stories of cheating reprinted from the organ of the "Committee of Enquiry."	8687
„ 15th	37	12mo dy	1st ...	1,000	ditto ...	0 5 0	Háran Chandra Chakrabarti, Jalpaiguri.	For the use of the *gurus* of primary schools in Bengal. The object of the work is to teach the *gurus* how best to impart instruction to young lads in the various branches of knowledge.	8688
„ 18th	66	12mo dy	3rd ..	1,000	ditto ...	1 0 0	Upendra Nath Mukharji, Calcutta.	Noticed	8689
„ 26th	38	16mo dy	New...	1,000	ditto ..	0 2 0	ditto ...	The preparation of various articles of luxury, prescriptions for the cure of a variety of diseases, &c.	8690
„ 27th	60	12mo dy	New..	1,000	ditto ...	0 8 0	ditto ...	Contains accounts of Sitá, Satí, Draupadí, Damayantí, and Sábitrí.	8691

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Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	MISCELLANEOUS—*contd.*					
8692	Shuka Bilás. The Sports of the Parrot.	Bengali	Nanda Kumár Kabiratna.	Miscellaneous.	Printed at 323, Chitpore Road, and published at 40, Garanhata Street, Calcutta.	Printed by Tinkari Biswás, and published by P. Ghosh.
8693	Sangíta Ságar. An Ocean of Songs.	ditto ...	Aghor Chandra Ghosh.	ditto ...	ditto ditto ...	ditto ditto ...
8694	Náritattwa. A Treatise on Females.	ditto ...	Baradákánta Mazumdár.	ditto ...	Printed at 2, Nawabdi Ostagar's Lane, and published at 1, Upper Circular Road, Calcutta.	Printed by Pitámbar Banerji, and published by L. V. Mitra and Company.
8695	Go Tattwa. A Treatise on Cattle. (T.)	ditto ...	Rájá Shashi Shekhareshwar.	ditto ...	Printed at 3, Maniktala Street, and published at Tahirpore, Rajshahi.	Printed by Nagendra Nath Bose, and published by the Tahirpore Krishi Office.
8696	Manihári. Miscellaneous Goods.	ditto ...	Praphulla Chandra Banerji.	ditto ...	Printed at 34-1, Colootola Street, and published at 201, Cornwallis Street, Calcutta.	Printed by Bihari Lál Sarkár, and published by Gurudás Chatterji.
	and functions of the faculty of reason, renunciation of the world, national degradation, &c. It contains a					
8697	Átma Rakshár Mula Mantra. The First Principles of Self-preservation.	ditto ...	Sarat Chandra Chaudhuri.	ditto ...	Printed and published at 92, Bowbazar Street, Calcutta.	Printed and published by Kisori Mohan Sen.
	can be easily had: food is not so easily to be had; therefore the writer advises people to lay by something every					
8698	Sáttvik Sangít. Religious Songs.	ditto ...	Bipin Bihari Sen.	ditto ...	ditto ditto	ditto ditto ...
8699	Stri Rahasya. Female Mystery.	ditto ...	Rádháranjan Shaha.	ditto ...	Printed and published at Kumarkhali.	Printed by Satish Chandra Mazumdar, and published by Amrita Lál Mazumdar.
8700	Kángál Fikirchand Fakirer Gítabalí. Songs by the Poor Mendicant Fikir Chánd.	ditto ...	Hárinath Mazumdar	ditto ...	ditto ditto ...	Printed and published by Satish Chandra Mazumdar.
8701	Beshyá Shástra. The Science of Prostitution	ditto ...	Mukundalal Chatterji.	ditto ...	Printed at 153, Cornwallis Street, and published at 8-1, Colootola Street, Calcutta.	Printed by G. C. Chakrabarti, and published by Hitlál Chatterji.
	the sterner sex, their relations with the police, and the methods resorted to for the purpose of increasing their					
8702	Gítábataraniká. An Introduction to Songs.	ditto ...	Chandra Shekhar Bhattácháryya.	ditto ...	Printed and published at Berhampore.	Printed by Sri Chandra Ráya, and published by Radhiká Náth Mukharji.
8703	Tripurá Lon Apish, Limiteder Niyamábali. Rules of the Tippara Loan Office, Limited.	ditto ...	.....	ditto ...	Printed and published at Komillah.	Printed and published by Nilambar Datta.
8704	Sukha Ságara. The Ocean of Bliss.	ditto ...	.....	ditto ...	Printed and published at 3, Beadon Square, Calcutta.	Printed by Biharilál Das, and published by Upendranáth Mukharji.
8705	Mahájani Gáid. The Money-lenders' Guide.	ditto ..	Durgácharan Bhaumik.	ditto ...	Printed and published at Bhowanipore.	Printed and published by Nabin Krishna Mukharji.
8706	Spensár Sáheber Belun Bihár. The Balloon Adventures of Mr. Spencer.	ditto ..	.....	ditto ...	Printed and published at 1, Nimu Gosain's Lane, Calcutta.	Printed and published by Mákhanlal Ghosh.
8707	Trináther Páncháli. Metrical Recitations in honour of Trináth.	ditto ...	Nandalál Raya	ditto ...	Printed at 2, Tarak Chatterji's Lane, and published at 115, Chitpore Road, Calcutta.	Printed and published by Umesh Chandra Bhattácháryya.

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
June, 3rd	11½	12mo rl	1st ...	1,000	Printed	0 4 0	.....	Legends about Bikramáditya arranged in the form of a continuous poem by Nanda Kumár Kabiratna, who wrote at Calcutta during the middle of this century.	8692
Jan., 19th	867	12mo dy	1st ...	500	ditto ...	2 0 0	Panchánan Ghosh, Calcutta.	The book contains seven distinct works, all of which were published before and noticed in this catalogue.	8693
April, 25th	175	12mo ..	1st ..	500	ditto ...	0 12 0	Baradakánta Mazumdar, 20, Guruprasád Chaudhuri's Lane, Calcutta.	One of a class of works which are now becoming numerous, and which, while professing to treat of the health, culture, &c., of women, indulge in prurient descriptions.	8694
Mar., 30th	127	16mo dy	1st ...	3 000	ditto ...	.....	Raja Shashi Shekhareswar, Tahirpore.	A translation of Dr. Hallen's manual of the cattle diseases in India.	8695
„ 15th	377	8vo dy	1st ...	700	ditto ...	1 10 0	Jogendra Chandra Basu, 34-1, Colootola Street, Calcutta.	A collection of miscellaneous essays, mostly on weighty subjects, such as the duties of man, the religion of man, the utility	8696
literal translation of a few chapters of Carlyle's Sartor Resartus and some thoughts on the Bengali poets.									
April, 22nd	24	12mo dy	1st ...	1,000	ditto ...	0 1 0	Sarat Chandra Chaudhuri, Puntea.	Lays stress on the necessity of keeping air, water and food pure and uncontaminated by foul substances. Air and water	8697
now and then to serve them in times of scarcity and famine.									
„ 25th	98	12mo dy	1st ...	1,000	ditto ...	0 12 0	Bipin Bihari Sen, 24, Bechu Chatterji's Street, Calcutta.	A collection of songs composed by the author on a variety of occasions, and on a variety of subjects mostly religious.	8698
May 13th	23	dy ...	1st ...	500	ditto ...	0 2 0	Amritalál Mazumdar, Kumarkhali.	An essay on the relation between man and woman.	8699
April 8th	12	dy ..	1st ...	1,000	ditto ...	0 1 0	Harináth Mazumdar, Kumarkhali.	Songs written in homely language containing beautiful sentiments and noble instruction.	8700
June, 1st	80	12mo dy	1st ...	1,000	ditto ...	0 8 0	Mukundalál Chaudhuri, 8-1, Colootola Street, Calcutta.	A work on prostitutes, their mode of living, their manner of attracting customers, their quarrels, their relations with	8701
strength. Though not positively obscene, it is full of prurient descriptions.									
May, 8th	12	8vo ...	1st ..	700	ditto ...	0 1 6	.....	Original songs on religious subjects.	8702
April, 29th	48	8vo dy	1st ...	500	ditto ...	0 2 0	.....	.....	8703
April, 25th	232	12mo dy	New..	1,000	ditto ...	2 0 0	Upendranáth Mukharji.	A number of essays on the acquisition of physical, mental, moral, social and domestic happiness.	8704
June, 1st	56	8vo dy	1st ..	500	ditto ...	0 4 0	Durgácharan Bhaumik, Bhawanipore.	Contains notes on the method of making advances of money, the forms of bonds and hand notes, mortgage deeds, &c., and the method of calculating interest.	8705
April, 11th	9	12mo dy	1st ...	1,000	ditto ..	0 0 3	.....	The title explains the object of the work.	8706
May, 3rd	9	12mo dy	2nd ...	1,000	ditto ...	0 1 0	Umesh Chandra Bhattácháryya.	Noticed ..	8707

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Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	MISCELLANEOUS—*contd.*					
8708	Sangíta Kantha Málá A Necklace of Songs.	Bengali	Matilál Sil ...	Miscellaneous.	Printed at 1, Garanhata Street, and published at 19, Brindaban Basak's Lane, Calcutta.	Printed by Gobinda Chandra Datta, and published by Hridayalál Sil.
8709	Debaganer Marttye Agaman. The Advent of Gods on earth.	ditto ...	Durgácharan Ráya.	ditto ...	Printed at 21, Sitárám Ghosh's Street, and published at 54, College Street, Calcutta.	Printed by Shashi Bhúshan Datta, and published by Bhupendra Kumar Kabiratna.
8710	Jamidári Káryya Sambandhiya Niyamábali. Rules regulating zemindari business.	ditto ...	Rájá Suryya Kánta Acharyya.	ditto ...	Printed and published at 46, Panchanan Tala Lane, Calcutta.	Printed and published by Sanyal and Company.
8711	Gagane Chánder Hát and Meghadutádi Granthábali. A number of works such as Gagane Chánder Hát, Meghaduta, &c.	ditto ...	K. P. Bidyaratna and others.	ditto ...	Printed at Chitpore, and published at Simla, Calcutta.	Printed by Rakhal Chandra Das, and published by Surendranath Sharmá.
8712	Galpa Swalpa. Stories, &c.	ditto ...	Swarna Kumári Debi.	ditto ...	Printed and published at 55, Chitpore Road, Calcutta.	Printed and published by Kálidás Chakrabarti.
8713	Prithibir Adi Samayer Sankshipta Bibaran. A Short Account of the Early Period of Earth's existence.	ditto ...	Jogendra Chandra Sen.	ditto ..	Printed at 55, Chitpore Road, and published at Jorasanko, Calcutta.	Printed by Kálidás Chakrabarti, and published by Jogendra Chandra Sen.
8714	Sahadharmini. The Partner in Religious Merit.	ditto ...	Suryyakánta Dvivedi.	ditto ...	Printed and published at 54—2-1, Grey Street, Calcutta.	Printed and published by Girish Chandra Ghosh.
8715	Brihat Baul Sangita. A Large Recension of the Baul Songs.	ditto ...	Binod Bihari Sil.	ditto ...	Printed at 333, Upper Chitpore Road, and published at 19, Brindaban Basak's Lane, Calcutta.	Printed by Binod Bihari Sil, and published by Kánáilal Dhar.
8716	Adrishta Parikshá. An Examination of Fate.	ditto ...	Jnánendra Mohan Set.	ditto ..	Printed at 333, and published at 118, Upper Chitpore Road, Calcutta.	Printed by Binod Bihari Sil, and published by the Author.
8717	Granthábali. The complete works of Babu Rájkrishna Ráya. Vol. IV. Part II.	ditto ...	Rajkrishna Ráya.	ditto ...	Printed and published at 37, Mechua Bazar Street, Calcutta.	Printed and published by Sarat Chandra Deva.
8718	Ditto ditto. Vol. IV. Part III.	ditto ...	ditto ...	ditto ...	Printed at 37, Mechua Bazar Street, and published at 201, Cornwallis Street, Calcutta.	Printed by Sarat Chandra Deba, and published by Gurudás Chatterji.
	The following works are designed for educational purposes.					
8719	Jamidári Mahájani O Bajár Hisáb. Zemindari, Mahajani and Bazar Accounts.	ditto ...	Nrisinha Chandra Mukharji, M.A., B.L.	ditto ..	Printed and published at 8, Dixon's Lane, Calcutta.	Printed and published by B. L. Chakrabarti.
8720	Bibidha Shikshá. Miscellaneous Instructions.	ditto ...	Ram Sundar Basak.	ditto ...	ditto ditto ...	ditto ditto ...
8721	Patra Likhibár Páth. Letter Writer.	ditto ...	Prasanna Bidyáratna.	ditto ...	Printed and published at the Dacca Raghunath Press.	Printed and published by Nanda Kishor Basak.
8722	Anka Shikshá. Instruction in Arithmetic.	ditto ...	Mathurá Nath Guha.	ditto ...	Printed and published at the Syamantak Press, Dacca.	Printed by Gopináth Basák, and published by Mathurá Náth Guha.
8723	Práimári Parikshá. Primary Examination.	ditto ...	Gangá Dás Sháhá.	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at 148, Báránasi Ghosh's Street, Calcutta.	Printed by Jadu Náth Sil, and published by the Sanskrit Press Depository.
8724	Páthsálá Pátiganit. Arithmetic for Páthsálás.	ditto ...	Brajendra Kumár Guha.	ditto ...	Printed and published at 46, Panchánantala Lane, Calcutta.	Printed and published by Sánnyál and Company.

Quarter ending 30th June 1889—continued.

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BOOKS—continued:									
1889.	Pages.					Rs A. P			
May, 27th	96	12mo dy	1st ...	1,000	Printed	0 6 0	Hridayalál Sil, Calcutta.	A collection of songs on a variety of subjects, mostly love songs.	8708
„ 2nd	630	8vo dy	1st ...	1,000	ditto ...	4 0 0	Durgácharan Ráya, 80, Mir Jaffer's Lane, Calcutta.	Reprinted from the Kalpa Druma Magazine, now defunct. Hindu gods and goddesses have been represented as taking a railway trip all over India about the year 1880, taking notes of what they saw and making shrewd remarks on the passing events of the day.	8709
„ 11th	170	4to crown.	1st ...	8vo ...	ditto ..	.....	Rajá Surya Kanta Acharyya Chaudhuri.	For the guidance of officers engaged in conducting the zemindari affairs of Rajá Suryya Kanta Acharyya Chaudhuri.	8710
Mar., 15th	613	12vo ...	3rd ...	500	ditto ...	3 12 0	K. P. Bidyáratna and others, Mallikpore, Jessore.	The books have all been separately noticed in previous catalogues. These bound together form the present volume.	8711
„ 12th	100	12mo dy	1st ...	1,000	ditto ...	0 8 0	Swarna Kumári Debi, Kasiabagan Garden House, Calcutta.	Essays, stories, and short poems written by the authoress	8712
May, 8th	42	8vo rl ...	1st ..	500	ditto ...	1 0 0	Jogendra Chandra Sen, Jorasanko, Calcutta.	The work is said to have been written by the son and grandson of the first progenitor of the world.	8713
April, 4th	32	12mo dy	1st ...	1,000	ditto ...	0 4 0	Suryyakánta Dvidevi, Akandabaria.	An account of Ruru and Pramadvará as given in the Mahábharata.	8714
„ 21st	64	12mo rl	New...	1,000	ditto ...	0 8 0	Kánáilál Dhar, Calcutta.	The nature of *baul* songs has often been explained.	8715
„ 13th	16	16mo dy	New...	1,000	ditto ..	0 2 0	Jnanendra Mohan Set.	A Book of Fate ..	8716
Feb., 25th	88	8vo rl ...	1st ..	500	ditto ...	1 0 0	Rájkrishna Ráya.	.....	8717
Mar., 5th	80	8vo rl ...	1st ...	500	ditto ..	1 0 0	ditto ...	.. ..	8718
„ 18th	186	8vo ...	36th...	8,000	ditto ...	0 10 0	Nrisinha Chandra Mukharji, Calcutta.	.. ..	8719
April, 5th	222	12mo ...	28th...	6,000	ditto ..	0 8 0	Ram Sundar Basak, Dacca.	.....	8720
May, 14th	56	12mo ...	1st ...	2,000	ditto ...	0 4 0	.....	A letter writer ..	8721
„ 30th	116	12mo ...	3rd ...	4,000	ditto ...	0 5 0	.....	Containing Arithmetic, Simple Mensuration, Subhankari Zemindari and Mahajani Accounts.	8722
Mar., 28th	231	12mo dy	2nd ...	2,000	ditto ...	0 10 0	Gangádás Sháhá, Ghat Bandar, Murshidabad.	Compiled for the Students of Lower Primary Schools.	8723
May, 13th	206	12mo dy	8th ..	6,000	ditto ...	0 6 0	Brajendra Kumár Guha, Dacca.	Containing also Simple Mensuration, Zemindari and Mahajani Accounts.	8724

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						BENGALI
	POETRY.					
8725	Durgábati. The Princess of Garra in Central India.	Bengali	Kali Kamal Datta.	Poetry ...	Printed and published at 2, Benetola Lane, Calcutta.	Printed and published by Natabar Chakrabarti.
8726	Bhárate Durgotsaba. The Durga Pujá in India.	ditto ...	Pratáp Chandra Sen.	ditto ...	Printed and published at Burdwan.	Printed and published by Pratáp Chandra Sen.
8727	Bagrir Krishna Ráya. The Image of Krishna at Bagri.	ditto ..	Ishán Chandra Sámanta.	ditto ...	Printed at 323, Chitpore Road, Calcutta, and published at Kánknan (Hooghly).	Printed by Tinkari Biswas, and published by the Author.
	and the history of the worship of Krishna Ráya. Rájyadhar Ráya of Krishnanagar in Bagri, in the district accordingly. This event took place some time before Chaitanya, as one of his followers, Abhirám					
8728	Pránochchhás. The Out-pourings of the Heart.	ditto ...	Jogendra Náth Banerji.	ditto ...	Printed and published at 54-2-1, Grey Street, Calcutta.	Printed by Girish Chandra Ghosh, and published by Nanigopál Mukharji.
8729	Sandhyá Málatí. The Evening Flower.	ditto ...	Shibakishor Chakrabarti.	ditto ...	Printed and published at the Dacca Oriental Press.	Printed by Ram Chandra Banik, and published by the Author.
	at evening, and at night, with humorous sketches of men and things. The other describes the condition of a					
8730	Hridaya Kusum The Flower of the Heart.	ditto ...	Kálidás Banerji	ditto ...	Printed and published at 92, Bow Bazar Street, Calcutta.	Printed and published by Kishori Mohan Sen.
8731	Bidagdha Hridaya. The Scorched Heart.	ditto ...	Debendra Náth Ráya Chaudhuri.	ditto ...	Printed and published at 249, Bow Bazar Street, Calcutta.	Printed and published by I. C. Bose & Co.
8732	Pralap. Ravings ...	ditto ...	Sharat Shashi Guptá.	ditto ..	Printed and published at the Bagura Raya Press.	Printed by Bifod Bihari Banerji, and published by Ramesh Chandra Mazumdar.
8733	Bishádo Shánti. Peace in Misery.	ditto ...	Sáradá Kánta Ráya.	ditto ...	ditto ditto ...	ditto ditto ...
8734	Sádhuranjan Sanhitá. Adisur Ballál Upákhyán. A compilation for the entertainment of good men. The Story of Adisur and Ballál.	ditto ...	Madhusudan Mallik.	ditto ...	Printed at 374, Upper Chitpore Road, and published at Ghuntea Bazar, Hooghly.	Printed by Hara Chandra Das, and published by Madhusudan Mallik.
	because Ballabh Adhya, a Sonar Bania, refused to advance a crore of rupees to Ballal Sen, one of the Ballal Sen. It represents him as a monster in human shape quite unfit to govern a kingdom.					
8735	Hridaya Lahari. Waves in the Heart.	ditto ...	Prán Gopál Datta.	ditto ...	Printed at 333, Upper Chitpore Road, and published at 3-4, Simla Street, Calcutta.	Printed by Binod Bihari Sil, and published by Shyámá Charan Das.
	Bidhabá. The Widow...	ditto ...	.....	ditto ...	Printed at 3, Beadon Square, and published at 35, Nimu Gosain's Lane, Calcutta.	Printed by Biharilál Das and published by Haridás Bhattácháryya.
8736	Sádher Biye. A long-wished-for marriage.	ditto ...	.....	ditto ...	Printed and published at 3, Beadon Square, Calcutta.	Printed and published by Biharilál Dás.
8737	Sachitra Sambhog Tattwa. An illustrated treatise on enjoyments.	ditto ..	.....	ditto ...	ditto ditto ...	Printed by Biharilál Dás, and published by Upendra Nath Mukharji.
	The following works are designed for educational purposes.					
8738	Mitra Páth. Mitra's Reader.	ditto ...	Ananda Chandra Mitra.	ditto ...	Printed at 221, Cornwallis Street, and published at Islampore, Dacca.	Printed by Abhaya Charan Gupta, and published by Matilál Chakrabarti.
8739	Padyasamgraha. A Poetical Reader.	ditto ..	Edited by Kedár Nath Bhattácháryya.	ditto ...	Printed at 8, Srináth Babu's Lane, and published at Malipara.	Printed by Sarat Chandra Chatterji, and published by the Editor.

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 9th	24	16mo double Fcap.	1st ...	500	Printed	0 2 0	Kálikamal Datta, Chittagong.	A poem in praise of the valour of Durgábatí who defended her *raj*, for a time, against the Generals of Akbar, but who fell, at last, fighting for her freedom.	8725
1888.									
Octo., 5th	22	8vo dy	1st ...	500	ditto ...	0 4 0	Pratáp Chandra Sen, Gangatikri, Burdwan.	An address to the Indo-Aryans and a prayer to Durgá.	8726
1889.									
April, 9th	12	12mo dy	1st ...	1,000	ditto ...	0 1 0	Ishán Chandra Sámanta, Káuknan.	Krishna Raya of Bagri Perganá is a well-known image of Krishna. The present work gives the antiquity of the place	8727
of Midnapore, was asked by Krishna in a dream to consecrate one of his images made at Cuttack, and he did so Goswámí, is said to have tested the divine powers of the image.									
Mar., 25th	92	8vo rl	1st ...	1,000	ditto ...	0 8 0	Surendra Nath Banerji, 54-2-1, Grey Street, Calcutta.	A collection of short poetical pieces on a variety of subjects. In one piece addressed to Pandit I. C. Bidyáságar, the	8728
writer laments the lot of Hindu girl-widows and ridicules those who compel them to lead a life of perpetual widowhood									
May, 10th	78	8vo ...	1st ...	1,000	ditto ...	1 0 0	.....	Two poems. One contains descriptions of Hindu society at morning, at noon,	8729
separated lover during each month of the year.									
April, 22nd	126	12mo dy	1st ...	500	ditto ...	0 12 0	Kalidás Banerji, Krishnagore.	Original pieces on a variety of subjects. Some of these pieces are adaptations of well-known English and Bengali poems.	8730
Mar., 12th	58	8vo dy	1st ..	250	ditto ...	.....	Debendra Kumár Ráya Chaudhuri, Báripore.	Written on the death of a dear child.	8731
May, 4th	46	.....	1st ...	500	ditto ...	Nil	.....	Lamentations of a bereaved mother at the loss of two of her sons within a short time of each other.	8732
June, 4th	19	12mo ...	1st ...	500	ditto ...	Nil	.....	Written to console a bereaved mother.	8733
„ 3rd	56	12mo dy	1st ...	1,000	ditto ...	0 4 0	.....	The Sonar Banias of Bengal consider themselves to be the representatives of the old Vaishya caste, but their position in the caste system in Bengal is very low, and they say that	8734
Sen Rájás of Bengal, that Rájá degraded the whole caste to a very low status. The present work is a lampoon on									
April, 27th	29	12mo dy	New	1,000	ditto ...	0 2 0	Shyámá Charan Das.	Original pieces on a variety of subjects.	8735
May, 5th	9	12mo dy	1st ...	1,000	ditto ...	0 2 0	Haridas Bhattácháryya, Calcutta.	The picture of a Hindu lady nursing her husband during his last illness.	
„ 4th	9	12mo dy	New	1,000	ditto ...	0 2 0	Biharilál Dás, Calcutta.	Describes how enlightened and educated daughters-in-law from towns bring about misery and ruin to the family into which they are married.	8736
April, 23rd	37	16mo dy	do.	1,000	ditto ...	0 4 0	Upendranath Mukharji, Calcutta.	Treats of love, and gives extracts from old authors.	8737
May, 5th	47	12mo ..	5th ...	1,000	ditto ...	0 5 0	Ishwar Chandra Chatterji, 49, Banstala Street, Calcutta.	A school-book	8738
April, 22nd	86	12mo dy	1st ...	1,000	ditto ...	0 8 0	Kedárnath Bhattácháryya.	Pieces selected from various standard authors.	8739

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	POETRY—*continued.*					
8740	Kabitá Páth. A Poetical Reader. Part I.	Bengali	Mahendra Náth Chakrabarti.	Poetry ...	Printed at 153, Cornwallis Street, and published at Rajpore, 24-Pergunnahs.	Printed by Gopál Chándra Chakrabarti, and published by the Author.
8741	Pushpamálá. Garland of Flowers.	ditto ...	Shib Náth Shástri.	ditto ...	Printed and published at 13, Cornwallis Street, Calcutta.	Printed and published by Kártik Chandra Datta.
8742	Padyasár. The substance of Poetry.	ditto ...	Ananda Chandra Mitra.	ditto ..	ditto ditto ...	ditto ditto ...
8743	Padyasár Tritya Bhág Athabá Kábyasára. Substance of Poetry. Part III, or substance of Belles Letters.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8744	Chárn Niti. Entertaining Morals. Part I.	ditto ...	Hárán Chandra Chakrabarti.	ditto ...	Printed at 3, Beadon Square, and published at Jalpiguri.	Printed by Biharilál Das, and published by the Author.
8745	Nitihár. Necklace of Morals.	ditto ...	Kailás Chandra Banerji.	ditto ...	Printed and published at Barisal.	Printed and published by Hara Kumár Kar.
8746	Padya Parichaya. Introduction to Poetry.	ditto ...	Srináth Charan Máshanta.	ditto ...	Printed and published at Ghantal.	Printed and published by Fakir Náráyan Sarkár.
8747	Kabitábali. A Collection of Poetical Pieces. Part I.	ditto ...	Harish Chandra Mitra.	ditto ...	Printed and published at the Dacca Syamantaka Press.	Printed by Gopinath Basak, and published by Kunjabihari Banik.
8748	Mitrapáth. Mitra's Reader.	ditto ...	Ananda Chandra Mitra.	ditto ...	ditto ditto ...	Printed by Gopinath Basak, and published by Matilál Chakrabarti.
8749	Jibanmaya Kábya. A Living Poem.	ditto ...	Madan Mohan Mitra.	ditto ...	Printed and published at the Dacca Raghunath Press.	Printed by Nandakisor Basak, and published by Baikuntha Pandit, Ripon Library, Dacca.
8750	Komal Kabitá. Tender Poetry.	ditto ..	Káliprasanna Ghosh.	ditto ...	Printed and published at the Dacca Girish Press.	Printed by Kalimuddin, and published by Harakumár Basu.
8751	Ditto ditto ...	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
8752	Ditto ditto ...	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ..
8753	Kabitá Chandriká. The Moonshine of Poetry.	ditto ...	Chandra Kánta Bidyáratna.	ditto ...	ditto ditto ...	Printed by Kalimuddin, and published by Gopi Mohan Datta.
8754	Padya Manjarí. Blossoms of Poetry. Part I.	ditto ...	Prasanna Chandra Bidyáratna.	ditto ...	Printed and published at the Raghunath Press, Dacca.	Printed and published by Nandakisor Basak.
8755	Ditto ditto ...	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8756	Shaishabajnána Chandriká. The Moonlight of Juvenile Knowledge.	ditto ...	Ráshbihári Mukharji.	ditto ...	Printed and published at the Adarsha Press, Dacca.	Printed and published by Lachhman Basak.
8757	Sadbhábe Shataka. A Century of good Sentiments.	ditto ...	Krishna Chandra Mazumdar.	ditto ...	ditto ditto ...	Printed by Lachhman Basak, and published by Nandakumár Guha.
8758	Chháira Shikshá Kabitábali. A Collection of Poems on the Education of Students. Part I.	ditto ...	Govinda Chandra Ráya.	ditto ...	ditto ditto ...	Printed by Lachhman Basak and published by Baradá Sunker Dás.
8759	Kusum Manjari. The Flower in Blossoms.	ditto ...	Annadá Charan Gupta.	ditto ...	ditto ditto ...	Printed and published by Lachhman Basak.
8760	Padya Niti. Morals in Verse.	ditto ...	Sánukul Chandra Chatterji.	ditto ...	Printed at 2, Nawabdi Ostagar's Lane, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Pitámbar Banerji, and published by the Sanskrit Press Depository.
8761	Padyapáth. Poetical Reader. Part I.	ditto ...	Jadúgopal Chatterji.	ditto ...	Printed at 44, Amherst Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Biharilál Banerji, and published by the Sanskrit Press Depository.
8762	Ditto ditto. Part II	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...
8763	Ditto ditto. Part III	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...
8764	Sarala Kabitábali. A Collection of Easy Poetical Pieces. Part I.	ditto ...	Jádab Chandra Goswámi.	ditto ...	Printed at 44, Amherst Street, and published at Pubna.	Printed by Biharilál Banerji, and published by D. D. Sur.
8765	Kabitá Kusumánjali. A Palmful of Flower of Poetry. Part II.	ditto ...	Krishna Kishor Banerji.	ditto ...	Printed at 44, Amherst Street, and published at Culna.	Printed by Biharilál Banerji, and published by Hari Charan Banerji.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
May, 31st	46	12mo dy	1st ...	1,000	Printed	0 2 0	Mahendra Náth Chakrabarti, Rajpore, 24-Pergunnahs.	.....	8740
Apr., 7th	128	12mo rl	5th ...	1,000	ditto ..	0 10 0	Shib Náth Shástri.	A well-known school-book ..	8741
„ 13th	60	12mo dy	5th ...	1,000	ditto ...	0 3 0	Ananda Chandra Mitra.	ditto ...	8742
„ 8th	150	12mo dy	2nd ...	1,000	ditto ...	0 8 0	ditto ...	ditto ...	8743
„ 18th	29	12mo dy	1st ...	1,000	ditto ...	0 2 0	Hárán Chandra Chakrabarti, Jalpiguri.	Entertaining lessons for the use of boys.	8744
May, 25th	58	9×5	1st ...	500	ditto ..	0 4 0	.....	Written with a view of teaching morals to school-boys.	8745
„ 2nd	34	12mo ...	4th ...	1,000	ditto ..	0 2 0	Srinath Charan Mashanta, Basudebpore, Midnapore.	.....	8746
„ 5th	25	12mo ...	5th ...	6,000	ditto ...	0 2 0	.....	.....	8747
May, 16th	47	12mo ...	6th ...	1,000	ditto ..	0 5 0	.....	.....	8748
„ 6th	140	12mo ...	2nd ...	2,500	ditto ...	0 8 0	.....	.....	8749
Mar., 25th	96	12mo ..	2nd ...	2,000	ditto ...	0 2 6	Kaliprasanna Ghosh, Dacca.	.....	8750
Apr., 5th	36	12mo ...	3rd ...	2,000	ditto ...	0 2 6	ditto ...	.....	8751
May, 14th	36	12mo ...	4th ...	2,000	ditto ..	0 2 6	ditto ...	.....	8752
Apr, 18th	56	12mo ...	6th ...	1,000	ditto ...	0 4 0	.....	.....	8753
„ 9th	12	12mo ...	32nd...	3,000	ditto ...	0 1 0	.....	.....	8754
May, 10th	12	12mo ...	33rd...	3,000	ditto ...	0 1 0	.....	.....	8755
Apr., 6th	48	12mo ...	3rd ...	1,000	ditto ...	0 4 0	.....	.....	8756
May, 2nd	148	12mo ...	14th...	2,000	ditto ...	0 12 0	.....	A well-known school-book. Many of the pieces have been translated from the Persian.	8757
„ 7th	42	12mo ...	3rd ...	1,000	ditto ...	0 3 0	.....	.....	8758
„ 10th	27	12mo ...	2nd ...	1,000	ditto ..	0 2 0	.....	.....	8759
Apr., 5th	44	12mo ...	2nd ...	3,000	ditto ...	0 2 0	Sánnkul Chandra Chatterji, Cornwallis Street, Calcutta.	.....	8760
Mar., 27th	44	12mo ...	46th...	10,000	ditto ..	0 2 0	Jadugopál Chatterji, 44, Amherst Street, Calcutta.	A well-known school book ...	8761
Apr, 3rd	72	12mo ...	32nd..	8,000	ditto ...	0 4 0	ditto ...	ditto ditto ...	8762
„ 15th	95	12mo ...	31st ...	5,000	ditto ...	0 8 0	ditto ...	ditto ditto ...	8763
„ 12th	68	12mo ...	2nd ...	4,000	ditto ...	0 4 0	Jádab Chandra Goswámi, Pubna.	ditto ditto ...	8764
„ 18th	86	12mo ...	12th...	1,000	ditto ..	0 6 0	Hari Charan Banerji, Culna.	ditto ditto ...	8765

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						BENGALI
	POETRY—*concluded.*					
8766	Kábya Kusum. Flower of Poetry.	Bengali	Akshaya Kumára Bidyábinod.	Poetry ...	Printed at 23, Jugal Kishor Das' Lane, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by U. C. Pál, and published by the Sanskrit Press Depository.
8767	Nitishikshá. Moral Instruction. Part I.	ditto ...	Ishán Chandra Raya Chaudhuri.	ditto ...	Printed and published at 46, Panchanantalá Lane, Calcutta.	Printed and published by Sányál and Co.
8768	Padyalatiká. The Creeper of Poetry. Part 1.	ditto ...	Shambhunáth Datta.	ditto ...	Printed and published at the Mymensing Charu Press.	Printed and published by Umákánta Rakshit.
8769	Padyaprabesh. An Introduction to Poetry.	ditto ...	Jadunáth Pál...	ditto ...	Printed and published at the Dinagepore Sen Press.	Printed and published by Bankim Bihari Banerji.
8770	Saral Kabitá Mayi. Full of Easy Verses.	ditto ...	Harakishor Das	ditto ...	Printed at 5, Nilmádhab Sen's Lane, and published at Goalpara.	Printed by A. G. Sen and Co., and published by Hari Charan Das.
8771	Priyapátha. Beloved Lessons.	ditto ...	Rámchandra Chakrabarti.	ditto ...	Printed at 23-1, Beebu Chatterji's Street, and published at the Dacca Students' Library.	Printed by Jadunáth Sil, and published by the Dacca Students' Library.
8772	Ditto ditto ...	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
	RELIGION.					
8773	Mahabharata. Vol. 5. No. 39. (T.)	ditto ...	Translated by Rámsebak Bidyáratna.	Religion, H.	Printed and published at 92, Bowbazar Street, Calcutta.	Printed by Kisori Mohan Sen, and published by Aghornáth Barat.
8774	Ditto ditto. Vol. 5. No. 40. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8775	Ditto ditto. Vol. 5. No. 41. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	Printed and published by Aghornáth Barat.
8776	Ditto ditto. Vol. 5. No. 42. (T.)	ditto ...	ditto ..	ditto ..	ditto ditto ...	Printed by Kisori Mohan Gupta, and published by Aghornáth Barat.
8777	Ditto ditto. Vol. 5. No. 43. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8778	Ditto ditto. Vol. 5. No. 44. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8779	Ditto ditto. Vol. 3. (T.)	ditto ...	.....	ditto ..	Printed and published at 34-1, Colootola Street, Calcutta.	Printed and published by Biharilál Dás.
8780	Ramayan. Sapta Kánda. The Ramayana. Complete in seven books. (R.)	ditto ...	Krittibás ...	ditto ...	Printed at 323, Chitpore Road, and published at 40, Garanhata Street, Calcutta.	Printed by Tinkari Biswas, and published by Panchánan Ghosh.
8781	Prabháskhanda. The Story of Prabhása.	ditto ...	Mahesh Chandra De.	ditto ...	ditto ditto ..	ditto ditto ...
8782	Brihat Lakshmi Charitra. A large work on the Goddess of Wealth.	ditto ...	Baikuntha Nath Maji.	ditto ...	Printed and published at 117, Chitpore Road, Calcutta.	Printed and published by Trailokyanath Datta.
8783	Mahabharata. Swapnaparba. The Mahabharata. The Book of Dreams. (R.)	ditto ...	Kásirám Das...	ditto ...	ditto ditto ...	ditto ditto ...
8784	Dúti Sambád. A Conversation of the Female Messenger.	ditto ...	.....	ditto ...	ditto ditto ..	ditto ditto ...
8785	Bhaktitattwasár. The substance of the Nature of Bhakti.	ditto ...	.....	ditto ..	ditto ditto ..	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 15th	45	12mo dy	1st ...	500	Printed	1 0 0	Akshaya Kumár Kábyabinod, 148, Baranasi Ghosh's Street, Calcutta.	In the preface the writer finds fault with the language, manner and matter of the most popular school-books in Bengali, with the Inspectors of Schools for allowing these books to be still used, and with the Central Text-book Committee, the members of which, he says, are masses of matter with a small quantity of life infused into them. There are pieces in prose also. The writer gives copious notes at the foot of each page in which he speaks very hard of modern Sanskrit scholarship.	8766
May, 4th	32	12mo dy	8th ...	3,000	ditto ...	0 2 0	Ishán Chandra Raya Chaudhuri, Mymensing.	.....	8767
April, 22nd	30	12mo dy	1st ...	2,000	ditto ...	0 2 0	Shambhunath Datta, Bakari, Mymensing.	Short poetical pieces suited to juvenile capacity.	8768
May, 19th	11	8vo dy...	1st ...	1,000	ditto ...	0 1 0	Jadu Nath Pál ..	Designed for educational purposes.	8769
April, 20th	24	12mo ...	1st ...	1,000	ditto ...	0 2 0	Hara Kishor Das, Goalpara.	ditto ditto ...	8770
Mar., 30th	68	12mo dy	7th ..	5,000	ditto ..	0 5 0	Ram Chandra Chakrabarti, Dacca.	ditto ditto ...	8771
May, 20th	72	12mo dy	8th ...	3,000	ditto ...	0 5 0	ditto ...	ditto ditto ...	8772
April, 22nd	48	8vo ...	1st ...	2,000	ditto ...	0 8 0	Aghornáth Barat 92, Bowbazar Street, Calcutta.	Goes on with the *Udjoga Parba*.	8773
„ 22nd	48	8vo ...	1st ...	2,000	ditto ...	0 8 0	ditto ...	ditto ditto ..	8774
„ 25th	48	8vo ...	1st ...	2,000	ditto ...	0 8 0	ditto ...	ditto ditto ...	8775
„ 25th	48	8vo ...	1st ..	2,000	ditto ...	0 8 0	ditto ...	ditto ditto ...	8776
„ 25th	48	8vo ...	1st ...	2,000	ditto ..	0 8 0	ditto ...	ditto ditto ...	8777
May, 5th	48	8vo ...	1st ..	2,000	ditto ..	0 8 0	ditto ...	ditto ditto ..	8778
„ 15th	650	8vo sprl.	1st ..	50,000	ditto ..	4 0 0	ditto ...	The *Udjoga*, *Drona* and *Bhishma parba* completed	8779
„ 15th	616	8vo rl .	3rd ..	1,000	ditto ...	1 4 0	.....	.....	8780
Mar., 10th	304	12mo dy	2nd ..	1,000	ditto ..	1 14 0	Panchánan Ghosh.	.....	8781
April, 18th	58	8vo rl ...	10th...	3,000	ditto ...	0 4 0	Trailokyanath Datta.	The spread of the worship of the goddess of wealth, a description of the houses where the goddess dwells, and of those which she shuns, her quarrels with her co-wife the goddess of learning, &c.	8782
„ 22nd	30	12mo rl	Revised.	3,000	ditto ...	0 2 6	.....	An apocryphal chapter of the Mahábhárata, said to be a secret chapter of the work, and translated into Bengali by Káshirám Das. The author mentions a Bengali translation of the Bhágabat by Jagannath Dás which is not known to the public.	8783
„ 27th	48	12mo rl	do.	3,000	ditto ...	0 3 0	.....	Brindá goes to Mathura as the messenger of Rádhá and other milkmaids of Brindaban to bring back Krishna to them. He does not come, and the milkmaids are greatly chagrined at the change in his attitude towards them.	8784
„ 25th	60	12mo rl	do.	3,000	ditto ...	0 3 0	.....	Short poetical pieces in the Vaishnaba interest. Often noticed.	8785

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						BENGALI
	RELIGION—*continued.*					
8786	Muktálatábali. A Collection of Pearl Creepers.	Bengali	Durgáprasád Sharmá.	Religion H.	Printed and published at 117, Chitpore Road, Calcutta.	Printed and published by Trailokyanath Datta.
8787	Prabhás Khanda. The Story of Prabhás.	ditto ...	Ishwar Chandra Sarkár.	ditto ...	Printed at 54, Balarám De's Street, and published at 98-3, Chitpore Road, Calcutta.	Printed by Rákhál Chandra Das, and published by Ram Kánái Das.
8788	Brahma Baibartta Purána. A Purán describing the creation of the world from the evolution from Brahma. (T.)	ditto ...	Purán Chandra Das.	ditto ...	ditto ditto ...	ditto ditto ...
8789	Bhaktitáttwasar. The Substance of the Nature of Bhakti.	ditto ...	.....	ditto ...	ditto ditto ...	ditto ditto ...
8790	Brihat Padma Purána A large Recension of the Padma Purána.	ditto ...	Mahes Chandra Das De.	ditto ...	ditto ditto ...	ditto ditto ...
8791	Shástrártha Samkalan. A collection of the precepts of the Hindu Scripture. Part I. (T).	ditto ...	G. C. Bhattácháryya.	ditto ...	Printed at the New Prákrita Press, Chitpore, and published at Jamtárá.	Printed by Rakhal Chandra Das, and published by Nirad Bihari Goswámi
8792	Ditto ditto. Parts II and III (together). (T).	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8793	Ditto ditto. Part IV. (T).	ditto ..	K. P. Bidyáratna and others.	ditto ...	ditto ditto ...	ditto ditto ...
8794	Ditto ditto. Part V. (T).	ditto ..	M. C. De and others.	ditto ...	ditto ditto ...	ditto ditto ...
8795	Ditto ditto. Part VI. (T).	ditto ...	W. N. Mitra and others.	ditto ...	ditto ditto ...	ditto ditto ...
8796	Ditto ditto. Part VII. (T).	ditto ...	P. C. Das and others.	ditto ...	ditto ditto ...	ditto ditto ...
8797	Haribansha. The Descendants of Hari. Parts I and II (together). (T).	ditto ...	B. M. Sarma ...	ditto ..	ditto ditto ...	ditto ditto ..
8798	Ditto ditto. Parts III and IV (together). (T).	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8799	Ditto ditto. Parts V and VI (together). (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8800	Ditto ditto. Parts VII and VIII (together). (T)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8801	Ditto ditto. Parts IX and X (together). (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	dittto ditto ...
8802	Ditto ditto. Parts XI and XII (together). (T.)	ditto ...	ditto ...	ditto ...	Printed at Ultadinghi, and published at Jámtára.	Printed by Banamáli Das, and published by Nirad Bihari Goswámi.
8803	Bhaktiratnákar. The Ocean of Devotion. Part VIII. (R.)	ditto ...	Narahari Chakrabarti.	ditto ...	Printed and published at Berhampore.	Printed and published by Rám Náráyan Bidyáratna.
8804	Ditto ditto. Part IX. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8805	Ditto ditto. Part X. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 24th	110	12mo rl	3rd ...	3,000	Printed	0 4 0	.....	Noticed	8786
May, 2nd	372	12mo rl	4th ...	1,000	ditto ...	1 0 0	Ram Kánái Das.	This is a very different work from the work of the same name noticed above. It treats of the career of Krishna at Brindaban, and Yasodá sees in a dream the advent of Chaitanya on earth.	8787
„ 8th	692	8vo rl ...	3rd ...	1,000	ditto ...	4 0 0	ditto ...	Metrical translation of a well-known Purána.	8788
„ 3rd	60	12mo ...	Revised.	1,000	ditto ..	0 3 0	.....	.....	8789
„ 5th	152	8vo rl ...	4th ...	1,000	ditto ..	0 14 0	Ram Kánái Dás, Calcutta.	The work has been named Padmapurán, because the interlocutors are Nárada and Padmalochana, the Prince of Kushadwip, one of the seven islands which constitute the earth.	8790
April, 8th	660	8vo rl ...	1st ..	300	ditto ...	6 10 0	Nirada Bihari Goswámi, Jámtara.	This part contains a prose translation of the Joga Váshishtha.	8791
„ 15th	1,322	8vo rl ...	1st ...	300	ditto ...	13 4 0	ditto ..	Joga Váshishtha ends and Haribansha begins.	8792
„ 29th	391	8vo rl ...	1st ...	300	ditto ..	3 7 0	ditto ...	A metrical translation of the Jaimini Bhárat.	8793
„ 29th	152	8vo rl ...	1st ...	300	ditto ...	1 14 0	ditto ...	Contains Padmapurán, which is in every way identical with a work of the same name noticed above.	8794
May, 15th	1105	8vo rl ...	1st ...	300	ditto ...	9 8 0	ditto ...	A metrical translation of the whole of the Srímad Bhágabata.	8795
„ 20th	248	8vo rl ...	2nd ...	300	ditto ...	2 8 0	ditto ...	A metrical translation of the Kálikápurán.	8796
April, 23rd	76	4to ...	2nd ...	500	ditto ...	3 0 0	ditto ...	A prose translation of the Haribansha.	8797
„ 23rd	80	4to ...	2nd ...	500	ditto ...	3 0 0	ditto ...	ditto ditto ...	8798
„ 23rd	80	4to ...	2nd ...	500	ditto ...	3 0 0	ditto ...	ditto ditto ...	8799
„ 23rd	80	4to ...	2nd ...	500	ditto ...	3 0 0	ditto ...	ditto ditto ...	8800
„ 23rd	72	4to ..	2nd ...	500	ditto ...	3 0 0	ditto ...	ditto ditto ...	8801
„ 24th	126	4to ...	2nd ...	500	ditto ...	3 0 0	ditto ...	ditto ditto ...	8802
Mar., 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 8 0	... ..	Contains a glowing description of some of the early congregations of the Vaishnaba monks shortly after the disappearance of Chaitanya. The occasions for these congregations were the obsequies of Gadádhar Pandit at Cutwa, and the anniversary of the death of Narahari at Srikhand. They were both great favourites with Chaitanya.	8803
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 8 0	.....	Describes an assemblage of the monks in which the spirit of Chaitanya manifested itself, as well as the consecration of the temple at Khardaha by the wife of Nityánanda, who was second only to Chaitanya in the matter of preaching the new religion.	8804
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 8 0	.....	Srinibás, Narottam, and Shyámánanda, three great luminaries of the Vaishnava Church, in the generation which succeeded Chaitanya take a tour round Navadwipa with a view to see the places consecrated by the presence of Chaitanya.	8805

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	RELIGION—*continued.*					BENGALI
8806	Bhakti Ratnákar. The Ocean of Devotion Part XI. (R)	Bengali	Narahari Chakrabárti.	Religion, H.	Printed and published at Berhampore.	Printed and published by Rám Náráyan Bidyáratna.
8807	Ditto ditto. Part XII. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8808	Ditto ditto. Part XIII. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8809	Ditto ditto. Part XIV. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8810	Chaitanya Charitámrita The Nectar of Chaitanya's works. Part IX. (R.)	ditto ...	Kirshna Das Kabiráj.	ditto ...	ditto ditto ..	ditto ditto ....
8811	Ditto ditto. Part X. (R.)	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
8812	Ditto ditto. Part XI. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8813	Ditto ditto. Part XII. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8814	Sukhámrita Grantha. A Book of the Nectar of Happiness.	ditto ...	Aditya Charan Dás.	ditto ...	Printed and published at 78, College Street, Calcutta.	Printed and published by Dwijendra Nath Pande.
8815	Sártattwa The Substance of Substances.	ditto ...	.....	ditto ...	Printed and published at 3, Beadon Square, Calcutta.	Printed by Biharilál Das, and published by Upendranath Mukharji.
8816	Haridáser Dharma Kathá. A Religious discourse by Haridas.	ditto ...	.....	ditto B. ...	Printed and published at 24, Beadon Street, Calcutta.	Printed and published by Manimohan Rakshit.
8817	Param Kalyán Gitá. The Most Auspicious Work in Verse. (T.)	ditto ...	Shibanáráyana Swámi.	ditto ...	Printed and published at 55, Chitpore Road, Calcutta.	Printed by Kalidás Chakrabarti, and published by Mohini Mohan Chatterji.
8818	Manohar Sáyi Brahma Sangita. Brahmo Songs in the tune made popular by Manohar Sháha.	ditto ...	Kisorilál Ráya	ditto ...	Printed and published at the Bogra Raya Press.	Printed by Binod Bihari Banerji, and published by the Author.
8819	Satya Náráyan. A Poem in Honour of Satya Náráyan.	ditto ...	Rádhánáth Mitra.	ditto H. ...	Printed at 147, Chitpore Road, and published at 9—1, Becharám Chatterji's Lane, Calcutta.	Printed by Umesh Chandra Pal, and published by Sáradá Prasád Mukharji.
8820	Sri Srijuter Pada. The Songs by the Holy Lord.	ditto ...	.....	ditto ...	Printed at 2, Nawabdi Ostagar's Lane, and published at 6, Madan Mitra's Lane, Calcutta.	Printed by Pitambar Banerji, and published by Bhuban Mohan Ganguli.
8821	Dharmopahára. A Religious Offering.	ditto ...	Gobindachandra Mukharji.	ditto ..	Printed at 132, Maniktala Street, and published at Sthal Basantapore. Pubna.	Printed by Harihar Nandi, and published by Devendra Nath Pákrási.
8822	Bálir Pinda O Shiba Ramer Juddha. The Funeral Cake of Sand and the war between Shiva and Rám.	ditto ...	Lakshman Chandra Sharmanee.	ditto ...	Printed at 1, Garanhata Street, and published at 19, Brindaban Basak's Lane, Calcutta.	Printed by Gobinda Chandra Datta, and published by Hridayalál Sil.
8823	Tantrasára. The Substance of the Tantras.	ditto ...	.. ...	ditto ...	Printed and published at 100, Bowbazar Street, Calcutta.	Printed and published by B. C. Sarkár.
8824	Upadesha Kusum. The Flower of Counsels.	ditto ...	Girish Chandra Das.	ditto ...	Printed and published at the Adarsha Press, Dacca.	Printed by Lachhman Basak, and published by Girish Chandra Das.

Quarter ending 30th June 1889—continued.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar., 22nd	80	8vo ...	1st ...	1,000	Printed	0 8 0	.....	The same subject continued ...	8806
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 8 0	.....	ditto ditto ...	8807
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 8 0	.....	The marriages of Srinibásh and Birabhadra the son of Nityánanda.	8808
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 4 0	.....	The festivities at Borakuli and the missionary work of Shyámánanda in Orissa.	8809
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 12 0	.....	With a running paraphrase in prose and with notes by Jagan Mohan Dás.	8810
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 12 0	.....	ditto ditto ...	8811
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 12 0	.....	ditto ditto ...	8812
„ 22nd	80	8vo ...	1st ...	1,000	ditto ...	0 12 0	.....	ditto ditto ...	8813
„ 20th	45	16mo dy	1st ...	250	ditto ...	0 2 0	Aditya Charan Dás, Sealdah.	A conversation on spiritual subjects between a worldly man and a mendicant. Devotion to God relieves man of all physical and mental pain, and brings him to perpetual happiness.	8814
April, 19th	12	12mo dy	1st ...	1,000	ditto ...	0 4 0	Upendra Nath Mukharji, Calcutta.	Written in the interest of Hindu orthodoxy, with the object of undervaluing Brahmoism, especially in its *Nababidhán* form.	8815
„ 27th	46	16mo dy	1st ...	1,000	ditto ...	0 2 0	.....	Written in the opposite interest. The writer makes a successful attempt to induce a Hindu gentleman to accept Brahmoism by pointing out the evils of idolatry of the caste system and so forth.	8816
May, 19th	314	8vo rl ...	1st ...	1,000	ditto ...	1 0 0	Shibnáráyana Swámi, Kalighát.	Translated from the Hindi. It is a defence of Hinduism in its higher and spiritual aspect, with suggestions for the reformation of certain social customs. Fire, sun, and the stars seem to be the principal objects of worship.	8817
June, 4th	32	12mo ...	1st ...	500	ditto ...	0 4 0	.....	The title explains the object of the work.	8818
Mar., 10th	23	12mo dy	2nd ...	1,200	ditto ...	0 2 0	Surya Kumár Mukharji, 21 Sankar Haldar's Lane, Calcutta.	ditto ditto ...	8819
April, 6th	64	8vo ...	1st ...	1,000	ditto ...	0 8 0	Bhuban Mohan Ganguli, 6, Madan Mitra's Lane, Calcutta.	Songs of the "Kartábhajá" sect of Vaishnabas published with the permission of the late Ishwar Chandra Pál, of Ghoshpara, the headman of the sect.	8820
Mar., 28th	26	12mo dy	1st ...	500	ditto ...	0 1 0	Devendranáth Pákrási, Sthal Basantapore, Pubna.	The writer thinks that Western education is undermining the foundations of Hindu religion and Hindu orthodoxy, which Islam and Buddhism could not shake; but he thinks that the eyes of the Hindus have been opened, and that they are in a position to counteract these foreign influences by a study of the past history of their religion.	8821
May, 25th	23	12mo rl	5th ...	1,000	ditto ...	0 2 0	Hridayalal Sil, Calcutta.	Noticed	8822
April, 16th	80	12mo dy	1st ...	2,000	ditto ...	0 4 0	B. C. Sarkár, 16, Madan Datta's Lane, Calcutta.	The principles of *Tantric* cult explained in Bengali.	8823
„ 2nd	12	12mo ...	1st ...	1,000	ditto ...	0 1 0	.....	The sayings of Buddha, Kabir and other great reformers.	8824

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	RELIGION—*continued.*					BENGALI
8825	Chakra Chintámani. The Jewel of thoughts composed of Discs.	Bengali	Durgácharan Tarkaratna.	Religion, H.	Printed and published at the Adarsha Press, Dacca.	Printed by Lachhman Basak, and published by Harimohan Banerji.
8826	Chaitanya Charitámrita Grantha. The Nectar of the Life of Chaitanya. (R.)	ditto ...	Krishnadás Kabiráj.	ditto ..	Printed at 1, Nimu Gosain's Lane, and published at 1, Garanhata Street, Calcutta.	Printed by Mákhanlál Ghosh, and published by Ganesh Chandra Ghosh.
8827	Adhyátma Rámáyana. The Spiritual Rámáyana, Nos. 13, 14 and 15 (together). (T.)	ditto ...	Baláichánd Goswámi.	ditto ..	Printed at 63-3, Mechua Bazar Road, and published at 74, Balaram De's Street, Calcutta.	Printed by Gopál Chandra Niyogi, and published by Dwárakanáth Chandra & Co.
8828	Brahman Ke? Who is a Brahman.	ditto ...	Hárádhan Mukharji.	Religion, C.	Printed and published at 22, Old Baitakkhana 2nd Lane, Calcutta.	Printed and published by Ramanáth Ghosh.
8829	Nitiratna. The Jewel of Good Advice.	ditto ...	Nabaraj Barua.	Religion, Buddha.	Printed and published at Chittagong.	Printed and published by Rám. Gobinda Chakrabarti.
8830	Jishu Nám Madhur Nám. The Sweet Name of Jesus.	ditto ...	G. H. Rouse ...	Religion, C.	Printed at the Baptist Mission Press, and published at 23, Chowringhee Road, Calcutta.	Printed by G. H. Rouse, and published by the C. T. and B. Society.
8831	Kichhutei Punya Nái. Merit in Nothing.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8832	Dhanákar. The Mine of Wealth.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8833	Pátaki Táran. The Saviour of Sinners.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8834	Tulsi. The Tulsi plant	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8835	Ishwar Amáder Pitá. God is our Father.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8836	Bidhabár Prati Ishwarer Dayá. God's Mercy to the Widow.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8837	Putra Shok. The Death of a Child.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8838	Aksmát Bajrágháta. The Sudden Lightning Stroke.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8839	Shibá Desher Rání. The Queen of Sheba.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8840	Luthia. Lydia, the Purple-Seller.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8841	Kshudhá o Pipásá. Hunger and Thirst.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8842	Swarga O Swarger Path. Heaven and the Way there.	ditto ...	ditto ..	ditto ..	ditto ditto ...	ditto ditto ...
8843	Agnibrishti. Fire Rained from Heaven.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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BOOKS—continued.									
1889. June, 8th	Pages. 18	8vo ...	1st ...	150	Printed	Rs. A. P. 0 3 0	.....	The substance of Purnánanda's Sanskrit work on the subject of the six discs which connect, according to the Tantric theory, the system of veins in the human body. The nature of these discs and the system of *Nâdis* or veins have been explained in this work.	8825
April, 1st	354	8vo rl ...	Revised.	2,000	ditto ...	1 6 0	.....	Often noticed	8826
Mar., 6th	144	8vo dy...	1st ...	1,050	ditto ...	0 4 0	Dwárakánáth Chandra.	A new translation of the Adhyátma Ramayan spoken by Shiba to Durgá.	8827
April, 5th	12	12mo dy	1st ...	1,000	ditto ...	.....	A. C. Mukharji, Dihi Serampore Road, Calcutta.	The writer thinks that the Brahmans are the descendants of Israel. They invariably use the word *Shrila* before writing their names. But the word *Shrila* is the same as *I-shraela*. The word Brahmana is simply another form of Abraham, from whom the writer thinks both the Jews and the Brahmans are descended.	8828
Mar., 4th	12	6mo dy	1st ...	500	ditto ..	0 1 0	Nabaraj Barua, Uttara Bhunsi.	Certain sayings of the Dhammapada rendered into Bengali prose.	8829
April, 3rd	4	12mo dy	2nd ...	5,000	ditto ...	.....	C. T. and B. Society, 23, Chowringhee Road, Calcutta.	The meaning of the term Jesus Christ is one who is engaged in saving others. It is a sweet name. Jesus is conquering the whole world and spreading His religion at the expense of the false religions of the world.	8830
„ 3rd	8	12mo dy	3rd ...	5,000	ditto ...	.....	ditto ...	The only means for salvation is faith in Christ. Those who think that merit can save them are wrong.	8831
„ 3rd	4	12mo dy	2nd ...	5,000	ditto ...	.....	ditto ...	To those who put their faith in Christ, He is the highest wealth.	8832
„ 3rd	4	12mo dy	5th ...	5,000	ditto ...	.....	ditto ...	....	8833
„ 3rd	4	12mo dy	3rd ...	5,000	ditto ...	.....	ditto ...	The plant *tulsi* is a special favorite with Vishnu, and therefore it is an object of worship. The writer objects to the worship of trees. Put faith in Jesus, he says, and you will be saved.	8834
„ 3rd	4	12mo ...	4th ..	5,000	ditto ...	.....	ditto ...	.....	8835
„ 3rd	4	12mo dy	5th ...	5,000	ditto ...	.....	ditto ...	.....	8836
„ 3rd	4	12mo dy	4th ...	5,000	ditto ...	.....	ditto ...	.....	8837
„ 3rd	4	12mo dy	5th ...	5,000	ditto ...	.....	ditto ...	.....	8838
Mar., 5th	4	16mo dc	1st ...	10,000	ditto ...	.....	ditto ...	The Queen of Sheba came to Solomon to learn wisdom, both spiritual and material. She came with valuable presents. The Bengali ladies should go to a greater Being, the son of God, who scorns all presents. He is not distant: believe in Him and He is present before you.	8839
„ 5th	4	16mo dc	1st ...	10,000	ditto ...	.....	ditto ...	Bengali ladies should hear the Gospel with attention as did Lydia, the purple-seller, who, on hearing the good news, put faith in it, and was saved.	8840
May, 6th	4	16mo dc	1st ...	15,000	ditto ...	.....	ditto ...	The soul has its hunger and its thirst for peace and happiness, and that happiness can be obtained by putting faith in Christ.	8841
„ 6th	4	16mo dc	1st ...	15,000	ditto ...	.....	ditto ...	The Hindus, the Musalmans all long for heaven: but this heaven is a place of material enjoyment. That is not true heaven. It can be reached only by putting faith in Christ.	8842
„ 9th	4	...	1st ...	15,000	ditto ...	... ..	ditto ...	The story of the burning of Sodom and Gomorrha and the lessons to be derived from it.	8843

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						BENGALI
	RELIGION—*concluded.*					
8844	Belun O Belun Báj Sháheb. The Balloon and the Balloonist.	Bengali	G. H. Rouse ...	Religion C.	Printed at the Baptist Mission Press, and published at 23, Chowringhee Road, Calcutta.	Printed by G. H. Rouse, and published by the C. T. and B. Society.
8845	Kon Shástra Mánaniya? What Scriptures should be regarded?	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8846	Mathi Likhita Susamáchára The Gospel of St. Matthew. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	Printed by G. H. Rouse, and published by the Calcutta A. B. Society.
8847	Ki Janya O Kirupe Shástra Path Karite Haya. Why and how to read the Scriptures.	ditto ...	ditto ...	ditto ...	Printed and published at the Baptist Mission Press, Calcutta.	Printed by G. H. Rouse, and published by the Scripture Union.
8848	Káti Kijam. Catechism	ditto ...	Right Reverend F. Pozzi, Bishop of Kishnagore.	ditto	Printed and published at Jessore.	Printed by Kshetra Gopál Sinha, and published by the Author.
8849	Eslám Tattwa. The substance of Islam.	ditto ...	M. R. Ahmed and Shaikh A. Rahim.	Religion, M.	Printed at 63-3, Mechua Bazar Street, and published at 79, Old Baitakkhana Bazar Street, Calcutta.	Printed by Gopál Chandra Niyogi, and published by Shahaán Sháh and Co.
	SCIENCE (MATHEMATICAL). *The following works are designed for educational purposes.*					
8850	Kshetratattwa. Geometry. Book I.	ditto ...	Mohan Chandra Basák.	Science (Mathematical).	Printed and published at 8, Dixon's Lane, Calcutta.	Printed and published by B. L. Chakrabartti.
8851	Jyámitir Atirikta Samádhán. Solution of Geometrical Exercises.	ditto ...	Nibáran Chandra Ghosh.	ditto ...	Printed at 21, Sitáram Ghosh's Street, and published at 54, College Street, Calcutta.	Printed by Shashi Bhushan Datta, and published by the Som Prakásh Depository.
8852	Mánasik Gananá. Mental Arithmetic.	ditto ...	Dinanath Sen .	ditto ..	Printed at 23-1, Bechu Chatterji's Street, Calcutta, and published at Gendirea, Dacca.	Printed by Jadunath Sil, and published by Girish Chandra Sen.
8853	Chalitánka. The Current Arithmetic.	ditto ...	Madhusudan Bhattácháryya.	ditto ...	Printed at 8, Srináth Babu's Lane, Calcutta, and published at Raghunathganj.	Printed by Sarat Chandra Chatterji, and published by the Author.
8854	Shubhankari. Indigenous Bengali Arithmetic.	ditto ...	Nilmani Sil ...	ditto ...	Printed at 339, Upper Chitpur Road, Calcutta, and published at Panihati.	Printed by Káliprasanna Ráya, and published by Nilmani Sil.
8855	Shubhankari Dhárápat. Indigenous Arithmetical Tables.	ditto ...	ditto ...	ditto ...	Printed at 68, Nimu Gosain's Lane, and published at 108, Chitpur Road, Calcutta.	Printed by Káliprasanna Ráya, and published by Sarat Chandra Bhattácháryya.
8856	Dhárápat Shubhankari Samet. Arithmetical Tables with Shubhankari.	ditto ...	.....	ditto ...	Printed at 333, and published at 118, Upper Chitpur Road, Calcutta.	Printed by Binod Bihári Sil, and published by Baishnab Charan Basák.
8857	Nutan Dhárápat. New Arithmetical Tables.	ditto ...	Abalá Kánta Sen.	ditto ...	Printed and published at 66, Beadon Street, Calcutta.	Printed and published by Chandi Charan Ráya.
8858	Sachitra Dhárápát. Illustrated Arithmetical Tables.	ditto ...	Sarach Chandra Sil.	ditto ...	Printed and published at 29, Ahiritolá Street, Calcutta.	Printed and published by Nritya Lál Sil.
8859	Shishu Dhárápát. Arithmetical Tables for Children.	ditto ...	.....	ditto ...	Printed at 2, Tárak Chatterji's Lane, and published at 115, Chitpur Road, Calcutta.	Printed by Naba Kumár Basu, and published by Umesh Chandra Bhattácháryya.
8860	Saral Pátiganit. Easy Arithmetic.	ditto ...	P. Ghosh ...	ditto ...	Printed and published at 28, Convent Road, Intali.	Printed and published by Dwárakánath Nandan.
8861	Anka Sutra Pratham Bhág. The Elements of Mathematics. Part I.	ditto ..	Káshi Chandra Guha.	ditto ...	Printed and published at the Syamantak Press, Dacca.	Printed by Gopináth Basak, and published by Káshi Chandra Guha.

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or litho-graphed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or portion of it.	REMARKS.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
May 5th	4	16mo dc	1st ...	15,000	Printed	.....	C. T. and B Society, 23, Chowringhee Road, Calcutta.	The balloonist can rise to the height of about 3 or 4 miles: but two men went to heaven in person and Jesus too went	8844
there. He will return with the whole host of angels, the dead will come to life, and he will take them to heaven.									
April, 3rd	8	12mo dy	10th...	5,000	ditto ...	.....	ditto ...	.....	8845
May, 9th	82	16mo dc	New	20,000	ditto ..	.....	ditto ...	A new translation in improved Bengali.	8846
Mar., 26th	4	8vo rl ...	1st ...	1,000	ditto ...	.....	Revd. W. Carey, Baptist Mission Press, Calcutta.	They should be read with eagerness, with regularity, with care, and with a devout heart.	8847
April, 28th	14	dy ...	1st ...	...	ditto ...	.....	Right Reverend F. Pozzi, Bishop of Krishnagore.	The Roman Catholic Catechism in Bengali.	8848
Mar., 18th	124	8vo dy..	2nd ...	1,010	ditto ...	0 12 0	M. R. Ahmed and Abdur Rahim.	Noticed in the Catalogue for the 4th quarter of 1888.	8849
Mar., 26th	171	12mo ...	9th...	3,000	ditto ...	0 8 0	Mohan Chandra Basák, Dacca.	.....	8850
May, 18th	102	12mo dy.	1st...	1,000	ditto ...	0 5 0	Durgá Charan Rá-ya, 54, College Street, Calcutta.	.....	8851
April, 10th	68	16mo rl.	6th..	10,000	ditto ...	0 3 0	Dinanáth Sen, Dacca.	.....	8852
„ 10th	178	12mo dy.	5th	4,000	ditto ...	0 5 0	Madhusudan Bhattácháryya, Raghunáthganj.	.....	8853
June, 4th	116	12mo dy.	1st...	1,000	ditto ...	0 8 0	Nilmani Sil, Panihati, 24-Pergunnahs.	.....	8854
May, 1st	32	12mo dy.	Revised.	1,000	ditto ...	0 1 0	Sarat Chandra Bhattácháryya, Calcutta.	.....	8855
„ 21st	37	12mo rl.	6th...	1,000	ditto ...	0 1 0	Baishnab Charan Basák, Calcutta.	.....	8856
Mar., 9th	32	12mo rl	1st ...	3,000	ditto ...	0 1 0	Abalá Kánta Sen, 50, Baranasi Ghosh's Street, Calcutta.	.....	8857
„ 6th	30	16mo ...	12th...	6,000	ditto ...	0 1 0	.....	.....	8858
April, 24th	22	12mo rl.	3rd ...	1,000	ditto ...	0 1 0	Umesh Chandra Bhattácháryya, Calcutta.	.....	8859
Mar., 25th	336	16mo ...	New..	3,000	ditto ...	0 12 0	P. Ghosh, 28, Convent Road, Entally.	.....	8860
„ 27th	28	12mo ...	1st ...	1,000	ditto ...	0 1 6	.....	.....	8861

1	2	3	4	5	6	
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	SCIENCE (MATHEMATICAL)—*concluded.*					
8862	Pratham Shikshá Ganit Arithmetic for Beginners.	Bengali	Hari Charan Bhattácháryya.	Science (Mathematical).	Printed and published at the Syamantak Press, Dacca.	Printed by Gopinath Basak, and published by Káshi Chandra Guha.
8863	Nutan Dhárápát. New Arithmetical Tables.	ditto ...	Kailásh Chandra Biswás.	ditto ...	Printed and published at Tangail, Mymensing.	Printed by, Sádhu Sarkár, and published by Chandra Kumár Lahirf.
8864	Sulabh Dhárápát. Easy Arithmetical Tables.	ditto ...	Prasanna Kumár Batabyál	ditto ...	Printed and published at Kumillá.	Printed and published by Nilámbar Datta.
	SCIENCE (NATURAL AND OTHER)					
8865	Kitkautuk. Entertaining account of worms.	ditto ...	Mahesh Chandra Tarkabágish.	Science (Natural and other)	Printed and published at 6, Balaram De's Street, Calcutta.	Printed and published by H. M. Mukharji and Company.
	The following works are designed for educational purposes.					
8866	Prakriti Bijnáner Prashnottar. A Catechism of Prakriti Bijnán.	ditto ...	Abalá Kánta Sen.	ditto ...	Printed and published at 66, Beadon Street, Calcutta.	Printed and published by Chandi Charan Ráya.
8867	Padártha Bidyá Bishayak Prashnottar. A Catechism of Natural Science.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8868	Prákritik Bhugoler Prashnottar. A Catechism of Physical Geography. Part I.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8869	Saral Padártha Bijnáner Prashnottar. Part I. A Catechism of Saral Padártha Bijnán.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8870	Bijnán Prabesh. Introduction to Science.	ditto ...	Krishna Chandra Banerji.	ditto ...	Printed at 24, Beadon Street, and published at 64, College Street, Calcutta.	Printed by Mani Mohan Rakshit, and published by Dás Gupta and Company.
8871	Sharir Pálan. Preservation of Health.	ditto ...	Jadunath Mukharji.	ditto ...	Printed at Ranaghát, and published at Calcutta.	Printed by Lakshmi Náráyan Dás, and published by the Sanskrit Press Depository.
8872	Saral Sharir Pálan. An Easy Work on Preservation of Health.	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
8873	Ditto ditto ..	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
8874	Prákritik Bhugol. Physical Geography.	ditto ...	Raya Rádhiká Prasanna Mukharji Bahadur.	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at 143, Baranasi Ghosh's Street, Calcutta.	Printed by Jadu Nath Sil, and published by the Sanskrit Press Depository.
8875	Swásthya-rakshá Prabeshiká. Introduction to Principles of Hygiene.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
8876	Samkshipta Padártha Darshan. A Short Treatise on Natural Science.	ditto ...	Mahendra Náth Bidyáranya.	ditto ...	ditto ditto ...	ditto ditto ...
8877	Sachitra Bijnán Prabesher Prashnottar. A Catechism of Sachitra Bijnán Prabesh.	ditto ...	Bipin Chandra Sen.	ditto ...	Printed and published at 5, Nilmádhab Sen's Lane, Calcutta.	Printed and published by A. G. Sen and Company.
8878	Bijnán Prabesher Prashnottar. A Catechism of Bijnán Prabesh.	ditto ...	Mrigánkadhar Rayá Chaudhuri.	ditto ...	Printed at 63-3, Mechuabazar Road, and published at 64, College Street, Calcutta.	Printed by Gopál Chandra Niyogi, and published by Das Gupta and Company.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 15th	24	12mo ..	2nd ...	2,000	Printed	0 1 6	.....	.....	8862
May, 2nd	12	12mo ...	3rd ..	2,000	ditto ...	0 2 6	Kailásh Chandra Biswás, Pathrail.	.....	8863
April, 20th	20	12mo ...	1st ..	2,000	ditto ...	0 0 6	.....	.....	8864
,, 7th	75	12mo dy	1st ...	500	ditto ...	0 8 0	Mahesh Chandra Tarkabágish, Múnkar.	A short treatise on the silk-worm of India.	8865
Mar., 13th	99	12mo rl	1st ...	1,000	ditto ...	0 6 0	Abalá Kánta Sen, 50, Baranasi Ghosh's Street, Calcutta.	.....	8866
Feb., 25th	134	12mo rl	1st ..	1,000	ditto ..	0 6 0	ditto ...	.....	8867
,, 21st	87	12mo rl	1st ...	1,000	ditto ..	0 6 0	ditto ...	.....	8868
,, 22nd	68	12mo rl	1st ...	1,000	ditto ...	0 4 0	ditto ...	.....	8869
April, 26th	98	12mo dy	2nd ...	6,000	ditto ...	0 6 0	.....	.....	8870
,, 1st	126	12mo rl	25th...	5,000	ditto ...	0 4 0	Jadunath Mukharji, Ránághat.	.....	8871
,, 1st	42	12mo dy	32nd	10,000	ditto ...	0 1 0	ditto ...	.....	8872
May, 28th	42	12mo dy	33rd...	10,000	ditto ...	0 1 0	ditto ...	.....	8873
Mar., 25th	144	12mo dy	25th...	6,000	ditto ...	0 6 0	Raya Rádhiká Prasanna Mukharji Bahadur, 30, Bechu Chatterji's Street, Calcutta.	.....	8874
April, 7th	48	12mo dy	11th .	3,000	ditto ...	0 2 0	ditto ..	.....	8875
Mar., 30th	84	12mo dy	8th ...	3,000	ditto ...	0 4 0	Mahendra Náth Bidyáranya, Calcutta.	.....	8876
May, 4th	68	12mo ...	1st ...	3,000	ditto ...	0 8 0	A. G. Sen, and Company.	.....	8877
April, 27th	38	12mo dy	1st ...	1,000	ditto ...	0 4 0	Mrigánkadhar Ráya Chaudhuri.	.....	8878

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Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						BENGALI
	SCIENCE (NATURAL AND OTHER)—*concluded.*					
8879	Bhúbidyá Arthát Prákritik Bhúgoler Prashnottar. A Catechism of Bhubidyá.	Bengali	Kunja Bihári Banerji.	Science (Natural and other.)	Printed at 84, Rájá Rajballabh's Street, and published at 176H—17, Chitpore Road, Calcutta.	Printed by Naba Kumár Basu, and published by Kunja Bihari Banerji.
8880	Bijnán Prabesher Prashnottar. A Catechism of Bijnán Prabesh.	ditto ...	Akshahya Kumár Chattopadhyáya.	ditto ...	Printed and published at Barisal.	Printed and published by Hara Kumár Kar.
8881	Baijnánik Prashnottar. A Catechism of Science.	ditto ...	Madhu Sudhan Sen.	ditto ...	Printed and published at the Dacca Press, Dacca.	Printed by Digambar Dás, and published by Braja Das Bairági.
8882	Bijnán Prabesher Prashnottar. A Catechism of Bijnán Prabesha.	ditto ...	Prasanna Ghosh.	ditto ...	Printed and published at the Raghunath Press, Dacca.	Printed by Nanda Kisor Basák, and published by Prasanna Ghosh.
8883	Bhubidyár Prashnottar. A Catechism of Bhubidyá.	ditto ...	Káli Kumár Gángopádhyáya.	ditto ...	ditto ditto ...	Printed by Nanda Kisor Basák, and published by Káli Kumár Gángopadhyáya.
8884	Bijnán Prabesher Nirdishta Páthyer Prashnottar. A Catechism of the portion of Bijnan Prabesh selected for examination.	ditto ..	Srinath Pál ...	ditto ...	Printed and published at the Oriental Press, Dacca.	Printed and published by Rám Chandra Banik.
8885	Bijnán Prabesher Prashnottar. A Catechism of Bijnan Prabesh.	ditto ...	Dwáraká Nath Chakrabartti.	ditto ...	ditto ditto ...	Printed by Rám Chandra Banik, and published by Jogesh Chandra Chakrabartti.
8886	Saral Sharir Pálanar Artha O Prashnottar. A key to, and Catechism of, Saral Sarir Pálan.	ditto ...	Kunja Bihari Náth.	ditto ...	Printed and published at the Syámantak Press, Dacca.	Printed and published by Gopináth Basak.
8887	Saral Sharir Pálaner Prashnottar Sahit Byákhyá Pustak. A key to, and Catechism of, Saral Sarir Pálan.	ditto ...	Jagabandhu De.	ditto ...	Printed and published at the Girish Press, Dacca.	Printed by Kalimuddin, and published by Jagabandhu De.
						ENGLISH
	ART.					
1954	Cossipore Artillery Volunteers' Manual.	English	Lieut.-Colonel R. Wace.	Art ...	Printed at Thacker, Spink and Company's Press, and published at 5, Government Place, Calcutta.	Printed and published by Thacker, Spink and Company.
	FICTION.					
1955	Magaret Beresford and Her Lovers.	ditto ...	Miss Alice Lemarchand.	Fiction ...	Printed at 300, and published at 296, Bowbazar Street, Calcutta.	Printed by Cones and Company, and published by the Royal Publishing Company, Limited.
	HISTORY (INCLUDING GEOGRAPHY).					
	The following works are designed for educational purposes.					
1956	An Epitome of English History.	ditto ...	Upendra Náth Mukharji.	History ...	Printed and published at 17, Srináth Das's Lane, Calcutta.	Printed and published by A. L. Ghosh.
1957	A Brief Outline History of England.	ditto ...	Chandra Kánta Basu.	ditto ...	Printed and published at the Syamantak Press, Dacca.	Printed by Pratáp Chandra De, and published by Nilkantha Basu.
1958	A Faithful Sketch of English History.	ditto ...	.....	ditto ...	Printed at the New Bálmiki Press, and published at 14, Sankar Ghosh's Lane, Calcutta	Printed by U. C. Pál, and published by Sarat Chandra Bhadra.
1959	The Examinee's History of England.	ditto ...	Bhut Náth Bháduri.	ditto ...	Printed at 300, Bowbazar Street, and published at the Metropolitan Institution, Balakhana Branch.	Printed by Cones and Company, and published by the Author.

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BOOKS—concluded									
1889.	Pages.					Rs. A. P.			
May, 8th	75	12mo dy	1st ...	1,000	Printed	0 4 0	Kunja Bihari Banerji, 176H—17, Chitpore Road, Calcutta.	A catechism	8879
June, 3rd	72	9×5 ...	1st ...	500	ditto ...	0 8 0	.. ...	ditto	8880
May, 12th	31	12mo dy	1st ...	1,000	ditto ...	0 6 0	.....	ditto	8881
„ 11th	43	12mo ...	1st ..	1,000	ditto ...	0 6 0	...	ditto	8882
„ 2nd	45	12mo dy	1st ...	1,000	ditto ...	0 6 0	.....	ditto	8883
„ 8th	36	12mo ...	1st ...	1,000	ditto ...	0 6 0	.....	ditto	8884
„ 7th	72	12mo ...	1st ..	1,000	ditto ...	0 10 0	.....	ditto	8885
April, 15th	36	12mo ...	1st ...	2,000	ditto ...	0 3 0	.....	ditto	8886
Feb., 28th	33	12mo ...	3rd ...	4,000	ditto ...	0 2 0	.....	ditto	8887
BOOKS.									
1889.									
May, 29th	233	12mo dy	1st ...	300	ditto ...	2 0 0	Lieut.-Colonel R. Wace.	.....	1954
Mar., 15th	68	32mo rl	1st ...	1,000	ditto ...	1 0 0	Miss Alice Lemarchand.	.....	1955
May, 15th	225	12mo dy	2nd ...	1,000	ditto ..	0 12 0	Shaik Brothers, 55, College Street, Calcutta.	.....	1956
April, 15th	234	12mo ...	1st ...	1,000	ditto ...	0 10 0	.. ...	.....	1957
„ 10th	76	12mo dy	1st ...	1,000	ditto ...	0 8 0	Sarat Chandra Bhadra, 14, Sankar Ghosh's Lane, Calcutta.	.....	1958
„ 22nd	92	8vo dy	1st ...	1,000	ditto ...	0 10 0	Bhut Nath Bháduri.	.....	1959

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Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						ENGLISH
	HISTORY (INCLUDING GEOGRAPHY)—*concld.*					
1960	A Catechism and Sketch of English History.	English	Rajendra Chandra Banerji.	History ...	Printed and published at Serampore.	Printed by Gangulí & Co. and published by Rajendra Chandra Banerji.
1961	A Catechism of English History.	ditto ..	Abalá Kánta Sen.	ditto ..	Printed and published at 66, Beadon Street, Calcutta.	Printed by Chandi Charan Ráya, and published by the Author.
1962	A Catechism of Indian History.	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1963	An Abridgment of the History of India.	ditto ...	Abdul Karim...	ditto ...	Printed and published at 43, Chunam Gulli, Calcutta.	Printed and published by N. C. Chakrabartti.
1964	Students' Companion to the History of India.	ditto ...	G. C. Mitra, M.A.	ditto ...	Printed at 78, and published at 55, College Street, Calcutta.	Printed by Ewijendra Náth Páre, and published by Asutosh Ghoshal & Co.
1965	A Concise Epitome of the History of India.	ditto ...	P. Gupta ...	ditto ...	Printed and published at 153, Cornwallis Street, Calcutta.	Printed by G. C. Chakrabartti, and published by G. C. Chakrabartti & Co.
1966	Questions on Indian History.	ditto ...	Upendra Náth Mukharji.	ditto ...	Printed at Uttarpara, and published at 55, College Street, Calcutta.	Printed by Shashi Bhushan Ghosh, and published by Shaik Brothers & Co.
1967	Outline of the History of Bengal. (R.)	ditto ...	J. C. Marshman, C.S.I.	ditto ..	Printed at 22-2, Jhamapukur Lane, and published at 54-1, College Street, Calcutta.	Printed and published by Baradá Prasád Majumdár.
1968	An Elementary General Geography.	ditto ...	Annadá Charan Sen.	ditto ...	Printed and published at the Adarsha Press, Dacca.	Printed by Lachman Basák, and published by Annadá Charan Sen.
1969	The First Geography ...	ditto ...	H. Blochmann, M.A.	ditto ...	Printed at the Baptist Mission Press, and published at 7, Dacre's Lane, Calcutta.	Printed by J. W. Thomas, and published by the Calcutta School-book Society.
	LANGUAGE.					
	The following works are designed for educational purposes.					
1970	A Junior English Grammar.	ditto ...	D. N. Basu ...	Language	Printed at 23-1, Bechu Chatterji's Street, and published at 148, Báránasi Ghosh's Street, Calcutta.	Printed by Jadu Náth Sil, and published by the Sanskrit Press Depository.
1971	First Book	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1972	Practical English Composition.	ditto ...	Umá Charan Ghosh.	ditto ...	Printed and published at Barisal.	Printed by Hara Kumár Kar, and published by Umá Charan Ghosh.
1973	A Catechism of Elementary English Grammar.	ditto ...	James A. Leary	ditto ...	Printed and published at the Victoria Press, Cuttack.	Printed and published by Abhin Náyak.
1974	Macaulay's Lord Clive. (R.)	ditto ...	Edited by Asutosh Mitra.	ditto ...	Printed at 78, Amherst Street, and published at 79, Cornwallis Street, Calcutta.	Printed by Ambiká Charan Shem, and published by the Star Depository.
1975	Essays written in the intervals of business. (R.)	ditto ...	Edited by Nagendra Nath Mukharji.	ditto ...	Printed at 6, Simla, Street, and published at 64, College Street, Calcutta.	Printed by P. C. Shaha, and published by H. B. Mukharji & Co.
1976	Notes on Grant's Xenophon.	ditto ...	P. K. Lahiri, M.A.	ditto ...	Printed at 108, Báránasi Ghosh's Street, and published at 54, College Street, Calcutta.	Printed by Nabin Chandra Pal, and published by S. K. Lahiri & Co.
1977	Notes on Helps' Essays	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar., 26th	100	8vo dy...	1st ...	1 000	Printed	0 8 0	Ganguli & Co., Máhes.	.....	1960
„ 6th	178	12mo rl	1st ...	1,000	ditto ...	0 10 0	Abalá Kánta Sen, 50, Báránasi Ghosh's Street, Calcutta.	.....	1961
„ 18th	106	12mo rl	3rd ...	2,000	ditto ...	0 8 0	ditto ...	.....	1962
April, 26th	77	8vo dy...	1st ...	1,000	ditto ...	0 10 0	Abdul Karim, 30, Lower Chitpore Road, Calcutta	.....	1963
Mar., 16th	120	12mo dy	1st ...	2,000	ditto ...	0 10 0	Asutosh Ghoshál & Co., 55, College Street, Calcutta.	.....	1964
June, 3rd	120	12mo dy	1st ..	.....	ditto ...	0 8 0	P. Gupta, 13, Nebutala Lane, Calcutta.	.....	1965
Mar., 30th	141	12mo dy	3rd ...	1,000	ditto ...	0 12 0	Shaik Brothers & Co., 55, College Street, Calcutta.	.....	1966
„ 20th	213	16mo ...	3rd ..	500	ditto ...	1 0 0	Baradá Prasád Majumdár, 22-2, Jhamapukur Lane, Calcutta.	.....	1967
April, 10th	116	12mo ..	1st ..	1,000	ditto ...	0 8 0	.....	.....	1968
„ 25th	48	12mo dy	Revised.	5,000	ditto ...	.....	Calcutta School-book Society, 7, Dacre's Lane, Calcutta.	A well-known work ...	1969
Mar., 27th	240	16mo d f cap.	4th ...	5,000	ditto ...	0 4 0	Dwáraká Náth Basu, Barackpore.	Designed for the use of students of middle class English schools in India, who find it difficult to understand grammars written in England for the use of boys whose mother-tongue is English.	1970
April, 6th	64	16mo d f cap.	2nd ..	3,000	ditto ...	0 3 0	ditto ...	In this book attempts have been made to give the different sounds of vowels, diphthongs and consonants as clearly as possible by indicating their sounds in Bengali.	1971
„ 29th	143	12″×6″	2nd ...	2,000	ditto ...	0 9 0	.....	.....	1972
„ 10th	35	16mo f cap.	1st ...	1,000	ditto ...	0 2 0	.....	.....	1973
„ 30th	84	12mo dy	1st ...	1,000	ditto ...	0 4 0	Asutosh Mitra, 78, Amherst Street, Calcutta.	.....	1974
May, 10th	230	16mo crown	1st ...	1,000	ditto ...	1 6 0	H. B. Mukharji & Co., 64, College Street, Calcutta.	A key	1975
„ 12th	72	12mo dy	1st ...	1,500	ditto ...	0 10 0	Prasanna Kumar Lahiri, 91, Balaram De's Street, Calcutta.	ditto	1976
„ 2nd	105	12mo ...	1st ...	1,500	ditto ...	0 10 0	ditto ...	ditto	1977

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer and name or firm of publisher.
						ENGLISH
	LANGUAGE—*concld.*					
1978	Notes on Helps' Essays	English	Nil Kantha Majumdár.	Language	Printed at 45, Beniatola Lane, and published at 66, College Street, Calcutta.	Printed by B. B. Majumdár, and published by Chatterji brothers.
1979	A Key to Thomson's Winter.	ditto ...	Shashi Bhushan Sen.	ditto ...	Printed at 21, Sitárám Ghosh's Street, and published at 54, College Street, Calcutta.	Printed by Shashi Bhushan Datta, and published by the Somprakásh Depository.
1980	A Key to the English Entrance Course, 1890. Part I.	ditto ...	A. T. Banerji, B.A.	ditto ...	Printed and published at 10, Dacre's Lane, Calcutta.	Printed and published by A. Ayre.
1981	Ditto ditto. Part II.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1982	Model Questions on the Entrance Course, 1890.	ditto ...	H. C. Sur ...	ditto ...	Printed and published at 102, Radha Bazar, Calcutta.	Printed and published by Sharat Chandra Gopi Mohan.
1983	A Key to the Entrance Course, 1890. Part II.	ditto ...	S. P. Ghosh, M.A.	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at 1, Jeliatola Lane, Calcutta.	Printed by Jadu Náth Sil, and published by S. N. Ráya.
1984	A Complete Key to the English Entrance Course for 1890. Part II.	ditto ...	N. L. De and U. L. De.	ditto ...	Printed at Serampore and published at Calcutta.	Printed and published by Jitendra Nath De.
1985	An English Spelling Book.	dit ...	Lindley Murray.	ditto ...	Printed at 22-1, Jhamapukur Lane, and published at 54-1, College Street, Calcutta.	Printed and published by Baradá Prasad Majumdár.
1986	Notes on Excelsior Reader.	ditto ...	Jádab Chandra Bose.	ditto ...	Printed at 6, Simla Street, and published at 25, Cornwallis Street, Calcutta.	Printed by Prem Chánd Sháhá, and published by B. Banerji & Co.
	LAW.					
1987	The Bengal Tenancy Act	ditto ...	Edited by R. F. Rampini and M. Finucane.	ditto ...	Printed at Thacker, Spink & Co.'s Press, and published at 5, Government Place, Calcutta.	Printed and published by Thacker, Spink & Co.
1988	Comparative Criminal Jurisprudence. Vol. I.	ditto ...	H. A. D. Phillips.	ditto ...	ditto ditto ...	ditto ditto ...
1989	Ditto ditto. Vol. II.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1990	A Digest of the Cases reported in the Indian Law Reports, Calcutta Series.	ditto ...	Baradá Prasád Chatterji.	ditto ...	Printed at 21, Sitárám Ghosh's Street, and published at 54, College Street, Calcutta.	Printed by Shashi Bhushan Datta, and published by the Somprakásh Depository.
1991	The Code of Civil Procedure.	ditto ...	Edited by Nrisinharám Mukharji.	ditto ...	Printed and published at Serampore.	Printed by Shashi Bhushan Ghosh, and published by Nrisinharám Mukharji.
1992	Index to all Acts and Regulations relating to the Lower Provinces and to the Stamp duties payable on documents in ordinary use.	ditto ...	F. H. Skrine ...	ditto ...	Printed and published at 9, Hare Street, Calcutta.	Printed and published by S. N. Banerji.
1993	The Court Fees Act ..	ditto ...	Jiban Krishna Ghosh.	ditto ...	Printed at 249, Bowbazar Street, and published at Bhawanipore.	Printed by I. C. Bose and Company, and published by Jiban Krishna Ghosh.
1994	The Civil Court Companion. Vol. I.	ditto ...	Edited by Bámápada Mukharji.	ditto ...	Printed and published at Shibpore.	Printed by S. C. Nág, and published by H. J. Haldár.

Quarter ending 30th June 1889—continued.

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Date of issue from the press or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright or any portion of it.	REMARKS.	Number.
BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar. 4th	259	12mo ...	1st ...	.....	Printad	1 4 0	Bhudhar Chatterji, 66, College Street, Calcutta.	A key	1978
May 9th	48	12mo dy.	1st ...	1,000	ditto ...	0 5 0	Shashi Bhushan Datta, Sukea's Street, Calcutta.	ditto	1979
April 5th	192	12mo dy.	1st ...	800	ditto ...	1 12 0 for 2 parts.	A. T. Banerji, Bhawanipore.	ditto	1980
„ 5th	270	12mo dy.	1st ...	800	ditto ...	.....	ditto ...	.....	1981
„ 9th	316	12mo dy.	1st ...	1,000	ditto ...	1 0 0	Hem Chandra Sur, 7, Gopi Mohan Datta's Lane, Calcutta.	.....	1982
„ 24th	228	12mo dy.	1st ...	2,000	ditto ...	2 0 0	Sáradá Prasád Ghosh, 1, Jeliatola Lane, Calcutta.	.....	1983
Mar. 27th	198	12mo dy.	1st ..	1,000	ditto ...	.....	N. L. De and U. L. De, Calcutta.	.....	1984
April 2nd	88	12mo ...	3rd ...	1,000	ditto ...	0 4 0	Baradá Prasad Majumdár, 22-2, Jhamapukur Lane, Calcutta.	.....	1985
„ 15th	72	12mo dy.	1st ...	250	ditto ...	0 6 0	Jádab Chandra Bose, 46, Simla Street, Calcutta.	A key	1986
April 30th	406	8vo dy.	2nd ...	1,000	ditto ...	7 0 0	R. F. Rampini and M. Finucane.	With notes and annotations, judicial rulings, the rules made under the Act by the Local Government, the High Court, and the Registration Department, and the forms of registers prescribed by the Board of Revenue.	1987
„ 29th	319	8vo dy.	1st ...	560	Printed	12 0 0	H. A. D. Phillips	The book has been written rather for the criminal jurist than for the practising lawyer. It brings to notice the provisions of Continental Criminal Codes and compares them with the Indian law that it may be of some service to the Legislative Department of the Government of India.	1988
„ 29th	302	8vo dy.	1st ...	560	Printed	.....	ditto ...	This volume treats of the adjective law.	1989
„ 25th	360	8vo sl....	1st ...	1,500	ditto ...	2 0 0	Baradá Prasád Chatterji, Kulna.	From Volume X to Volume XIII, with a supplement containing a digest of the cases reported in Volumes XIV and XV.	1990
Mar. 14th	226	8vo rl....	1st ...	1,500	ditto ...	1 4 0	Nrisinharám Mukharji, Uttarpara.	As amended up to 20th September 1888.	1991
April 1st	72	8vo rl....	1st ...	500	ditto ...	1 0 0	F. H. Skrine, Rungpore.	Published for the benefit of the China famine relief fund.	1992
„ 2nd	4	8vo dy.	1st ...	500	ditto ...	.....	Jiban Krishna Ghosh, 49, Jeliapara Road, Bhawanipore.	Act VIII of 1870 ...	1993
1888. Nov. 10th	700	8vo crown.	1st ...	1,000	ditto ...	4 0 0	Bámápada Mukharji, Shibpore, Howrah.	.....	1994

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						ENGLISH
	MEDICINE.					
1995	A Manual of Homœopathic Pharmacopœia.	English	Rajendra Lál Sur.	Medicine E.	Printed at Tala, and published at Shambazar, Calcutta.	Printed by Purna Chandra Bose, and published by Rajendra Lál Sur.
	MISCELLANEOUS.					
1996	Thacker's Indian Directory, 1889.	ditto ...	.....	Miscellaneous.	Printed at Thacker, Spink & Co.'s Press, and published at 5, Government Place, Calcutta.	Printed and published by Thacker, Spink & Co.
1997	Indian Tea, Indigo, Silk and Coffee Concerns; Sugar, Lac, and Cinchona Plantations.	ditto ...	.....	ditto ...	ditto ditto ...	ditto ditto ...
1998	Angling in the Kumaun Lakes.	ditto ...	W. Walker, M.D.	ditto ...	ditto ditto ...	ditto ditto ...
1999	The Training and Management of Chargers.	ditto ...	J. W. King ...	ditto ...	ditto ditto ...	ditto ditto ...
2000	Phrenological Relations of Theories traceable in regard to the Principles of Causality and Conscientiousness.	ditto ...	Narsing Chandra Haldar.	ditto ...	Printed and published at 19, Lalbazar Street, Calcutta	Printed and published by C. J. A. Pritchard.
2001	Pay Tables of the British Army in India.	ditto ...	Adam Smith ...	ditto ...	Printed at 5, Council House Street, and published at the Pay Examiner's Office, Calcutta	Printed by the Calcutta Central Press Co., Ld., and published by Adam Smith.
2002	Prospectus and Plan of Elson's Maritime Code of Signals.	ditto ...	S. R. Elson ..	ditto ...	Printed and published at 9, Hare Street, Calcutta.	Printed and published by S. N. Banerji.
2003	Tables of Income, Wages, and Rent.	ditto ...	B. B. Mukharji.	ditto ...	Printed and published at 10, Dacre's Lane, Calcutta.	Printed and published by Alexander Ayre.
2004	A Primer of Commercial and Economic Education.	ditto ...	F. W. Quanbrough.	ditto ...	Printed and published at 20, British Indian Street, Calcutta.	Printed and published by D. M. Trail.
2005	The Voice of Hope ...	ditto ...	G. C. Ghosh ...	ditto ...	Printed at 78, College Street, and published at Cooch Behar.	Printed by Dwijendra Nath Pâre, and published by G. C. Ghosh.
	The following works are designed for educational purposes.					
2006	The Government of India	ditto ...	.....	ditto ...	Printed at Thacker Spink & Co.'s Press, and published at 5, Government Place, Calcutta.	Printed and published by Thacker, Spink & Co.
2007	Calcutta University F. A. Papers and Allahabad University Intermediate Examination Papers for 1889.	ditto ...	.....	ditto ...	Printed at 78, Amherst Street, and published at 143, Cornwallis Street, Calcutta.	Printed by Ambikâ Charan Shom, and published by the Star Depository.
	PHILOSOPHY.					
	The following work is designed for educational purposes.					
2008	An Analysis of Sully's Outlines of Psychology.	ditto ...	Girish Chandra Nâg.	Philosophy	Printed at 29-1, Mir Jaffer's Lane, and published at 54, College Street, Calcutta.	Printed by Shashi Bhushan Datta, and published by the Somprakâsh Depository.

Quarter ending 30th June 1889—continued.

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BOOKS—continued.									
1889.	Pages					Rs. A. P.			
May 22nd	13	12mo ...	3rd ...	500	Printed	0 4 0	Rajendra Lál Sur, Shambazar, Calcutta.	.....	1995
Mar. 29th	1,411	8vo dy.	1st ...	1,750	ditto ...	16 0 0	Thacker, Spink & Co.	.....	1996
April 30th	96	8vo dy.	1st ..	150	ditto ...	2 8 0	ditto ...	.....	1997
„ 28th	105	8vo dy.	1st ..	500	ditto ...	4 0 0	W. Walker, M D.	With a map of the Kumaun Lake Country.	1998
Feb. 25th	41	16mo dy.	1st ...	750	ditto ...	1 8 0	J. W. King ..	Some useful hints in the matter of training and management of chargers by one who served 12 years as a volunteer mostly in the Behar Light Horse, the finest Corps in India.	1999
May 2nd	½ sheet...	½ sheet fcap.	1st ...	100	Printed	0 1 0	Narsing Chandra Halder, Bhawanipore.	.....	2000
Mar. 22nd	32	8vo dy.	10th...	800	ditto ...	1 0 0	Adam Smith, 1, Kaila Ghát Street, Calcutta.	.....	2001
May 22nd	12	8vo rl.	1st ...	500	ditto ...	.....	S. R Elson, 71, Diamond Harbour Road, Calcutta.	.....	2002
„ 15th	91	16mo dy.	1st ...	2,000	ditto ...	0 8 0	B. B. Mukharji, Behala.	.....	2003
April 1st	147	12mo dy.	1st ...	5,000	ditto ...	1 8 0	F. W. Quanbrough, Lahore.	A very useful publication for those who have to depend on their individual efforts as the only means of success in life.	2004
Mar. 28th	45	12mo dy.	1st ...	500	ditto ...	.....	G. C. Ghosh, Cooch Behar.	Two essays, one on the effects of English education and the other on female education.	2005
„ 30th	72	12mo ...	2nd ...	1,000	ditto ...	0 8 0	Horace Bell ...	An improved edition, in the preparation of which the author had the advantage of consulting Sir John Strachey's work entitled *India*.	2006
May 13th	12	12mo dy.	1st ...	.....	ditto ...	0 0 6	Star Depository, 143, Cornwallis Street, Calcutta.	.....	2007
June 2nd	86	12mo dy.	1st ...	1,000	ditto ...	0 12 0	Girish Chandra Nág, Ravenshaw College, Cuttack.	.....	2008

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						ENGLISH
	POETRY. *The following works are designed for educational purposes.*					
2009	Poetical Class Book. No. I. (R.)	English	Compiled by Rai Rádhiká Prasanna Mukharji, Bahadur.	Poetry ...	Printed at 23-1, Bechu Chatterji's Street, and published at 148, Baranasi Ghosh's Street, Calcutta.	Printed by Judu Nath Sil, and published by the Sanskrit Press Depository.
2010	Milton's Paradise Lost, Book I, Wordsworth's Excursion, Book I, and Thomson's Winter. (R.)	ditto ...	Edited by P. K. Lahiri, M.A.	ditto ...	Printed at 108, Baranasi Ghosh's Street, and published at 54, College Street, Calcutta.	Printed by N. C. Pál, and published by S. K. Lahiri & Co.
2011	Milton's Paradise Lost, Book I. (R.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2012	Paradise Lost, Book I. (R.)	ditto ...	Edited by Nagendra Náth Mukharji.	ditto ...	Printed at 300, Bowbazar Street, and published at 64, College Street, Calcutta.	Printed by Cones & Co., and published by H. B. Mukharji & Co.
2013	Thomson's Seasons. Winter. (R.)	ditto ...	Edited by G. A. Lorimer, M.A.	ditto ...	Printed at 6, Simla Street, and published at 64, College Street, Calcutta.	Printed by P. C. Sháhá, and published by H. B. Mukharji & Co.
2014	Selected Poems. (R.) ...	ditto ...	Edited by Madhu Sudan Sen.	ditto ...	Printed and published at the Giris Press, Dacca.	Printed by Kalimuddin, and published by Madhu Sudan Sen.
	POLITICS.					
2015	The Thoughts and Reflections of an Indian in England arising out of the Debate on the Indian Budget for 1888-89.	ditto ...	Párbati Charan Ráya.	Politics ...	Printed and published at the East Bengal Press, Dacca.	Printed by K. D. Basak, and published by Párbati Charan Ráya.
2016	The Indian Political Register. Part I. No. 1.	ditto ...	Rajani Kánta Ghosh.	ditto ...	Printed and published at 10, Padmapukur Road, Bhawanipore.	Printed and published by K. N. Mitra.
	RELIGION.					
2017	The Mahabharata. Part 48. (T.)	ditto ...	Translated by Pratáp Chandra Ráya.	Religion, H.	Printed and published at 1, Raja Gurudas' Street, Calcutta.	Printed by Kalidás Sen, and published by Pratáp Chandra Ráya.
2018	Ditto. Part 49. (T.) ...	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2019	Ditto. Part 50. (T.) ...	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2020	God's Dealings in the Life of a Sinner. (T.)	ditto ...	Shashi Bhushan Mallik.	ditto, B. ...	Printed and published at the East Bengal Press, Dacca.	Printed by K. D. Basak, and published by Shashi Bhushan Mallik.
2021	The New Dispensation ...	ditto ...	Banga Chandra Ráya.	ditto ...	ditto ditto ...	Printed by K. D. Basak, and published by Banga Chandra Ráya.
	SCIENCE (MATHEMATICAL). *The following works are designed for educational purposes.*					
2022	Hints on the Study of Mathematics.	ditto ...	R. D. Banerji	Science (Mathematical).	Printed and published at Serampore.	Printed and published by Jitendra Náth De.
2023	The Students' Algebra. Part I.	ditto ...	Chuni Lál Sil	ditto ...	Printed at 6, Simla Street, and published at 25, Cornwallis Street, Calcutta.	Printed by Prem Chánd Sháhá, and published by B. Banerji & Co.
2024	Progressive Papers in Algebra with Solutions.	ditto ...	Hara Náth Bhattácháryya.	ditto ...	Printed at 23-1, Bechu Chatterji's Street, and published at 55, College Street, Calcutta.	Printed by Jadu Náth Sil, and published by J. C. Banerji.

Quarter ending 30th June 1889—continued.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar. 29th	48	12mo dy.	12th...	2,000	Printed	0 8 0	Rai Rádhiká Prasanna Mukharji, Bahadur, 30, Bechu Chatterji's Street, Calcutta.	A well-known school book ..	2009
May 12th	311	12mo ...	1st ...	2,000	ditto ...	1 10 0	Prasanna Kumár Lahiri, 91, Balarám De's Street, Calcutta.	With Notes	2010
„ 8th	102	12mo. ..	1st ...	1,000	ditto ...	0 8 0	ditto ...	ditto	2011
June 1st	120	16mo crown.	1st ...	1,000	ditto ...	1 0 0	Nagendra Náth Mukharji.	ditto	2012
May 12th	125	16mo crown.	1st ...	1,000	ditto ...	1 0 0	H B. Mukharji & Co., 64, College Street, Calcutta.	.....	2013
Mar. 15th	14	.....	1st ..	1,000	ditto ...	0 1 6	.....	.....	2014
May 28th	13	8vo ...	1st ...	200	ditto ...	0 2 0	.....	Being chiefly a defence of educated Indians against the charge of disloyalty brought forward by Sir Richard Temple.	2015
Mar. 14th	32	8vo dy.	1st ...	2,000	ditto ...	0 4 0	R. K. Ghosh, 36, Baláram Bose's Lane, Bhawanipore.	Being a collection of extracts from public documents, letters, minutes and speeches of British and Anglo-Indian Statesmen relating to Indian affairs. This part treats of England's duties to India.	2016
Mar. 16th	72	8vo dy.	1st ...	4,000	ditto ...	.....	Pratáp Chandra Ráya.	Goes on with the Dronaparba ...	2017
„ 25th	72	8vo dy.	1st ...	4,000	ditto ...	.....	ditto ..	ditto ditto ...	2018
April 25th	72	8vo dy.	1st ...	3,500	ditto ...	.....	ditto ...	Dronaparba ends and Karnaparba commences in this part.	2019
June 12th	124	12mo ...	1st ...	500	ditto ...	0 10 0	.....	A translation of the Bengali work entitled *Pápír Jibane Bhagabáner Lilá.*	2020
May 22nd	32	.....	1st ...	200	ditto ...	0 2 0	.....	Its spiritual aspect	2021
„ 12th	360	12mo dy.	2nd ...	500	ditto ...	1 8 0	R. D. Banerji Serampore.	.....	2022
April 12th	504	12mo dy.	2nd ...	504	ditto ...	1 8 0	Chuni Lál Sil, 46, Simla Street, Calcutta.	.....	2023
„ 17th	256	12mo dy.	1st ...	1,000	ditto ...	1 4 0	Hara Náth Bhattácháryya, Calcutta.	.....	2024

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						ENGLISH
	SCIENCE (MATHEMATICAL—*concld.*					
2025	The Elements of Algebra. Part I.	English	P. Ghosh ...	Science (Mathematical).	Printed and published at 28, Convent Road, Entali.	Printed and published by Dwáraká Náth Nandan.
2026	The Elements of Arithmetic.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2027	The Elements of Mental Arithmetic.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2028	A Syllabus of the Elements of Modern Geometry.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2029	Euclid's Elements of Geometry. Books I to IV.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2030	Ditto. Books V, VI, XI, and XII.	ditto ...	ditto ...	ditte ...	ditto ditto ...	ditto ditto ...
2031	A Sequel to the Elements of Euclid.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
	SCIENCE (NATURAL AND OTHER). *The following works are designed for educational purposes.*					
2032	An Introduction to Science.	ditto ...	Kali Kumár Dás.	Science (Natural and other).	Printed and published at 38, Ram Mohan Datta's Road, Bhawanipore.	Printed by B. M. Bose. and published by Jogesh Chandra Banerji.
2033	Students' Guide to the Rudiments of Science.	ditto ...	Jogendra Nath Banerji.	ditto ...	Printed at 109, and published at 55, College Street, Calcutta.	Printed by Umá Charan Chakrabartti, and published by J. C. Banerji.
2034	A Companion to the Science Primer.	ditto ...	S. N. Banerji and K. P. Sen.	ditto ...	Printed at 62-2, Beadon Street, and published at 3, Santiram Ghosh's Street, Calcutta.	Printed by Nepál Chandra Dás, and published by Hari Charan Dás.
2035	A Companion to the Study of Science.	ditto ...	A. C. Sen, B.A.	ditto ...	Printed at 92, Bow Bazar Street, and published at 54, College Street, Calcutta.	Printed by Kisori Mohan Sen, and published by S. K. Lahiri & Co.
2036	A Companion to Introductory (?)	ditto ...	Hem Chandra Niyogi.	ditto ...	Printed and published at the Danapur Central Press.	Published by Hem Chandra Niyogi.
2037	A Guide to Physical Geography.	ditto ...	Bipin Bihari Dás.	ditto ...	Printed at 113, Grey Street, and published at 70, College Street, Calcutta.	Printed by A. C. Hazra, and published by Biswas and Sons.
2038	Ditto ditto ...	ditto ...	Jajneswar Bagchi.	ditto ...	Printed and published at 8, Muktaram Babu's Street, Calcutta.	Printed and published by Adhar Chandra Ghosh.
2039	Students' Guide to Physical Geography.	ditto ...	Jogendra Náth Banerji ...	ditto ...	Printed at 109, and published at 55, College Street, Calcutta.	Printed by Umá Charan Chakrabartti, and published by J. C. Banerji.
	TRAVELS AND VOYAGES.					
2040	A Visit to Europe ...	ditto ...	T. N. Mukharji.	Travels and Voyages.	Printed at 132, Lower Circular Road, and published at 4, Dalhousie Square, Calcutta.	Printed by J. Larkins, and published by W. Newman & Co.
	book is full of interesting observations on men and things in England. Though he greatly admires English should, yet he points out certain defects in the political and social regulations of the English people. His products of one country in the other is very interesting.					
						HINDI
	ART.					
931	Khetí Bárí. A Book on Agriculture. Part I.	Hindi ...	Umánáth Misrá.	Art ...	Printed and published at the Khargabilas Press, Bankipore,	Printed and published by Shaheb Prasad Sinha.
932	Khetnáp Mensuration.	ditto ...	Gopilál ...	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—concluded.									
1889.	Pages.					Rs. A. P.			
Mar., 20th	370	16mo ...	12th,...	5,000	Printed	1 8 0	P. Ghosh, 28, Convent Road, Entali.	.....	2025
„ 15th	498	16mo ...	13th...	10,000	ditto ...	1 8 0	ditto ...	.....	2026
„ 12th	50	13mo ...	New	3,000	ditto ...	0 2 0	ditto ...	.....	2027
„ 5th	76	16mo ...	New	200	ditto ...	0 8 0	ditto ..	.....	2028
„ 3rd	382	16mo ...	11th .	4,500	ditto ..	1 4 0	ditto ...	.....	2029
„ 17th	218	16mo ...	3rd ...	2,000	ditto ...	1 0 0	ditto ...	.....	2030
„ 8th	103	16mo ...	New	200	ditto ...	1 0 0	ditto ...	.....	2031
„ 8th	58	12mo dy	1st ..	2,000	ditto ...	0 6 0	Kali Kumár Dás, Boalia, Rajshahye.	Designed for the use of students apreparing for the Entrance Exmination.	2032
Feb., 12th	40	12mo dy	1st ..	2,000	ditto ...	0 5 0	Jogendra Nath Banerji, Nimta.	ditto ditto ...	2033
May, 4th	45	12mo dy	1st ...	1,000	ditto ...	0 5 0	S. N. Banerji, 37, Kási Mitra's Ghát Street, and K. P. Sen, 9, Ram Chandra Mitra's Lane, Calcutta.	ditto ditto ...	2034
April, 28th	53	12mo dy	1st ...	1,000	ditto ...	0 6 0	A. C. Sen, B.A., 1-1, Srinath Das's Lane, Calcutta,	ditto ditto ...	2035
Feb., 15th	33	...	1st ...	1,000	ditto ...	0 5 0	... ..	ditto ditto ...	2036
May, 2nd	72	12mo ...	1st ..	1,000	ditto ..	0 7 0	....	ditto ditto ...	2037
April, 2nd	80	8vo dy	1st ...	1,000	ditto ..	0 8 0	Adhar Chandra Ghosh, 80, Muktaram Babu's Street, Calcutta.	ditto ditto ...	2038
Mar., 1st	78	12mo dy	1st ...	2,000	ditto ...	0 8 0	Jogendra Nath Banerji, Nimta	ditto ditto ...	2039
„ 29th	404	12mo dy	1st ...	500	ditto ...	3 0 0	T. N. Mukharji F L.S.	The writer was deputed by the Government of India to the Colonial and Indian Exhibition held in London in 1886. The	2040
society, and expresses his regret that his countrymen do not benefit by their contact with Englishmen as fast as they suggestions for improving the position of the poorer classes of both England and India by popularising the cheap									
BOOKS.									
Mar., 18th	106	12mo dy	1st ...	1,000	ditto ...	0 6 0	Umánáth Misrá, Samkoora, Patna.	A short treatise on agriculture and gardening.	931
„ 20th	22	12mo dy	th ...	2,000	ditto ...	0 2 0	Gopináth, Pachgachia, Bhagulpore.	.....	932

1		3	4	5	6	
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						HINDI
	DRAMA.					
933	Indar Sabhá. The Court of Indra.	Hindi ...	.....	Drama ...	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nrityalál Sil.
934	Satya Harischandra Nátak. A Drama describing the career of Rájá Harischandra, the Truthful.	ditto ..	Harischandra.	ditto ...	Printed and published at the Khargabilas Press, Bankipore.	Printed and published by Saheb Prasad Sinha.
935	Bál Khel ba Dhruba Charitra. The career of Dhruba, for the Amusement of children.	ditto ...	Damodar Shástri ...	ditto ...	ditto ditto ...	ditto ditto ...
	FICTION.					
936	Betál Pachchisi. Twenty-five Tales of the Demon. (R.)	ditto ...	Edited by Nabin Misra.	Fiction ...	Printed at 323, Chitpore Road, and published at 40, Garanhátá Street, Calcutta.	Printed by Tinkari Biswas, and published by Panchánan Ghosh.
937	Hatemtai. The Story of the Emperor Hatem. (T.)	ditto ..	.....	ditto ...	Printed at 339, and published at 326, Upper Chitpore Road, Calcutta.	Printed by Kaliprasanna Ráya, and published by Shyamlál Sil.
938	Ditto ditto (T.)	ditto ...	.....	ditto ...	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nrityalál Sil.
939	Gulavákáwali. The Bakawali Flower. (T.)	ditto ...	.....	ditto ...	ditto ditto ...	ditto ditto ...
940	Kissá Afimchi ká. The Story of an Opium-eater.	ditto ...	Srídhar Bhát.	ditto ...	ditto ditto ...	ditto ditto ...
941	Triyá Charít. Stories relating to female character.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
942	Betál Pachchisi. Twenty-five Tales of the Demon. (T.)	ditto ..	Lalu Lal ..	ditto ...	ditto ditto ...	ditto ditto ...
	HISTORY (INCLUDING GEOGRAPHY).					
	The following works are designed for educational purposes.					
943	Bhugol Bidyá kí Pahili Pustak. The First Book on Geography.	ditto ...	Revd. A. Turnbull.	History (including Geography).	Printed and published at Lochnagar, Darjeeling.	Printed and published by N. L. Ráya.
944	Bháratbarsa ká Naksá. Map of India.	ditto ...	Debendra Nath Dhar.	ditto ...	Printed and published at 40, Báránasi Ghosh's Street, Calcutta.	Printed and published by Debendra Náth Dhar.
	LANGUAGE.					
	The following works are designed for educational purposes.					
945	Sáhitya Samgraha ki Kunji. A complete key to Babu Bireswar Chakrabarti's Sáhitya Samgraha.	ditto ...	Piyárilál and Rám Lal.	Language	Printed at 105, Cotton Street, Calcutta, and published at the Mission School, Ranchi.	Printed by Bechulál Gupta, and published by Piyárilál.
946	Nitisár. Moral Lessons.	ditto ...	Munshi Ganesh Prasád.	ditto ...	Printed and published at Durbhunga.	Printed by Nirod Chandra Mukharji, and published by Munshi Ganesh Prasád.
947	Bháshásár. The Substance of Language.	ditto ...	Saheb Prasád Sinha.	ditto ...	Printed and published at the Kargabilas Press, Bankipore.	Printed and published by Saheb Prasad Sinha.

Quarter ending 30th June 1889—continued.

8	9.	10	11	12	13	14	15	16	17
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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
Mar., 13th	44	12mo ...	4th ...	2,000	Printed	0 1 0	.....	A well-known drama ...	933
May, 10th	60	8vo rl ...	2nd ...	2,000	ditto ...	0 6 0	Ramdin Sinha, Khargabilas Press, Bankipore.	Based on the story of Rájá Harischandra, who gave away his kingdom and sold himself to slavery in order to keep his promise to Bisvámitra.	934
Mar., 21st	24	12mo dy	1st ...	500	ditto ...	0 2 0	ditto ...	....	935
„ 7th	120	12mo rl	1st ...	1,000	ditto ...	0 4 0	Panchánan Ghosh Calcutta.	.....	936
April, 17th	238	8vo rl ...	Revised.	1,000	ditto ...	0 14 0	Shyamlál Sil, Calcutta.	.....	937
Mar., 24th	254	8vo ...	4th ...	2,000	ditto ...	0 5 0	.....	.....	938
„ 24th	99	8vo ...	3rd ...	2,000	ditto ...	0 2 6	.....	.....	939
„ 18th	28	12mo ...	3rd ...	2,000	ditto ...	0 1 0	.....	A number of humorous stories about the oddities of opium-eaters.	940
„ 26th	60	12mo ...	4th ...	2,000	ditto ...	0 2 0	.....	.....	941
„ 23rd	93	8vo ...	4th ...	3,000	ditto ...	0 1 6	.....	.....	942
„ 1st	97	12mo ...	2nd ...	1,000	ditto ...	0 3 0	Foreign Mission Committee of the Church of Scotland, Edinburgh.	.....	943
April, 25th	1 sheet:	4' 9" × 3' 6"	1st ...	200	ditto ...	5 0 0	Debendra Náth Dhar, 40, Báránasi Ghosh's Street, Calcutta.	.....	944
Mar., 15th	105	8vo dy	1st ...	2,000	ditto ...	0 10 0	.....	A key	945
April, 26th	117	8vo dy ...	1st ...	1,000	ditto ...	0 7 0	.....	Moral lessons in pure and idiomatic Hindi.	946
May, 11th	184	8vo rl ...	6th ...	2,000	ditto ...	0 8 0	Saheb Prasad Sinha, Khargabilas Press, Bankipore.	.....	947

1		3	4	5	6	7
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						HINDI
	LAW.					
948	Tarjume Kayedá Bord Mul Alik Tamil Ehkamad Sage Kalaktari. Translation of Board's Rules as to the Service of Processes from the Collectorate.	Hindi ...	Amjad Hussain Shaha.	Law ...	Lithographed and published at Arrah.	Lithographed and published by Zuhur-ul-Huq.
	MISCELLANEOUS.					
949	Fagua Chautál. Songs for the *Holi* Festival in which *fagua* or red powder is used.	ditto ...	Dhaneswar Pande.	Miscellaneous	Printed at 51, Cross Street, and published at 10, Banstala Street, Calcutta.	Printed by Sadánanda Misra, and published by Bhagawat Misra and Dhaneswar Pande.
950	Hanumán Jyotish. An Astrological Work attributed to Hanumán.	ditto ...	Srínáth Láhá	ditto ...	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nritya Lál Sil.
951	Holi Ká Khyál. The Songs Relating to the *Holi* Festival.	ditto ...	Brajabilás Das	ditto ..	ditto ditto ...	ditto ditto ...
952	Pávas Pramod. The Pleasures of the Rainy Season.	ditto ...	Dámodarprasád	ditto ...	Printed at 105, Cross Street, Calcutta, and published at Bhagulpore.	Printed by Bechulál Gupta, and published by the Author.
953	Khyál Kájíki Betí Mulako. The Songs about Mulá, the daughter of the Kází.	ditto ...	Sankar Das ...	ditto ...	Printed at 105, Cotton Street, and published at 63, Sutapatti, Calcutta.	Printed by Bechulál Gupta, and published by Surajballi Pande.
954	Harish Chandra Kalá. The Complete Works of Harish Chandra. Vol. IV. Part II.	ditto ...	Edited by Ramdin Sinha.	ditto ...	Printed and published at the Khargabilás Press, Bankipore.	Printed and published by Shahebprasad Sinha.
955	Ditto ditto. Vol. IV. Part III.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
956	Ditto ditto Vol. IV. Part IV.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
957	Ditto ditto. Vol. IV. Part V.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
958	Ditto ditto. Vol. V. Part I.	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
	The following work is designed for educational purposes.					
959	Mahájani. Mercantile Accounts.	ditto ...	Umanáth Misra	ditto ..	ditto ditto ...	ditto ditto ...
	RELIGION.					
960	Gopichánd Bharthari. The Stories of Gopichand and Bharthari.	ditto ...	Gajaráj Sinha	Religion, H.	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nrityalál Sil.
961	Suryya Purán. A Purán in honour of the Sun.	ditto ...	Tulsi Dás ...	ditto ...	ditto ditto ..	ditto ditto ...
962	Srírám, Bharat Srí-krishna O Rádhámádhabji ki Báramási. The condition of Ram, Bharat, Krishna and Rádhámádhab during the twelve months of the year.	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 11th	24	6¼ × 5	1st ...	50	Lithographed.	.....	.....	The title explains the object of the work.	948
Mar., 3rd	72	12mo dy	1st ...	1,000	Printed	0 8 0	Bhagawat Misra, 10, Banstala Street, Calcutta.	.....	949
„ 8th	112	16mo ...	2nd ...	2,000	ditto ...	0 2 0	.....	Fortune-telling by means of diagrams, of the cawing of crows, and of the throbbings of different parts of the body.	950
May, 18th	20	12mo ...	1st ...	2,000	ditto ...	0 1 0	.....	*Khyal* songs for the *holi* festival	951
Mar., 19th	36	12mo ..	1st ...	1,000	ditto ...	0 4 0	Keshabánand ...	Describes the mental condition of ladies during the rainy season.	952
„ 18th	48	12mo dy	1st ...	1,000	ditto ...	0 8 0	Surajballi Pande	Songs relating to the love of a Prince for Mulá, the daughter of a Kázi. The Prince fell in love with her in a dream.	953
„ 12th	68	8vo rl ...	1st ...	200	ditto ...	1 0 0	Ramdin Sinha, Khargabilas Press, Bankipore.	This contains the text and translation of *Tudíya Sarvasva*, a work on the nature of devotion to God, attributed to Nárada. It contains 84 aphorisms, and is in the form of an *Upanishat*. It refutes the theories of Vyása, Garga and Sándilya on the subject, and considers the devotion of the milkmaids of Brindaban to be the true form of devotion.	954
„ 13th	87	8vo rl ...	1st ...	200	ditto ...	1 0 0	ditto ...	The text and translation of the one hundred aphorisms of Sándilya on the nature of devotion to God; the *Sarbottama stotra*; the second-half of the work entitled *Bhaktamálá*; the *Utsabábali*, or the number of festivals observed by the Hindus, and a discourse on Vaishnabism in India.	955
„ 14th	64	8vo ...	1st ...	200	ditto ...	1 0 0	ditto ...	Contains an introduction to the Puránas, in which the number, the chapters the slokas and the contents of the various Puranas are discussed.	956
May, 14th	98	8vo ...	1st ...	200	ditto ...	1 0 0	ditto ..	Of the various months in the year and the religious ceremonies to be performed in each.	957
„ 16th	108	8vo rl	1st ...	200	ditto ...	1 0 0	ditto ...	Collections of songs on a variety of subjects.	958
Mar, 19th	66	12mo dy	1st ...	1,000	ditto ...	0 2 0	Umanath Misra, Shámkura, Patna.	For the use of students of the schools and páthshalas of Behar.	959
„ 11th	37	12mo ...	4th ..	2,000	ditto ...	0 2 0	.....	Often noticed	960
„ 21st	21	12mo ...	6th ...	3,000	ditto ...	0 1 0	.....	ditto ...	961
„ 19th	11	12mo ...	1st ...	2,000	ditto ...	0 0 6	.....	The title explains the object of the work.	962

	2	3	4	5	6	7
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						HINDI
	RELIGION—*concld.*					
963	Khaira Shahaki Báramási. The condition of Khaira Sháh during the twelve months of the year.	Hindi ..	.....	Religion. H.	Printed at 99, Ahiritola Street, Calcutta	Printed and published by Nrityalál Sil.
964	Benimádhab, Jugal Kishor, Kausalyá, Gopi Vallabdebki Báramási The condition of Benimádhab, &c., during the twelve months of the year.	ditto ...	.....	ditto ..	ditto ditto ...	ditto ditto ...
965	Bharatharí Charitra The Career of Bharathari or Bhartrihari.	ditto ..	Kashi Náth ...	ditto ...	ditto ditto ...	ditto ditto ...
966	Rukmini Mangal. The Auspicious Rukmini.	ditto ...	Bhagabati Pandit.	ditto ...	ditto ditto ...	ditto ditto ...
967	Hanumán Bijaya. Victory to Hanumán.	ditto ...	.....	ditto ..	ditto ditto ...	ditto ditto ...
968	Dána Lílá. The Ferry Sport.	ditto ..	Girijánanda ...	ditto ...	ditto ditto ..	ditto ditto ...
969	Prema Ságara. The Ocean of Love (R)	ditto ...	Lallu Lál ...	ditto ...	ditto ditto ...	ditto ditto ...
970	Jagannath Máhátmya. The Sacredness of Jagannáth.	ditto ...	Paramánanda Sharmá.	ditto ...	Printed at 51, Cross Street, and published at 10, Rup Chand Raya's Street. Calcutta.	Printed by Sadánanda Misra, and published by Beni Mádhab Prasád.
971	Krishna Masti Prárambha. Salutation to Krishna.	ditto ...	Keshabánanda	ditto ..	Printed and published at 105, Cotton Street, Calcutta.	Printed and published by Bechulál Gupta.
972	Jnánávali. A Jaina Religious work.	ditto ...	Compiled by Raya Sítab Chand Nahar.	ditto Jaina.	Printed and published at Azimganj.	Printed and published by Shyamlál Chakrabarti.
	SCIENCE (MATHEMATICAL).					
	The following works are designed for educational purposes.					
973	Ganita Guru. Tables of Native Arithmetic. Part I.	Hindi ...	Bireswar Chakrabarti.	Science (Mathematical).	Printed and published at 8, Dixon's Lane, Calcutta.	Printed and published by B. L. Chakrabarti.
974	Deshi Hisháb. Native Arithmetic, Part III.	ditto ...	Umanath Misra.	ditto ...	Printed and published at the Khargabilás Press. Bankipore.	Printed and published by Shahebprasád Sinha.
975	Ditto. Ditto. Part IV.	ditto ...	Ditto ...	ditto ..	Ditto ditto ...	Ditto ditto ...
	FICTION.					MUSALMANI.
609	Khaibarer Janganámá. The Battle of Khyber.	Musalmani Bengali	Dost Muhammad Chaudhuri.	Fiction ...	Printed and published at 155, Musjidbari Street. Calcutta.	Printed and published by Mafizuddin Ahmmad.
610	Paribanu Sháhájádi. Paribanu. The Emperor's Daughter.	ditto ...	Ayuzuddin Ahmmad	ditto ...	ditto ditto ..	ditto ditto ...
611	Sahide Kárbálá. The Martyr of Kárbálá.	ditto ...	Jonab A ..	ditto ..	ditto ditto ..	ditto ditto ...
612	Jange Sohráb. The War of Sohráb.	ditto ...	Munshi Muhammad Khater.	ditto ..	Printed at 68, Nimu Gosain's Lane, and published at 155, Musjidbari Street, Calcutta.	Printed by Debendra Nath Chatterji, and published by Mafizuddin Ahammad.
613	Del Afroj. The Enlightener of the Heart.	ditto ...	Molla Muhammad Danesh.	ditto ..	Printed and published at, 75, Nimu Gosain's Lane Calcutta.	Printed and published by Muhammad Khater.
614	Gule Harmuz. Of Gul and Harmuz.	ditto ...	Muhammad Khater.	ditto ..	ditto ditto ...	ditto ditto ...
615	Laili Majnu. Of Laili and Majnu.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...

Quarter ending 30th June 1889—continued.

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BOOKS—concluded.									
1889.	Pages.					Rs. A. P.			
Mar. 15th	11	12mo ...	3rd ...	2,000	Printed	0 0 6	.....	.....	963
„ 20th	11	12mo ...	1st ...	2,000	ditto ...	0 0 6	.....	.....	964
„ 21st	13	12mo ...	4th ...	3,000	ditto ...	0 0 6	.....	Noticed	965
„ 9th	21	12mo ...	2nd ...	2,000	ditto ..	0 1 0	.. ...	ditto	966
„ 13th	11	12mo ...	1st ...	2,000	ditto ...	0 0 6	.....	.....	967
„ 18th	11	12mo ...	8th ...	2,000	ditto ...	0 0 6	.. ...	.....	968
„ 23rd	316	vo ...	10th...	3,000	ditto ..	0 5 0	.....	.....	969
„ 1st	48	8vo dy.	1st ...	2,000	ditto ...	0 5 0	Beni Mádhab Prasad, 10, Rup Chand Raya's Street, Calcutta	.....	970
„ 9th	8	16mo ...	1st ...	500	ditto ...	0 2 0	Keshabánand ...	.....	971
May 11th	208	vo ...	2nd ...	1,000	ditto ...	1 4 0	.....	A collection of short poems on Jaina religious subjects in an old form of the Hindi language.	972
						Rs. A. P.			
Mar. 29th	41	8vo ...	2nd ...	5,000	Printed	0 1 6	Bireswar Chakrabarti, Ránchi.	.....	973
April 25th	74	8vo dy.	1st ..	1,000	ditto ...	0 3 0	Umánáth Misra, Sham Kura, Patna.	.....	974
Mar. 17th	96	8vo dy.	1st ..	1,000	ditto ...	0 2 6	ditto ...	.....	975
BENGALI BOOKS.									
May 4th	236	8vo rl. ...	2nd ...	1,000	Printed	2 4 0	Dost Muhammad, Purasa, Dinajpore.	Khyber is a place in Arabia where Muhammad had a serious fight with the Jews. Through the exertions of Ali, Muhammad was successful in the fight. The present work is a historical romance based on the story of the victory of Ali at Khyber.	609
April 26th	138	8vo rl. ...	2nd ...	1,000	Printed	1 4 0	Mafizuddin Ahmmad, Calcutta.	A love story	610
„ 14th	411	8vo rl. ...	2nd ...	1,000	ditto ...	2 12 0	ditto ...	Based on the story of the martyrdom of Hosain at Kárbálá.	611
„ 19th	65	8vo rl. ..	new ...	1,000	ditto ...	0 8 0	Mafizuddin Ahmmad.	Based on the story of Rostam and his son Sohrab as given in Fardusi's *Shahnama*.	612
May 23rd	71	8vo rl. ...	Revised.	1,000	ditto ...	0 6 0	Maniruddin Ahmmad and Tafiluddin Ahmmad, Calcutta.	An adaptation of the first story of the Hitopadesha entitled *Mitralábh*.	613
„ 26th	202	8vo rl. ...	ditto	1,000	ditto ..	1 4 0	Muhammad Khater, Calcutta.	Often noticed	614
„ 27th	77	8vo rl. ...	ditto	1,000	ditto ...	1 2 0	ditto ...	ditto	615

1	2	3	4	5	6	7
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						MUSULMANI-BEN.
	FICTION—*concld.*					
616	Janga Namá. The Book of War.	Musalmani Bengali	Munshi Yakub	Fiction ..	Printed at 75, Nimu Gosain's Lane, and published at 19, Brindaban Basak's Lane, Calcutta.	Printed and published by Muhammad Khater.
617	Gul e Arjan. (A Name)	ditto ...	Rayhánuddin and Sadulla Sarkar.	ditto ...	Printed and published at 333, Upper Chitpore Road, Calcutta.	Printed by Binod Bihari Sil, and published by Kánáilál Sil and Brothers.
618	Cháhár Darbesh. The Four Darweshes.	ditto ...	Muhammud Danesh.	ditto ..	Printed and published at 90, Beadon Street, Calcutta.	Printed and published by Manirruddin Ahmmad.
619	Ján Churir Puthi. The Book about Heart-stealing.	ditto ...	Shaikh Mahabulla.	ditto ...	Printed and published at Kumarkhali.	Printed by Satish Chandra Mazumdar, and published by Nasiruddin Kári.
	MISCELLANEOUS					
620	Sher Ali. (A Name) ...	ditto ...	Shaha Sher Ali	Miscellaneous.	Printed at 90, Beadon Street, and published at 105, Chitpore Road, Calcutta.	Printed and published by Maniruddin Ahmmad.
621	Ditto ditto ...	ditto ...	ditto ..	ditto ...	Printed and published at 75, Nimu Gosain's Lane, Calcutta.	Printed and published by Muhammad Khater.
622	Sayat Námá. Of auspicious and inauspicious times.	ditto ...	Golam Farid...	ditto ...	ditto ditto ...	ditto ditto ....
623	Solemani Talenama. Solomon's Book on Fortune-telling.	ditto ..	ditto ..	ditto ..	ditto ditto ...	ditto ditto ...
	RELIGION.					
624	Del Raoshan. The Light of the Heart.	Musalmani-Bengai	Garibulla Shaheb.	Religion, M.	Printed and published at 155, Masjid Bari Street, Calcutta.	Printed and published by Mafizuddin Ahmmad.
625	Jaorakal Iman. The Boat of Faith.	ditto ...	Munshi Ashgar Hasan.	ditto ...	Printed at 90, Beadon Street, and published at 105, Chitpore Road, Calcutta	Printed and published by Maniruddin Ahmmad.
626	Serajal Kalam. The Lamp of Doctrines.	ditto ...	Munshi Ashruf Ali.	ditto ...	Printed and published at Andar Killa, Chittagong.	Printed by Jagat Chandra Das, and published by Ashraf Ali.
627	Nari Benamáz námá. Of the woman who does not say her prayers.	ditto ...	Bax Ali Khondkar.	ditto ...	Printed and published at the Amar Press, Comilla.	Printed and published by Nilámbar Datta.
628	Dhoká Bhanjan. The Removal of Doubts.	ditto ...	Naimuddin ...	ditto ...	Printed and published at the Mahmudia Press, Karatia.	Printed and published by Atahar Ali.
629	Ahakámal Muslemin. Good and Bad Deeds according to Musalman Doctrines.	ditto ...	Munshi Mal Muhammad.	ditto ...	Printed and published at the Dacca Azizia Press.	Printed and published by Basanta Kumár De.
630	Nasihatal Gafelin. Awakening the negligent.	ditto ...	Munshi Sadak Ali Ahmmad.	ditto ...	Printed and published at the Mahmudia Press, Karatia.	Printed and published by Atahar Ali.
631	Ek Sha Tirish Faraz One hundred and thirty duties of Musalmans.	ditto ...	Bax Ali Khondkar.	ditto ...	Printed and published at the Amar Press, Comilla.	Printed and published by Nilámbar Datta.
632	Meyáráj Námá. The Book of the Heavenward Journey.	ditto ...	Munshi Muhammed Khater.	ditto ...	Printed at 75, Nimu Gosain's Lane, and published at 116, Chitpore Road, Calcutta.	Printed by Muhammad Khater, and published by Mafizuddin Ahmmad.

uarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
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ALI BOOKS—concluded.									
1889.	Pages.					Rs. A. P.			
une, 2nd	158	8vo rl ...	Revised.	1,000	Printed	1 4 0	Muhammad Khater.	Often noticed.	616
pril 12th	120	8vo rl ...	ditto	2,000	ditto ...	0 5 0	Kánáilál Sil and Brothers.	Ditto.	617
fay 12th	172	8vo rl ...	ditto	1,000	ditto ...	1 6 0	Maniruddin Ahmmad, Calcutta.	Ditto.	618
pril 1st	32	.....	1st	1,000	ditto ...	0 2 6	Shaikh Mahabulla Bakali, Julpiguri.	Madar was a saint, a great worshipper of Allah, and had many wonderful powers, one of them being that of concealing his own vital principle. At his death Azrail, the Angel, came to carry away his vital principle, but could not find it till after some search. Madar himself pointed out where he had concealed it.	619
May 8th	76	8vo rl ...	Revised	1,000	ditto ..	0 11 0	Maniruddin Ahmmad.	.....	620
,, 16th	76	8vo rl ...	ditto	1,000	ditto ...	0 6 0	Muhammad Khater, Calcutta.	Short pieces on a variety of subjects by Shah Sher Ali.	621
,, 19th	58	3vo rl ...	ditto	1,000	ditto ...	0 6 0	Muhammad Khater, Calcutta.	The title explains the object of the work.	624
,, 21st	54	8vo rl ...	ditto	1,000	ditto ...	0 10 0	Ditto ditto ...	Often noticed.	623
April, 23rd	79	8vo rl ...	3rd ...	1,000	Printed	1 2 0	Mafizuddin Ahmmad.	Directions for the performance of the religious ceremonies of the Musalmans.	624
May, 7th	175	8vo rl ...	Revised.	1,000	ditto ...	1 0 0	Maniruddin, Ahmmad, Calcutta.	The consequences of meritorious acts in this world and in the next, as given in the Koran and in the *Hadis*.	625
Mar, 22nd	13	8vo dy...	1st ...	100	ditto ...	0 1 6	Ashruf Ali, Chandgaon.	A refutation of certain doctrines laid down by a learned Wahabi on the subject of reciting the story of Muhammad's birth in religious assemblies of the Musalmans.	626
April, 25th	17	8vo ..	2nd ...	1,000	ditto ...	0 2 0	.....	A woman who does not say her Namaz is not counted a good Musalmani.	627
,, 15th	12	12mo dy	1st ...	1,000	ditto ...	0 0 3	Naimuddin, Karatia.	In reply to a Wahabi work finding fault with certain doctrines of the Hanifi school of Sunnis.	628
Mar, 25th	92	8vo ..	8th ...	1,000	ditto ...	0 6 0	.....	The title explains the object of the work.	629
May, 13th	12	8vo ...	...	1,000	ditto ...	0 1 0	Munshi Sadak Ali Ahmmad.	.....	630
April, 12th	10	8vo ...	1st ...	2,000	ditto ..	0 0 6	.. ...	The title explains the object of the work.	631
May, 28th	28	8vo rl ..	Revised.	1,000	ditto ...	0 4 0	Mafizuddin Ahmmad, Calcutta.	Muhammad's journey to heaven, based on the Koran and the *Hadis*.	632

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher
						NEPALESE
	RELIGION.					
16	Galátiharu Lái Páwal Prerit ko Patra. The Epistles of Saint Paul to the Galatians. (T.)	Nepalese	Translated by Rev. A. Turnbull.	Religion C.	Printed and published at Lochnagar, Darjeeling.	Printed and published by N. L. Ráya.
						PERSIAN
	LANGUAGE.					
	The following works are designed for educational purposes.					
87	Gulzare Maktab. The school garden.	Persian	Hedayet Ali ...	Language	Lithographed and published at Arrah.	Lithographed by Muhammad Idris and published by Hedayet Ali.
88	Parsí Guzar. The Persian Instructor, Part I	ditto ...	Muhammad Nabi Hasan.	ditto ...	ditto ditto ...	Lithographed by Muhammad Zuhurul Huq and published by Muhammad Nabi Hasan.
						SANSKRIT
	DRAMA.					
951	Uttara Ráma Charita. The latter part of Rama's career. (R.)	Sanskrit.	Edited by Jibánanda Bidyáságara.	Drama ...	Printed at 56, Amherst Street. and published at 2, Ramanath Mazumdar's Lane, Calcutta.	Printed by Kshetra Mohan Mukharji and published by Jibánanda Bidyáságar.
	LANGUAGE.					
952	Shabda Kalpa Druma. The tree of words that fulfils all desires. Nos. 20 and 21 (together).	ditto ...	Sir Raja Rádhákánta Deb.	Language	Printed and published at 71, Pathuriaghata Street, Calcutta.	Printed by Kalipraskanna Basu, and published by Baradá Charan Basu and Haricharan Basu.
953	Ditto ditto. Nos. 22 and 23 (together)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
954	Kalápa Vyákaranam. A Sanskrit Grammar (R).	ditto ...	.....	ditto ...	Printed and published at the Dacca Syamantaka Press.	Printed by Gopinath Basak, and published by Kunjabihari Banik.
	The following work is designed for educational purposes.					
955	Sanskrita pátha. A Sanskrit Reader. Part I.	ditto ...	Harish Chandra Kabiratna.	ditto ...	Printed and published at 24, Girish Bidyáratna's Lane, Calcutta.	Printed by Shashi Bhushan Bhattácháryya, and published by the Author.
	LAW.					
956	Bibliotheca Indica. New Series. No. 705. Madan Párijáta. A work on Hindu Law. Fasc. V. (R.)	ditto ...	Edited by Madhu Sudan Smritiratna.	Law ..	Printed at 24, Girish Bidyaratna's Lane, and published at 57, Park Street, Calcutta.	Printed by Shashi Bhushan Bhattácháryya, and published by the Asiatic Society.
	MEDICINE.					
957	Satíka Chakradatta. The Medical work of Chakrapáni Datta, with a commentary. (R.)	Sanskrit	Edited by Hridaya Náth Tarkaratna.	Medicine, N.	Printed and published at 5, Nimtalá Ghát Street, Calcutta.	Printed and published by Bhuban Chandra Basák.
958	Bangasena Grantha. The Medical Work of Bangasena. (R.)	ditto ...	Bangasena ...	ditto ...	Printed at 75, Cotton Street, Calcutta, and published at Shahar Beri, district Rohtak.	Printed by Biswanáth Brahmachári, and published by Nanda Kumár Goswami.
	to have been lost. Nanda Kumar Goswami, a native physician of Beri in Rohtak in the Punjab, has after *Vaidyas* in India. He had very imperfect materials for his edition, and he was compelled therefore to Agasti Samhita. Bangasena recast it in its present form and gave it his own name. It contains many useful					
959	Sushruta. A system of medicine. (R.)	ditto ...	.....	ditto ...	Printed at 56, Amherst Street, and published at 2, Ramá Nath Mazumdar's Lane, Calcutta.	Printed by Kshetramohan Mukharji, and published by Jibánanda Vidyáságar.

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BOOK.									
1889.	Pages.					Rs. A. P.			
Mar., 15th	20	8vo ...	1st ...	1,000	Printed	0 1 0	Foreign Mission Committee of the Church of Scotland, Edinburgh.	.....	16
BOOKS.									
April, 7th	18	10×6½	1st ...	500	Lithographed.	0 1 6	.....	An alphabetical primer	87
Mar., 29th	18	9×5¾	1st ...	1,000	ditto ...	0 1 0	.....	A Persian Grammar	88
BOOKS.									
April, 1st	268	8vo dy...	2nd ...	1,000	Printed	1 0 0	Jibánanda Bidyáságara, 2, Ramanath Mazumdar's Lane, Calcutta.	.....	951
Apr., 12th	64	4to rl ...	New	2,000	ditto ...	2 0 0	Baradá Charan Basu and Hari Charan Basu, 71, Pathuriaghata Street, Calcutta.	From *Tithikshaya* to *Dadhi Mandoda.*	952
May, 8th	64	4to rl ...	do. ...	2,000	ditto ..	2 0 0	ditto ...	From *Dadhimukha* to *Devara* ...	953
Mar., 22nd	72	12mo ...	2nd ...	3,000	ditto ...	0 8 0	.....	The chapter on declensions ...	954
Mar., 6th	60	12mo dy	11th...	2,000	ditto ...	0 4 0	Harish Chandra Kabiratna, 24, Girish Bidyaratna's Lane, Calcutta.	.....	955
April, 22nd	96	8vo dy...	1st ...	500	ditto ...	0 6 0	Asiatic Society, 57, Park Street, Calcutta.	The 5th and 6th chapters ...	956
May, 26th	169	8vo dy...	1st ...	500	ditto ...	0 8 0	.....	.....	957
April, 18th	1127	12mo rl	1st ...	500	ditto ...	12 0 0	Nanda Kumar Goswami, Shahar Beri, Rohtak.	Bangasena is quoted by all medical treatises current in Bengal. But the complete work of Bangasena was considered great search succeeded in completing the work by obtaining different chapters from different families of distinguished make his own emendations. Bangasena himself was the son of Gadádhar of Kántiká. The work was known as chapters on the water we drink, the locality we inhabit, &c.	958
„ 1st	927	8vo dy	3rd ...	1,000	ditto ...	4 0 0	Jibánanda Vidyáságara, 2, Ramá Náth Mazumdar's Lane, Calcutta.	.....	959

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						SANSKRIT
	MEDICINE—*concld.*					
960	Sushruta Samhitá. The medical work by Sushruta. No. 22. (R)	Sanskrit	Edited by Abinash Chandra Kabiratna.	Medicine, N.	Printed at 5, Simia Street, and published at 200, Cornwallis Street, Calcutta.	Printed by Gopalchandra Ghoshal, and published by the Editor.
	MISCELLANEOUS.					
961	Vidagdha Mukhamandanam. The Ornament of the mouth of the Witty People. (R.)	ditto ...	Edited by Basanta Kumár Kabirája.	Miscellaneous.	Printed and published at 21, Sitárám Ghosh's Street, Calcutta.	Printed and published by Shashibhushan Datta.
	POETRY.					
962	Níti Kusuman. The Flower of Morals.	ditto ...	Kalipada Mukharji.	Poetry ...	Printed and published at 23, Jugal Kishor Dás' Lane, Calcutta.	Printed and published by Udaya Charán Pal.
	RELIGION.					
963	Bhagabadgitá. Verses spoken by Krishna (R).	ditto ...	.....	Religion, H.	Printed and published at 55, Chitpore Road, Calcutta.	Printed and published by Kálidas Chakrabarti.
964	Brihat Nitya Karma Paddhati. A Large Recension of the work on the Process of Performing Daily Religious Ceremonies. (R.)	ditto ...	.....	ditto ...	Printed at 54, Balarám De's Street, and published at 98-3, Chitpore Road, Calcutta.	Printed by Rakhal Chandra Das, and published by Ram Kánái Das.
965	Nitya Karma Paddhati. The Process of Performing Daily Religious Duties.	ditto ...	.....	ditto ...	Printed at 2, Tarak Chatterji's Lane, and published at 115, Chitpore Road, Calcutta.	Printed and published by Umesh Chandra Bhattácháryya.
966	Mahábháratam. The Mahábharata, No. 41. (R).	ditto ...	....	ditto ...	Printed and published at 1, Rájá Gurudas's Lane, Calcutta.	Printed and published by Pratáp Chandra Raya.
967	Ditto ditto. No. 42. (R.)	ditto ..	.....	ditto ...	ditto ditto ...	ditto ditto ...
968	Champu Ramayana. The Ramayana in Prose and Verse. (R).	ditto ..	Bhoja Rájá ...	ditto ...	Printed at 56, Amherst Street, and published at 2, Rama Nath Mazumdar's Lane, Calcutta.	Printed by Kshetra Mohan Mukharji, and published by Jibánanda Vidyáságara.
969	Rig Vedasya Sayanácháryaviráchitam Madhaviya Vedartha-Prakáshákhyam Bháshyan. The Commentary on the Rigveda entitled Vedártha prakásha by Sáyana, Year I, Parts 1 and 2 together. (R).	ditto ..	Edited by Prasanna Kumar Vidyáratna.	ditto ...	Printed and published at 41, Patuatola Lane, Calcutta.	Printed by Umesh Chandra Ghosh, and published by the editor.
970	Ditto ditto. Year I. Parts 3 and 4 together (R).	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
971	Ditto ditto. Year II, Part 5.	ditto ...	ditto ...	ditto ...	Printed at 5, Ramá Náth Ghosh's Lane, and published at 5, Sita Rám Ghosh's Street, Calcutta.	ditto ditto ...
972	Brihat Nitya Karma Paddhati. A Large Recension of the Work on the Process of Performing Daily Religious Ceremonies. (R)	ditto ...	Edited by Bipin Bihari Sil.	ditto ...	Printed at 333, and published at 113, Upper Chitpore Road, Calcutta.	Printed by Binod Bihari Sil, and published by Nader Chánd Sil.
973	Bibliotheca Indica. New Series. No. 710. The Varáha Purána Fasc. IX. (R.)	ditto ...	Edited by Pandit Hrishikesha Shástri	ditto ...	Printed at 24, Girish Vidyáratna's Lane, and published at 57, Park Street, Calcutta.	Printed by Shashibhushan Bhattácháryya, and published by the Asiatic Society.

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BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April, 16th	80	8vo rl ...	1st ...	1,000	Printed	1 0 0	Abinásh Chandra Kabiratna, 200, Cornwallis Street, Calcutta.	.....	960
May, 14th	24	12mo dy	1st ..	1,000	ditto ...	0 4 0	Basanta Kumár Kabirája, 37, Fauzdari Balakhana, Calcutta.	A book of riddles in Sanskrit ...	961
April, 19th	32	8vo dy.	1st ...	500	ditto ...	0 8 0	Udayacharan Pal, 23, Jugal Kishor Das Lane, Calcutta.	A collection of short pieces containing good advice.	962
Mar., 23rd	151	32mo rl	1st ...	1,000	ditto ...	0 4 0	Kuladá Kinkar Ráya, 13, Rájá Naba Krishna's Street, Calcutta.	.....	963
May, 4th	36	12mo rl	Revised.	1,000	ditto ...	0 2 0	.....	.....	964
April, 27th	36	12mo rl	5th ...	1,000	ditto ...	0 2 0	Umesh Chandra Bhattácháryya, Calcutta.	.....	965
Mar., 16th	120	8vo dy	1st ...	4,000	ditto ...	.....	Pratáp Chandra Ráya.	Goes on with the *Anushásha-parba.*	966
„ 25th	120	8vo dy	1st ...	4,000	ditto ...	.....	ditto „	ditto ditto ...	967
April, 1st	370	8vo dy	2nd ...	1,000	.....	1 0 0	Jivánanda Vidy-a sagara, 2, Rama nath Mazumdar's Lane, Calcutta.	*Champu* is a poem in prose and verse, written in praise of any one distinguished individual. Here the Ramayana has been recast in the form of a *Champu* Kábya.	968
Mar., 26th	154	8vo dy	1st ...	500	ditto ...	2 8 0	Prasanna Kumár Vidyáratna 41, Patuatolah Lane, Calcutta.	The preface by Sáyana and the commentary on 16 hymns.	969
April, 1st	160	8vo dy	1st ...	500	ditto ...	2 8 0	ditto ...	This part ends with the commentary on the 51st hymn.	970
May, 1st	80	8vo dy	1st ...	500	ditto ...	2 8 0	ditto ...	Ends with the commentary on the 64th hymn.	971
April, 19th	34	12mo rl	8th ..	1,000	ditto ...	0 2 0	Bipin Bihari Sil, Calcutta.	.....	972
May, 25th	96	8vo dy.	1st ...	500	ditto ..	0 6 0	The Asiatic Society, 57, Park Street, Calcutta.	The greatness of Someswar and other places of pilgrimage, of Triveni and other places which are regarded as places of redemption, of the place where *Salgrám* stones are procurable, of Kurukshetra, of Hrishikesh, of Dwárká, of Mathura, &c.	973

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						SANSKRIT
	RELIGION—*concld.*					
974	Bibliotheca-Indica. New Series. No. 702. Chaturvarga Chintámani. Vol. III. Part II. Fasc. II. (R.)	Sanskrit	Edited by Pandit Jogeswara Smritiratna, and Pandit Kámákhyánáth Tarkavágisha.	Religion H.	Printed at the Baptist Mission Press, and published at 57, Park Street, Calcutta.	Printed by G. H. Rouse, and published by the Asiatic Society.
975	Srirám Sahasranáma. The Thousand Names of Ráma. (R.)	ditto ...	.....	ditto ...	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nrityalál Sil.
976	Ditto ditto ...	ditto ...	.....	ditto ...	ditto ditto ...	ditto ditto ...
977	Mukunda Muktábali O Chátu Pushpánjali. Pearls for Mukunda and a Handful of Flowers of Coaxing. (R.)	ditto ...	Bùp Goswami	ditto ...	ditto ditto ...	ditto ditto ...
978	Sri Gangá Lahari. Verses on the Sacredness of the Ganges. (R).	ditto ...	Gajràj Sinha ...	ditto ...	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nritya Lál Sil.
979	Vishnu Sahasra Nâm. The Thousand Names of Vishnu. (R).	ditto ...	Bhágirathi Sathia.	ditto ...	Printed and published at the Cuttack Printing Company's Press.	Printed and published by the Cuttack Printing Company.
						URDU
	FICTION.					
261	Kissa Hiraman Totá. The Story of a Parrot of the Hiraman Species.	Urdu ...	Enaet Ali Beg	Fiction ...	Lithographed and published at Arrah.	Lithographed by Zuhurul Huq, and published by Muhammad Abdus Sattar.
	to enter the dead body of an antelope and himself entered the lifeless body left by the King and ordered all he told the secret. The Queen then induced the pseudo-King to enter into the body of a dead cock, and the real					
	LAW.					
262	Majumia Zabete Dowani. The Civil Procedure Code. (T.)	ditto ...	Mehdi Hasan	Law ...	ditto ditto ...	Lithographed and published by Zuhurul Huq.
	RELIGION.					
863	Nuran-ala Nur. Light and more Light.	ditto ...	Shah Golam Najaf.	Religion, M.	Lithographed and published at the Union Press, Bankipore.	Lithographed and published by Sayyid Rahmiuddin.
264	Sadatud Darain. Fi Etáátil Waledain. Obedience to Parents leads to fortune in this world and in the next.	ditto ...	Ilahi Bux ...	ditto ...	Lithographed at Arrah, and published at Patna.	Lithographed by Zuhurul Huq, and published by Hazi Sayad Jan.
						URIYA
	ART.					
	The following works are designed for educational purposes.					
631	Uriyá Copy Book. No. 1	Uriya ...	J. Elliot ...	Art ...	Printed and published at the Orissa Mission Press, Cuttack.	Printed and published by J. F. Hill.
632	Ditto ditto. No. 3	ditto ...	ditto ...	do. ...	ditto ditto ...	ditto ditto ...
	FICTION.					
633	Padmámati (A Name) ...	ditto ...	Umesh Chandra Sarkar.	Fiction ...	Printed and published at the Cuttack Printing Company's Press.	Printed and published by the Cuttack Printing Company.
	on real facts. Durjodhan Das, an influential officer of the Rájá of Nilgiri, wanted to force Padmámati, the his inhuman treatment of Padmámati and her family reached the ears of Mr. Ricketts, the Magistrate, who					

Quarter ending 30th June 1889—continued.

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BOOKS—concluded.									
1889.	Pages.					Rs. A. P.			
Mar., 16th	96	8vo dy.	1st ...	500	Printed	.. ...	Asiatic Society, 57, Park Street, Calcutta.	Determination of the time of the annual and other periodical ceremonies.	974
„ 25th	13	12mo ..	3rd ...	1,000	ditto ..	0 0 6	... ..	The title explains the object of the work.	975
„ 28th	11	12mo ...	2nd ..	1,000	ditto ..	0 1 0	.....	This is in the Bengali character	976
„ 26th	8	12mo ...	2nd ..	2,000	ditto ..	0 1 0	.....	Two works by Rúp Gosvami, one of the immediate disciples of Chaitanya.	977
„ 15th	13	12mo ...	2nd ...	2,000	ditto ..	0 0 6	.....	.....	978
May, 4th	14	12mo dy	5th ...	1,000	ditto ..	0 1 3	Bhagirath Satthia.	.. ..	979
BOOKS.									
Mar., 16th	24	10 × 6½	1st ..	1,500	Litho-graphed.	0 1 6	.....	A story of *Kdyápalat*, or changing the person. A King knew the secret of changing his person, and taught it to his minister, who induced the King antelopes to be killed. Then the King entered the person of a Hiraman parrot and came to the Queen, to whom King got an opportunity of re-entering his own person.	261
April, 1st	204	10 × 6½	2nd ..	500	ditto ...	1 0 0	.....	Act XIV of 1882 ...	262
Mar., 23rd	56	8vo ...	1st ...	500	ditto ...	0 7 0	Shah Golam Najaf, Bankipore.	Suggestion of certain explanations of some of the most obscure expressions and passages in the Bible.	263
April, 10th	48	10 × 6½	1st ...	1,000	ditto ...	0 4 0	.....	The title explains the object of the work.	264
BOOKS.									
May, 18th	28	Double foolscap.	3rd ...	2,000	ditto ...	0 2 0	Orissa Mission Press.	.....	631
„ 16th	31	ditto ...	5th ...	2,000	ditto ...	0 2 0	ditto ...	.....	632
Mar., 22nd	122	12mo dy	1st ...	1,000	ditto ...	0 8 0	Umesh Chandra Sarkar.	The writer thinks that this is the first original work of fiction in Uriya. The story is based daughter of Jagu Patwari, to marry him. He was a wicked man and fond of oppressing the raiyats. The story of instituted a prosecution against him and got him severely punished for his offence.	633

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the titlepage is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer and name or firm of publisher.
						URIYA
	HISTORY (INCLUDING GEOGRAPHY).					
	The following works are designed for educational purposes.					
634	Sankshipta Bhárat Itihás. A Short History of India.	Uriya ...	Ram Chandra Birbar, and Hari Chandan Mahíndra Bahadur,	History (including geography).	Printed and published at the Orissa Mission Press.	Printed and published by J. F. Hill.
635	Práimeri Bhugol. Primary Geography.	ditto ...	Trilochan Mishra.	ditto ...	ditto ditto ..	ditto ditto ...
	LANGUAGE.					
	The following works are designed for educational purposes.					
636	Barna Bodhak. An Alphabetical Primer. Parts I and II (together.)	ditto ...	Gobinda Rath	Language	Printed and published at the Printing Company's Press, Cuttack.	Printed and published by the Cuttack Printing Company.
637	Chaturtha Páth. The Fourth Number Reader.	ditto ..	Sitanath Ráya	ditto ..	ditto ditto ...	ditto ditto ...
638	Pratham Páth. Reader No. 1.	ditto ...	Jagannath Rao	ditto ...	Printed and published at the Mission Press, Cuttack.	Printed and published by J. F. Hill.
	MISCELLANEOUS.					
639	Sáhitya Sammilani Sabhár Samálochaná. A Review of the proceedings of the Literary Society entitled Sáhitya Sammilani Sabhá.	ditto ...	Dayánidhi Shástri.	Miscellaneous.	Printed and published at the Orissa Patriot Press.	Printed and published by Madanmohan Náyak.
	The following works are designed for educational purposes.					
640	Praimeri Jamidari Mahajani Hisáb. An Elementary work on Zemindari and Mahajani Accounts.	ditto ...	Jagannath Rao	ditto ...	Printed and published at the Orissa Mission Press, Cuttack.	Printed and published by J. F. Hill.
	POETRY.					
641	Prabhát Abakásh. Morning Leisure.	ditto ...	Bhagabat Prasad Dau.	Poetry ...	Printed and published at the Cuttack Printing Company's Press.	Printed and published by the Cuttack Printing Company.
642	Chaupadi Mála. A Collection of Vers s in the *Chaupadi* Metre.	ditto ..	Gobardhan Patnaik.	ditto ..	ditto ditto ..	ditto ditto ...
643	Balabodh Koili. The Cuckoo addressed on the subject of theEarly Sports of Krishna.	ditto ...	Agani Naik ...	ditto ...	Printed and published at the Victoria Press, Cuttack.	Printed and published by Abhin Nayak.
644	Navánurág. New Love	ditto ...	Gobinda Rath	litto ...	ditto ditto ...	ditto ditto ...
645	Berá Parikramá O Gundichá Bije. The Perambulation of the City of Puri and the Car Festival.	ditto ...	.....	litto ...	Printed and published at the Printing Company's Press, Balasore.	Printed by Gobinda Chandra Patnaik and published by Bhagawan Chandra Das.
646	Kálí Dalan. The Suppression of the Serpent-God Kali or Kálíya.	litto ...	Lakshman Nayak.	litto ..	Printed and published at the Orissa Patriot Press.	printed and published by Agani Náyak.

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
BOOKS—continued.									
1889.	Pages.					Rs A P.			
April 24th	192	12mo dy	1st ...	1,000	Printed	0 8 0	Ram Chandra Birbar, &c., Talchera.	From ancient times down to the present day.	634
Mar. 21st	122	12mo dy	1st ...	2,000	ditto ...	0 5 0	Trilochan Mishra, Third Assistant High School, Sambalpur.	Designed for the use of the 3rd, 4th, and 5th classes of Uriya schools.	635
May 31st	44	D. F. 16	9th ...	10,000	ditto ...	0 1 0	The Author ...	.....	636
June 6th	7	12mo dy.	1st ...	1,000	ditto ...	0 6 0	ditto ...	Moral lessons ...	637
April 24th	38	12mo dy.	4th ...	2,000	ditto ...	0 1 0	ditto ..	An illustrated alphabetical primer	638
„ 5th	9	8vo dy...	1st ...	50	ditto ...	.....	ditto ..	Contains a criticism of Bhásháḍarsha, a work on Uriya Grammar.	639
May 8th	25	12mo dy	2nd ..	1,000	ditto ...	0 1 6	ditto ...	.....	640
Mar. 13th	8	12mo dy	5th ...	2,000	ditto ...	0 1 0	ditto ...	Jashoda's exhortations to Krishna to leave his bed.	641
April 22nd	42	12mo dy	1st ..	1,000	ditto ..	0 3 0	ditto ...	The exploits of Krishna at Brindában.	642
Mar. 18th	9	16mo fcap	1st ..	1,000	ditto ..	0 0 6	.....	Jashodá addresses her favourite cuckoo on the subject of the early sports of Krishna, after his departure for Mathurá.	643
June 6th	18	16mo dy	1st ...	1,000	ditto ..	0 1 0	.....	The sports of Krishna and Rádhá.	644
Jan. 25th	14	8vo ...	1st ...	500	ditto ...	0 0 9	.....	.....	645
.....	...	...	...	...	ditto ...	0 1 0	.....	The title explains the object of the work.	646

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						URIYA
	RELIGION.					
647	Mahábhárata Banaparba. The Third Book of the Mahábhárata. (T.)	Uriya ..	Fakir Mohan Senápati.	Religion H.	Printed and published at the Balasore Printing Company's press.	Printed by Gobinda Chandra Patnaik, and published by Bhagaban Chandra Dás.
648	Puránprakáshiká. The Publication of Puranas, Part XIV. The Brahma Baibartta Mahápurán. The Puran describing the Evolution of the World from Brahma. (T.)	ditto ...	Rághunath Ghosh.	ditto ..	Printed and published at the Victoria Press, Cuttack.	Printed and published by Abhin Náyak.
	SCIENCE (MATHEMATICAL).					
	The following works are designed for educational purposes.					
649	Jyámitik Anushilani Samarthan. Solutions of Geometrical Deductions.	ditto ...	Chintámani Dás and others.	Science (Mathematical).	ditto ditto ...	ditto ditto ...
650	Ganit Prabesh. An Introduction to Mathematics.	ditto ...	Sitánath Ráya	ditto ...	ditto ditto ...	ditto ditto ...
651	Anka Prabesh. An Introduction to Mathematics.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
652	Utkal Ganitánka. An Uriya Arithmetic.	ditto ...	J. S. Ruto and C. Acharyya.	ditto ...	ditto ditto ..	ditto ditto ...
653	Sulabh Jyámati. Easy Geometry.	ditto ...	Madhusudan Rao and Sitanath Ráya.	ditto ...	Printed and published at the Orissa Mission Press.	Printed and published by J. F. Hill.
654	Anka Sútra. The Principles of Arithmetic.	ditto ...	.....	ditto ...	Printed and published at the Balasore Printing Company's Press.	Printed by Gobinda Chandra Patnayak, and published by Bhagban Chandra Dás.
	SCIENCE (NATURAL AND OTHER).					
	The following work is designed for educational purposes.					
655	Svástha Sádhan. The Way to Health.	ditto ...	Shyam Sundar Patnayak	ditto ...	Printed and published at the Orissa Mission Press.	Printed and published by J. F. Hill.
						I.—ARABIC AND MUSALMANI.
	RELIGION.					
13	Ahákámossalát. All about Namaz.	Arabic and Musalmani-Bengali	Muhammad Fayazuddin.	Religion M.	Printed and published at the Azizia Press, Dacca.	Printed and published by Basanta Kumar De.
						II.—ARABIC AND
15	Majmuia Adiyat. A Collection of Prayers.	Arabic and Urdu.	.....	ditto ...	Lithographed at Arrah, and published at Patna.	Lithographed by Zuhurul Huq, and published by Hazi Sayyad Jan.
						III.—BENGALI AND
	LANGUAGE.					
477	An enlarged English and Bengali Dictionary.	Bengali and English.	Purna Chandra Basu.	Language	Printed at 23 Jugol Kisor Dás' Lane, and published at 54-1, College Street, Calcutta.	Printed by Udaya Charan Pál, and published by the author.

Quarter ending 30th June 1889—continued.

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BOOKS—concluded.									
1889.	Pages.					Rs. A. P.			
Mar. 6th	96	12mo ...	1st ...	1,000	Printed	0 10 0	.....	A new translation of the Mahábhárata.	647
„ 17th	24	8vo rl	1st ...	1,000	ditto ...	0 4 0	.....	A metrical translation of the Brahma Baibartta Purán from the original Sanskrit.	648
May 16th	56	12mo dy	1st ...	1,000	ditto ...	0 4 6	.....	.....	649
April 8th	98	16mo rl	1st ...	500	ditto ...	0 2 6	.....	.....	650
„ 8th	98	16mo rl	1st ...	500	ditto ...	0 2 6	.....	.....	651
„ 12th	108	12mo dy	1st ...	1,000	ditto ...	0 2 0	.....	.....	652
„ 12th	88	12mo ...	1st ...	1,000	ditto ...	0 6 0	Sitanath Ráya, Balasore.	.....	653
Mar. 4th	12	8vo ...	4th ...	500	ditto ...	0 0 9	.....	.....	654
Mar. 27th	78	12mo dy	1st ...	5,000	ditto ...	0 1 0	Shyám Sundar Patnayak, Cuttack.	.....	655
BENGALI BOOK.									
1889.	Page.								
Mar. 22nd	59	8vo ...	2nd ...	1,000	ditto ..	0 6 0	.....	.....	13
URDU BOOK.									
1889.	Page.								
April 10th	64	5×3	1st ...	1,000	Lithographed.	0 3 0	.....	.....	15
ENGLISH BOOKS.									
1889.									
April 20th	788	8vo rl ...	1st ...	2,000	Printed	2 0 0	Purna Chandra Basu, 54-1, College Street, Calcutta.	The distinguishing features of the present work are (1) that many illustrations have been given; (2) that many phrases and idioms have been explained; (3) that a list of abbreviations have been given with their explanations.	477

1	2	3	4	5	6	7
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						III.—BENGÁLI AND
	LANGUAGE—*contd.*					
478	Barat's Pronouncing Etymological and Pictorial Dictionary. Part LXXXII.	Bengali and English.	L. N. Mallik	Language	Printed and published at 92, Bowbazar Street, Calcutta.	Printed by Kisori Mohan Sen, and published by Trailokya Nath Barát.
479	Ditto ditto. Part LXXXIII.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
480	Ditto ditto. Part LXXXIV.	ditto ...	ditto ..	ditto ...	ditto ditto ..	ditto ditto ...
	The following works are designed for educational purposes.					
481	Inráji Shikshak. The English Teacher. Part I.	ditto ...	Jogindra Chandra Dás.	ditto ...	Printed at 23, Jugal Kisor Dás' Lane, Calcutta, and published at Bantra.	Printed by Udaya Charan Pál, and published by the author.
482	A Key to the Juvenile Reader.	ditto ...	.....	ditto ...	Printed and published at 92, Bowbazar Street, Calcutta.	Printed and published by Bámá Charan Majumdár.
483	A Modern Spelling Book	ditto ..	Golok Chandra Dás.	ditto ...	Printed at 46, Panchánantala Lane, Calcutta and published at Nágarpur, Mymensing.	Printed by Sanyal and Company, and published by K. C. Saha Pramanik.
484	Ditto ditto ...	ditto ...	ditto ..	ditto ...	ditto ditto ..	ditto ditto ..
485	The Mentorial Notes on the Middle Class Reader.	ditto ...	P. Ghosh ...	ditto ...	Printed at 46, Panchánantala Lane, and published at 1, College Street, Calcutta.	Printed by Sanyal and Company, and published by the Saraswati Library
486	The Beginner's English Grammar in Bengali ...	ditto ...	Mohini Mohan Basu.	ditto ...	Printed and published at 46, Panchánantala Lane, Calcutta.	Printed and published by Sanyal and Company.
487	A Series of Graduated Translation Exercises, Part I.	ditto ...	L. A. Stapley	ditto ...	Printed at 6, Simla Street, and published at 20, Cornwallis Street, Calcutta.	Printed by Premchand Shaha, and published by B. Banerji and Company.
488	A Key to Royal Reader. No. 4, Part I.	ditto ..	Kripanath Majumudar.	ditto ...	Printed at 23, Panchánantala Lane, Calcutta, and published at Darbhanga.	Printed by Rambrahma Kumar, and published by the Darbhanga Trading Company.
489	Elementary Lessons on English Composition.	ditto ...	Gangádhar Banerji.	ditto ...	Printed 63-3, Mechhua bazar Street, and published at 55, College Street, Calcutta.	Printed by Gopal Chandra Niyogi, and published by Jogesh Chandra Banerji.
490	Rajabhásha. The Queen's English.	ditto ...	Upendra Nath Mukharji.	ditto ...	Printed at 107, Bowbazar Street, and published at 3, Beadon Street, Calcutta.	Printed by Umácharan Chakrabartti, and published by Upendranath Mukharji.
491	Helps to Students ..	ditto ...	Ananda Mohan Datta.	ditto ...	Printed at 24, Beadon Street, and published at 64, College Street, Calcutta.	Printed by Mani Mohan Rakshit, and published by Mahesh Chandra Bhattácháryya.
492	An Elementary Practical Grammar of the English Language.	ditto ...	Ramánáth Sarasvati.	ditto ...	Printed and published at 24, Girish Bidyáratna's Lane, Calcutta.	Printed by Shashi Bhushan Bhattácháryya, and published by Hárish Chandra Kabiratna.
493	How to Translate Idiomatically from Bengali into English.	ditto ...	Dhanaballabh Set, M.A.	ditto ...	Printed at 108, Baranasi Ghosh's Street, and published at 64, College Street, Calcutta.	Printed by Nabin Chandra Pal, and published by Dás Gupta and Company.
494	An Exhaustive Note on the Bengali Entrance Course, 1890.	ditto ..	Purna Chandra Gupta.	ditto ...	Printed at 153, Cornwallis Street, and published at 13, Nebutala Lane, Calcutta.	Printed by Gopal Chandra Chakrabartti, and published by S. Biswás.
495	A Complete Key to Murray's Spelling Book.	ditto ...	Bihari Lál Ráya Chaudhuri.	ditto ...	Printed and published at 22-2, Jhámápukar Lane, Calcutta.	Printed and published by Baradá Prasád Majumdár.
496	A Complete Key to Poetical English Reader No. II.	ditto ...	Kailash Chandra Datta, M.A.	ditto ...	Printed at 22 2, Jhámápukur Lane, and published at 54-1, College Street, Calcutta.	ditto ditto ...

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number.
ENGLISH BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
April 15th	32	4to dy...	1st ...	1,000	Printed	0 6 0	Trailokya Nath Barát, 12, Patáldanga Street, Calcutta.	English from *Soda* to *Sounding rod*; and Bengali from *Ruchaka* to *Rogya*.	478
„ 20th	32	4to dy...	1st ...	1,000	ditto ...	0 6 0	ditto ...	English from *Soundless* to *Spindle*, and Bengali from *Rochaka* to *Lanká*.	479
May 5th	32	4to dy ..	1st ...	1,000	ditto ...	0 6 0	ditto ...	English from *Spindle-legged* to *Spring time*, and Bengali from *Lanká* to *Lashuniya*.	480
April 10th	175	8vo dy...	1st ...	1,000	ditto ...	1 4 0	Chuni Lal Mukharji and Jogindra Chandra Dás.	.....	481
„ 30th	232	12mo ...	1st ...	1,000	ditto ...	0 10 0	Chárú Chandra Majumdar, Jamua.	.....	482
Mar. 17th	106	12mo dy	3rd ...	10,000	ditto ...	0 4 0	Kisor Chandra Saha Pramanik, Nagarpur, Mymensing.	.....	483
April 26th	106	12mo dy	4th ...	2,000	ditto ...	0 4 0	ditto ..	.....	
„ 19th	84	12mo dy	1st ...	1,000	ditto ..	0 4 0	Purna Chandra Ghosh, 1, College Street, Calcutta.	.....	484 485
„ 24th	53	16mo d fcap.	2nd ...	3,000	ditto ..	0 3 0	Mohini Mohan Basu, Bogra.	.....	486
„ 10th	41	8vo dy...	4th ...	2,000	ditto ..	0 6 0	Kali Krishna Banerji, 18, Duff Street, Calcutta.	.....	487
„ 8th	95	8vo dy...	2nd ...	1,000	ditto ...	0 10 0	Kripa Nath Majumdar, Darbhanga.	.....	488
„ 11th	116	16mo s. rl.	13th...	6,000	ditto ..	0 6 0	Gangádhar Banerji.	.....	489
„ 15th	106	12mo dy	1st ...	2,000	ditto ..	0 10 0	Aghornath Banerji, Bowbazar, Calcutta.	A guide to the art of writing and speaking English correctly.	490
„ 20th	176	12mo ...	10th...	1,100	ditto ...	0 10 0	.....	.....	491
April 23rd	72	12mo dy	New	1,000	ditto ...	0 5 0	Thákamani Dási, Gocháran, 24-Pergunnahs.	.....	492
May 2nd	118	12mo ...	2nd ...	1,000	ditto ...	0 8 0	Dhanaballabh Set, M.A., Balaram De's Street, Calcutta.	.....	493
„ 24th	116	12mo dy.	1st ..	500	ditto ...	0 14 0	Purna Chandra Gupta, 13, Nebutala Lane, Calcutta.	.....	494
Mar. 29th	38	12mo ...	6th ...	2,000	ditto ...	0 5 0	Baradá Prasád Majumdár, 22-2, Jhámápukur Lane, Calcutta.	.....	495
April 20th	154	12mo ...	6th ...	1,000	ditto ...	1 0 0	ditto ..	.....	496

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						III.—BENGALI AND
	LANGUAGE—*concld.*					
497	A Complete Key to Royal Reader No. II.	Bengali and English.	Purna Chandra Chakrabartti.	Language.	Printed at 22-2, Jhámápukur Lane, and published at 54-1, College Street, Calcutta.	Printed and published by Baradá Prasád Majumdár.
498	Key to Poetical English Reader No. I.	ditto ...	G. Mazumdár	ditto ...	ditto ditto ..	ditto ditto ...
499	A Complete Key to Poetical Class Book No. I.	ditto ...	Annadá Prasád Mazumdár.	ditto ..	ditto ditto ..	ditto ditto ...
500	A Complete Key to Douglas's English Reader No. IV.	ditto ...	Bimalá Charan Ghosh.	ditto ...	ditto ditto ...	ditto ditto ...
501	A Complete Key to Easy Selections.	ditto ...	Nrisinha Chandra Mukhopádhyáya.	ditto ..	ditto ditto ...	ditto ditto ...
502	The first step in Grammar.	ditto ..	Akrur Chandra Sen.	ditto ...	Printed and published at the Adarsha Press, Dacca.	Printed by Lakshman Basák, and published by Akrur Chandra Sen.
503	Middle Class English Composition.	ditto ...	Brindában Dhar.	ditto ..	Printed and published at the Girish Press, Dacca.	Printed and published by Kalimuddin.
504	The Child's Grammar ...	ditto ...	Kishori Mohan Basu.	ditto ...	Printed and published at the East Bengal Press, Dacca.	Printed and published by K. D. Basák.
505	Boys' Guide ...	ditto ...	B. K. Datta and B. C. Basu.	ditto ...	Printed and published at Barisal.	Printed by Hara Kumar Kar, and published by B. K. Datta and B. C. Basu.
						IV.—BENGALI AND
	RELIGION.					
1	Buddha Bhajaná. The worship of Buddha.	Bengali and Pali.	Compiled by Bhagirath Chandra Baruá.	Religion, Bhuddist.	Printed and published at Andarkilla, Chittagong.	Printed by Jagat Chandra Dás, and published by Bhagirath Chandra Baruá.
						V—BENGALI AND
	LANGUAGE					
	The following works are designed for educational purposes.					
1371	Byákaran Kaumudi. A Sanskrit Grammar for Beginners. Parts II and III (together).	Bengali and Sanskrit.	Iswar Chandra Bidyáságar.	Language.	Printed at 62, Amherst Street, and published at 25, Sukea's Street, Calcutta.	Printed by Jajneswar Mukharji, and published by the Calcutta Library.
1372	Sanskrita Byákaran, Upakramanika. Introduction to Sanskrit Grammar.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1373	Byákaran Samgraha. Elements of Sanskrit Grammar.	ditto ...	Heramba Náth Tattvaratna.	ditto ...	Printed and published at 24, Giris Bidyáratna's Lane, Calcutta.	Printed by Sashi Bhushan Bhattácháryya, and published by Harish Chandra Kabiratna.
1374	Sudhákar Byákaran. A Sanskrit Grammar.	ditto ...	Shyámá Charan Kabiratna.	ditto ...	Printed and published at 24, Beadon Street, Calcutta.	Printed and published by Mani Mohan Rakshit.
1375	Kaláp Byákaranam. A Sanskrit Grammar. (T.)	ditto ...	Edited by Kálisha Chandra Sen Gupta.	ditto ...	Printed at 113, Musjidbari Street, and published at 35, Maniktala Street, Calcutta.	Printed by Jogendra Náth Mallik, and published by Kálisha Chandra Sen Gupta.
	LAW.					
1376	Mitáksharà. A treatise on Hindu Law. (T.)	ditto ...	Translated by Aghor Náth Tattvanidhi.	Law ...	Printed and published at Burdwan.	Printed by Purushottam Deb Chattaráj, and published by H. R. Reily and Ban Bihari Kapur.

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ENGLISH BOOKS—concluded.									
1889.	Pages.					Rs. A. P.			
April 20th	36	12mo ...	7th ...	2,000	Printed	0 4 0	Barada Prosaud Majumdar, 22-2, Jhámápukur Lane, Calcutta.	.....	497
„ 21st	84	12mo ...	5th ...	1,000	ditto ...	1 0 0	ditto ...	.....	498
„ 25th	65	12mo ...	2nd ...	1,000	ditto ...	0 4 0	ditto ...	.....	499
May, 20th	156	12mo ...	4th ...	1,000	ditto ..	0 10 0	ditto ...	.....	500
„ 25th	264	12mo ...	6th ...	2,000	ditto ...	1 0 0	ditto ...	.....	501
„ 15th	69	12mo ...	New.	1,000	ditto ...	0 5 0	.....	.....	502
April, 1st	92	12mo ...	5th ...	2,000	ditto ...	0 6 0	.....	.....	503
June, 2nd	84	12mo ...	2nd ...	1,000	ditto ..	0 5 0	.....	.....	504
May, 17th	50	10 × 6	2nd ...	1,000	ditto ...	0 4 0	.....	.....	505
PALI BOOK.									
1889.									
Mar., 25th	31	12mo dy	1st ...	1,000	ditto ...	0 2 0	Bhagirath Chandra Baruá, Gujárá.	The daily religious prayers, invocations, and vows of an orthodox Buddhist of the Southern School The present work differs from a similar work in Ceylon entitled Buddha Yáda Hilla, or the Buddhist Faith, in having the short *a* always lengthened into *á*, as Dhamma into Dhámmá.	1
SANSKRIT BOOKS.									
1889.									
Mar., 26th	204	12mo ...	24th...	2,000	ditto ...	1 0 0	Iswar Chandra Bidyáságar, 25, Brindában Mallik's Lane, Calcutta.	.....	1371
April, 1st	139	12mo ...	35th .	6,000	ditto ...	0 8 0	ditto ...	.....	1372
„ 7th	312	12mo dy	9th ...	2,000	ditto ...	1 0 0	Heramba Náth Tattwaratna, Grey Street, Calcutta.	.....	1373
„ 27th	294	12mo dy	1st ...	1,000	ditto ...	1 8 0	.....	The writer follows the system of Pandit Iswarachandra Vidyáságara, and appends a list of grammatical roots at the end of his work.	1374
May, 18th	66	16mo rl.	1st ...	600	ditto ...	0 4 0	.....	The rules of Sarba Barmá with the *vritti* of Durga Sinha and a Bengali translation. It contains the chapter on Sandhi only.	1375
1295.									
Magh., 23rd.	476	8vo rl...	1st ...	500	ditto ...	.....	Burdwan Raj Estate.	The chapter on expiations only. It contains the text of Jajnavalkya and a Bengali translation made according to Bijnáneswar's commentary entitled the Mitáksharé.	1376

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Number.	Title (to be translated into English when the title-page is not in that language.)	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name of firm or printer, and name or firm of publisher.
						BENGALI AND
	MEDICINE.					
1377	Sánubád Nárijnán. The knowledge of the Pulse, with a translation. (T.)	Bengali and Sanskrit.	Edited by Rámbramha Sen.	Medicine, N.	Printed at 2, Tárak Chatterji's Lane, and published at 115, Chitpur Road, Calcutta.	Printed by Nabakumár Bose, and published by Umesh Chándra Bhattácháryya.
1378	Nútan Bhaishajya Dhanvantari. A treatise on Hindu Medicine. (T.)	ditto ..	Translated by Chandra Kumár Kabi bhusan.	ditto ...	ditto ditto ...	Printed by Nabakumár Bose, and published by Bhattácháryya and Company.
	MISCELLANEOUS.					
1379	Jyotish Kalpadruma. An Astrological Compilation. Part 16. (T.)	ditto ..	Edited by Rasik Mohan Chatterji.	Miscellaneous.	Printed and published at 5, Simla Street, Calcutta.	Printed by Gopál Chandra Ghosál, and published by Rasik Mohan Chatterji.
1380	Ditto ditto. Part 17. (T.)	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
1381	Ditto ditto. Part 18. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1382	Sánubád Rati Shástra The Science of Love, with a translation. (T.)	ditto ...	Translated by Beni Mádhab Nyáyaratna.	ditto ...	Printed and published at 68, Nimu Gosain's Lane, Calcutta.	Printed by Káli Prasanna Ráya, and published by Sri Nath Láhá.
1383	Niti Payodhi. The Ocean of Morality. (T.)	ditto ...	Kailás Chandra Mazumdár.	ditto ...	Printed and published at the Girls Press, Dacca.	Printed by Kalimuddin, and published by Hari Náráyan Mitra.
	PHILOSOPHY.					
1384	Vedánta Darshanam. The Vedanta Philosophy. Part 15. (T.)	ditto ...	Translated by Kálibar Vedántabágish.	Philosophy	Printed at 22, Old Baitakkhana 2nd Lane, and published at 2, Nursing's Lane, Calcutta.	Printed by Ramá Náth Ghosh, and published by Mati Lál Ghosh.
1385	Ditto ditto. Part 16. (T.)	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
	RELIGION.					
1386	Srimad Bhágabatam, Part 65. (T.)	ditto ...	Translated by Rám Náráyan Bidyáratna.	Religion H.	Printed and published at Berhampore.	Printed by Rám Náráyan Bidyáratna, and published by Rájballabh Sháhá.
1387	Ditto ditto Part 66. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1388	Ditto ditto Part 67. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1389	Joga-Básistha Rámáyanam. The Rámáyan containing Lectures on Yoga by Basistha. Part 7. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1390	Ditto ditto Part 8. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1391	Adhyátma Rámáyanam. The Rámáyan in a Spiritual Form. (T.)	ditto ...	.....	ditto ...	Printed and published at 34 1, Kalutola Street, Calcutta.	Printed and published by Bihári Lál Sarkár.
1392	Srimad Debi Bhágabatam Mahápuránam. One of the Mahápurans. Part 8. (T.)	ditto ...	Edited by Hari Charan Basu.	ditto ...	Printed and published at 71, Pathuriaghata Street, Calcutta	Printed by Káli Prasanna Basu, and published by Hari Charan Basu.
1393	Ditto ditto Part 9. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1394	Ditto ditto Part 10. (T.)	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
1395	Ditto ditto Part 11. (T.)	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...

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SANSKRIT BOOKS—continued.									
1889.	Pages.					Rs. A. P.			
May, 5th	44	12mo dy	1st ...	1,000	Printed	0 4 0	Umesh Chandra Bhattácháryya, Calcutta.	Directions for feeling the pulse. The writer says that the native physicians know the art of feeling the pulse to perfection, while the students of the Medical College seem to neglect this most important branch of medical science.	1377
„ 7th	512	8vo rl	1st ..	1,000	ditto ...	3 0 0	ditto ...	A new compilation from standard works on Hindu Medicine, the text being in Sanskrit, and the translation in Bengali. It contains the symptoms of diseases, their pathology, and the medicines to be applied for their cure.	1378
April 3rd	96	8vo rl	1st ...	1,000	ditto ..	1 0 0	Rasik Mohan Chatterji, 5 Simla Street, Calcutta.	Contains a portion of the Bhrigu Sanhita, and of the Tajika by Nilakantha. It contains a complete work entitled *Panchasvará*, which gives directions for calculating astrologically the longevity of man. The five *swaras* are arbitrarily determined by placing certain consonants with vowels below the numbers indicating the *ráshis* or signs of the zodiac.	1379
May, 2nd	96	8vo rl	1st ...	1,000	ditto ...	1 0 0	ditto ...	Contains short instalments of a number of works on astrology.	1380
June, 1st	96	8vo rl	1st ...	1,000	ditto ...	1 0 0	ditto ...	Contains a treatise on palmistry,...	1381
May, 11th	160	12mo dy	1st ...	1,000	ditto ...	2 0 0	Sri Náth Láhá, Calcutta.	Contains information on a variety of subjects connected with the preservation of infant life, mystic formulæ, *mustijog* medicines, &c.	1382
June, 12th	41	12mo ...	1st ...	1,000	ditto ...	0 4 0	.....	Contains Sanskrit verses with Bengali translation for regulating the conduct of men from conception to manhood.	1383
April 1st	40	8vo dy	1st ..	1,000	ditto ...	0 5 0	Mati Lál Ghosh, 2, Nursing's Lane, Calcutta.	The aphorisms of Bádaráyana, with Sankar's *bháshya*, the *bhamati*, an abridged commentary by the editor and a Bengali translation by him.	1384
May, 22nd	40	8vo dy	1st ...	1,000	ditto ...	0 5 0	ditto ...	ditto ditto.	1385
Mar., 22nd	40	4to ...	2nd ...	4,000	ditto ...	.....	.....	With commentaries of Sridhar Svámí, Jiva Gosvami, and Vishvanáth Chakrabarti. Goes on with the tenth Skandha.	1386
„ 22nd	40	4to ...	2nd ...	4,000	ditto ...	.....	.....	ditto ditto ...	1387
„ 22nd	40	4to ..	2nd ...	4,000	ditto ...	.....	.....	ditto ditto ...	1388
„ 23rd	80	8vo ...	1st ...	500	ditto ...	0 12 0	.....	With commentary entitled *Prakásha*, and a Bengali translation.	1389
„ 23rd	80	8vo ...	1st ...	500	ditto ...	0 12 0	.....	ditto ditto ...	1390
„ 25th	266	8vo rl	1st ...	9,000	ditto ...	1 8 0	Jogendra Chandra Bose, 31-1, Kalutola Street Calcutta.	The divinity of Rama has been put forward in a more pronounced form than in the work of Valmiki.	1391
„ 15th	72	8vo rl	1st ...	1,000	ditto ...	0 6 0	Hari Charan Basu, 71, Pathuriaghata Street, Calcutta.	The text, the commentary entitled *Tilaka* and a Bengali translation.	1392
„ 27th	72	8vo rl	1st ..	1,000	ditto ...	0 6 0	ditto ...	ditto ditto ..	1393
April, 10th	72	8vo rl	1st ...	1,000	ditto ...	0 6 0	ditto ..	ditto ditto ..	1394
May, 1st	72	8vo rl	1st ...	1,000	ditto ...	0 6 0	ditto ...	ditto ditto ...	1395

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						BENGALI AND
	RELIGION—*concld.*					
1396	Mahabharatam. Part 130 (T.)	Bengali and Sanskrit.	Translated by Sridhar Churámani.	Religion H	Printed and published at Serampore.	Printed by Thákurdás Ghosál, and published by Umesh Chandra Bhattácháryya.
1397	Sánubád Brihat Tantra Kosha. A Tantric Compilation with a Translation. (T.)	ditto ...	Compiled by Káli Prasanna Bidyáratna.	ditto ...	Printed at 1, Nimu Gosain's Lane, and published at 1, Garanhata Street, Calcutta.	Printed by Mákhan Lál Ghosh, and published by Ganesh Chandra Ghosh.
1398	Sri Bhagabati Gita. A Treatise on the Greatness of Durga. (T.)	ditto ...	Translated by Rám Ratna Bhattácháryya	ditto ...	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nrityalál Sil.
1399	Bhakti Lahari. Waves of *Bhakti*. (T.)	ditto ...	Krishna Chandra Bipra.	ditto ...	Printed and published at 24, Giris Bidyaratna's Lane, Calcutta.	Printed by Shashi Bhushan Bhattácháryya, and published by Harish Chandra Kabiratna.
1400	Smarana Mangal. Remembrance of Krishna's Auspicious Sports at Brindaban. (R.)	ditto ...	Narottam Dás	ditto ...	Printed and published at 99, Ahiritola Street, Calcutta.	Printed and published by Nrityalál Sil.
1401	Atma Bodha. Knowledge of the Soul. (T.)	ditto ..	Translated by Prasád Dás Gosvami.	ditto ...	Printed and published at Serampore.	Printed and published by Jitendra Nath Dé.
1402	Satya Náráyan Bratam. The worship of Satya Narayana.	ditto ...	Compiled by Mahendra Náth Bidyá ratna.	ditto ...	Printed at 147, Upper Chitpore Road, Calcutta, and published at Sahara.	Printed by Umesh Chandra Pál, and published by Mahendra Nath Bidyáratna.
						VI.—ENGLISH AND
	LANGUAGE.					
	The following work is designed for educational purposes.					
45	Shikshá Mani. English-Hindi Vocabulary.	English and Hindi.	Dina Náth Dev	Language	Printed at 75, and published at 132, Cotton Street, Calcutta.	Printed by Bisva Náth Brahmachári, and published by Mungi Lál Chiráwálá.
						VII.—ENGLISH AND
	LANGUAGE.					
	The following work is designed for educational purposes.					
62	Niti Pátham. A Sanskrit Reader. (R.)	English and Sanskrit.	Compiled by Shyámá Charan Kabiratna.	ditto ...	Printed at 21, Sitárám Ghosh's Street, and published at the New Indian School, Calcutta.	Printed by Shashi Bhushan Datta, and published by Shyámá Charan Kabiratna.
						VIII.—ENGLISH AND
	LANGUAGE.					
	The following work is designed for educational purposes.					
34	Key to the New Royal Reader. No. I.	English and Uriya.	Akshaya Kumár Ghosh and Srikrishna Mahápátra.	ditto ...	Printed and published at the Printing Company's Press, Cuttack.	Printed and published by the Cuttack Printing Company.

Quarter ending 30th June 1889—continued.

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Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number
SANSKRIT BOOKS—concluded.									
1889.	Pages.					Rs. A. P.			
May 18th	80	8vo rl ..	1st ..	300	Printed	0 8 0	Jadu Nath Set, Serampore.	Goes on with the Dronaparba ...	1396
April 4th	190	8vo dy...	2nd ...	6,000	ditto ...	1 8 0	Ganesh Chandra Ghosh, Calcutta.	The usual contents of a *Tantric* work. The definition of a preceptor and of a disciple, the various sorts of postures called *ásans*, the various ways of joining the palms and fingers in invoking celestial spirits technically called *mudrás*, the method of initiation, the regulation of the breath by closing the nostrils, the various celestial spirits to be invoked, the various modes of propitiation of various divinities, the mystic rites, the attainment of supernatural power.	1397
Mar. 27th	48	12mo ...	2nd ...	1,000	ditto ...	0 1 6	.....	.....	1398
„ 15th	12	8vo dy .	1st ...	500	ditto ...	0 3 0	Krishna Chandra Ráya, Básara, Dinagepore.	Contains 42 verses expressive of devotion to Rama.	1399
„ 28th	20	12mo ..	2nd ..	2,000	ditto ...	0 1 0	.....	In eleven verses Rupa Goswami gives an account of the feelings of Radha and Krishna during the course of the day, and Narottam Das translates these into Bengli averse.	1400
May 5th	60	12mo dy	1st ...	1,000	ditto ...	0 4 0	Prasád Dás Gosvámi, Serampore.	Sankaráchárayya's well known work with a Sanskrit commentary and a Bengali translation.	1401
„ 20th	60	12mo dy	1st ...	1,000	ditto ...	0 4 0	Suryya Kumár Mukharji, 21, Sankar Háldár's Lane, Calcutta.	Said to be a portion of the *Reva Khanda* of the Skanda Purán.	1402
HINDI BOOK.									
May 2nd	136	8vo rl...	1st ..	1,000	Printed	0 12 0	Dina Náth Dev, 19, Rajá's Chak, and Mungi Lál, 132, Cotton Street, Calcutta.	A word-book in English and Hindi.	45
SANSKRIT BOOK.									
April 19th	108	12mo ...	1st ...	1,000	ditto ...	1 0 0	Shyámá Charan Kabiratna, 47, Benetola Lane, Calcutta.	A new school-book	62
URIYA BOOK.									
April 15th	22	12mo rl.	1st ...	1,000	ditto ...	0 3 0	Akshaya Kumár Ghosh and Srikrishna Mahápátra.	.....	34

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						IX.—PERSIAN AND
	LANGUAGE.					
10	Pharsi Amoj. The Persian Instructor.	Porsian and Urdu.	Abdul Hai ...	Language	Lithographed and published at the Union Press, Bankipore.	Lithographed and published by Rahimuddin.
						X.—SANSKRIT AND
	RELIGION.					
51	Srimadbhágabatam. Skandha I. (T).	Sanskrit and Uriya.	Raja of Talchera.	Religion, H.	Printed and published at Cuttack Printing Company's Press, Cuttack.	Printed and published by the Cuttack Printing Company.
						TRI-LINGUAL
						I.—BENGALI,
	LANGUAGE.					
80	Rijubodhini. A Key to Rijupatha. Part I.	Bengali, English, & Sanskrit.	Baikuntha Chandra Náth.	Language.	Printed and published at the Adarsha Press, Dacca.	Printed by Lachman Basák, and published by Baikuntha Chandra Náth.
81	Riju Byákhyá. A Complete Key to Rijupatha Part I.	ditto ...	Káli Saháya Ráya Chaudhuri.	ditto ...	Printed at 22-2, Jhámápukur Lane, and published at 54-1, College Street, Calcutta.	Printed and published by Baradá Prasád Majumdár.
82	Riju Bibriti. A Key to Rijupatha. Part I.	ditto ...	Shyámá Charan Chatterji.	ditto ...	Printed and published at 23-1, Bechu Chatterji's Street, Calcutta.	Printed and published by Jadu Náth Sil.
						I—UNI-LINGUAL
						I—BENGALI
	ART.					
2142	Krishi Gejet. The Agricultural Gazette. A monthly paper. Vol. I.	Bengali	Edited by G. C. Bose.	Art ...	Printed and published at 34-1, Kalutola Street, Calcutta.	Printed and published by Bihári Lal Sarkár.
2143	Ditto ditto. Vol. II. No. 13.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
2144	Ditto ditto. Vol. II No. 14.	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...
2145	Ditto ditto. Vol. II. No. 15.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
2146	Ditto ditto. Vol. II. No. 16.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2147	Ditto ditto. Vol. II. Nos. 17 and 18.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2148	Ditto ditto. No. 19	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2149	Ditto ditto. No. 20	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2150	Ditto ditto. No. 21	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
2151	Ditto ditto. No. 22	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
2152	Ditto ditto. No. 24	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2153	Ditto ditto. Nos. 25 and 26 (together).	ditto ...	ditto ...	Art ...	Printed at 34-1, Kalutola Street, and published at 116, Bowbazar Street, Calcutta.	Printed by Bihárilal Sarkár, and published by Hari Dás Pátra.

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URDU BOOK.									
1889.	Pages.					Rs. A P.			
Mar. 25th	80	8vo ...	2nd ...	1,000	Lithographed.	0 10 0	Abdul Hai, Bankipore.	.....	10
URIYA BOOK.									
Mar. 12th	222	8vo rl....	1st ...	1,000	Printed	Nil	Raja of Talchera.	The text and an Uriya translation made from the Bengali translation of Pandit Rámá Náráyan Vidyáratna.	51
BOOKS.									
ENGLISH, AND SANSKRIT BOOKS.									
1889.									
Mar. 31st	176	12mo ...	3rd ...	1,000	ditto ...	0 8 0	.....	.....	80
April 21st	252	12mo ...	7th ...	3,000	ditto ...	0 8 0	Baradá Prasád Majumdár, 22-2, Jhamapukur Lane, Calcutta.	.....	81
May 6th	288	12mo dy	2nd ...	2,000	ditto ...	0 10 0	Shyámá Charan Chatterji, 11, Jorápukur Lane, Calcutta.	.....	82
PERIODICALS.									
PERIODICALS.									
.....	288	fcap. ...	1st ...	500	ditto ...	.....	G. C. Bose, 34-1, Kalutola Street, Calcutta.	Articles on agricultural and economic subjects. Twelve parts bound together.	2142
1293 B.S.	24	fcap. ...	1st ...	500	ditto ...	0 6 0	G. C. Bose, 116 Bowbazar Street, Calcutta.	The cultivation of cotton; agricultural education; trade in cotton yarn and cloth of Calcutta.	2143
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	.....	2144
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	.....	2145
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	Sugarcane cultivation in Puna	2146
.....	48	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	Articles on agricultural and economic subjects.	2147
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	Draught cattle; woollen work in the Punjab; cultivation of tobacco in Burma.	2148
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	Grapes of Cashmere; cultivation of ginger, &c.	2149
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	The tannery at Cawnpore; Indian silk; cultivation of pepper on the Malabar coast, &c.	2150
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	The Cirencester agricultural students; the cultivation of tobacco; mulberry plantation, &c	2151
ditto ...	24	fcap. ...	1st ...	500	ditto ...	0 6 0	ditto ...	Articles on wheat, jute, musk, rubber, &c.	2152
1294 B.S.	48	fcap. ...	1st ...	225	ditto ...	0 6 0	ditto ...	The manufacture of candles; fish trade; the cultivation of jute, &c.	

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						I.—BENGALI
	ART—*concluded.*					
2154	Krishi Gejet. The Agricultural Gazette. A monthly paper. Nos. 27 to 30, (together).	Bengali.	Edited by G. C. Bose.	Art ...	Printed at 66, College Street, and published at 116, Bowbazar Street, Calcutta.	Printed by Binodbihári Majumdar, and published by Hari Dás Pátra.
2155	Ditto ditto. Nos. 31 to 36 (together).	dit to ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
2156	Ditto ditto. No. 37	ditto ...	ditto ...	ditto ...	Printed at 1, Pítámbar De's Lane, Serampore, and published at 116, Bowbazar Street, Calcutta.	Printed by Raghunáth Pál, and published by Hari Dás Pátra.
2157	Ditto ditto, No. 38	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2158	Ditto ditto. No. 39	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2159	Ditto ditto. Nos. 45 to 48.	ditto ...	ditto ...	ditto ...	Printed at Serampore, and published at Calcutta.	Printed by Jitendranath Dé, and published by Hari Dás Pátra.
	MEDICINE.					
2160	Chikitsá Sammilani. The bringing together of different systems of Medicine. A monthly paper. Vol. V. Nos. 7 to 9 (together).	ditto ...	Edited by Abinash Chandra Kabiratna.	Medicine, E. & N.	Printed at 5, Simla Street, and published at 200, Cornwallis Street, Calcutta.	Printed by Gopal Chandra Ghoshál, and published by Abinásh Chandra Kabiratna.
	MISCELLANEOUS.					
2161	Anusandhán. Inquiry. A Fortnightly Review Vol. II. No. 18.	ditto ...	Edited by Durgá Dás Láhiri	Miscellaneous.	Printed at 34, Benetola Lane, and published at 58, College Street, Calcutta.	Printed by Ashutosh Banerji, and published by the Anusandhán Samiti.
2162	Ditto ditto. Vol. II. No. 19.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2163	Aryya Pratibhá. The Genius of the Aryan Race. Vol. I. No. I.	ditto ...	...	ditto ...	Printed at 65-2, Beadon Street, and published at 118, Upper Chitpur Road, Calcutta.	Printed by R. K. Bhattácháryya, and published by Baishnab Charan Basák.
2164	Ditto ditto. Vol. I. No 2.	ditto ...	...	ditto ...	ditto ditto ...	ditto ditto ...
2165	Bámábodhini Patriká. A monthly journal for the instruction of women. No. 291.	ditto ...	Edited by Umesh Chandra Datta.	ditto ...	Printed at 13, Cornwallis Street, and published at 9, Antony Bágán Lane, Calcutta.	Printed by Kártik Chandra Datta, and published by Ashutosh Ghosh.
2166	Ditto, ditto, No. 292.	ditto ...	ditto ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2167	Bhárati O Bálak. A monthly paper. Vol. XII. No. 10.	ditto ...	Edited by Svarna Kumári Debi.	ditto ...	Printed at 55, Chitpur road, and published at Kasibagan Garden House, Ultadingi, Calcutta.	Printed by Kalidas Chakrabarti, and published by Satish Chandra Mukharji.
2168	Ditto ditto. Vol XII, Nos. 11 and 12 (together).	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
2169	Ditto ditto. Vol XIII. No. 1.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2170	Bhárat Shramajibi. Vol. III. No. 2.	ditto ...	Edited by Shashi Bhusan Biswás.	ditto ...	Printed at 8, Kalutola street, and published at 6, Nawabdi Ostagar's lane, Calcutta.	Printed by Mákhan Lál Raya, and published by the Editor.

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright or any portion of it.	Remarks.	Number
PERIODICALS—continued.									
1887.	Pages.					Rs. A. P.			
Feb. 1st	34	F cap....	1st ...	225	Printed	4 2 0	G. C. Bose, 116, Bowbazar Street, Calcutta.	Trade in wool in Bengal; cultivation of date-trees in India; &c.	2154
April 12th	41	F cap....	1st ...	225	ditto ...		ditto ...	Silk trade in the Punjab; cotton mills in Bengal; the best method of preparing grafts, &c.	2155
May 13th	16	F cap....	1st ...	200	ditto ...	0 6 0	ditto ...	Blight of rice and wheat; cultivation of sugarcane in Bombay; the Agricultural College at Cirencester.	2156
June 14th	16	F cap..	1st ...	200	ditto ...	0 6 0	ditto ...	Dentition of domesticated animals; medicine for the destruction of worms; brass and copper plates of the Punjab, &c.	2157
July 14th	16	F cap...	1st ...	200	ditto ..	0 6 0	ditto ...	Increase of productive power by means of manure composed of nitrogenous matter; the necessity of manure; grass as fodder; the wheat trade.	2158
1889.									
June 10th	32	F cap....	1st ...	250	ditto ...	1 8 0	ditto ...	Dairy farming in Calcutta; the Agricultural Department; the cultivation of turmeric; the soil; silk; manure from cowdung; cultivation of potato; how to test manure for potato cultivation; the cultivation of sugarcane; coir; the rearing of coconut trees.	2159
April 9th	96	8vo dy...	1st ...	1,000	ditto ...	0 6 0 per No.	Abinásh Chandra Kabiratna, 200, Cornwallis Street, Calcutta.	The usual contents ...	2160
April 23rd	18	8vo rl ...	1st ...	800	ditto ..	0 2 0	Durgá Dás Láhiri	.....	2161
May 12th	18	8vo rl ..	1st ...	800	ditto ..	0 2 0	ditto ...	.....	2162
April 8th	36	12mo rl	1st ...	1,000	ditto ...	0 4 0	Baishnab Charan Basak, 118 Upper Chitpur Road, Calcutta.	Articles on a variety of subjects	2163
,, 8th	36	12mo rl	1st ...	1 000	ditto ...	0 4 0	Ditto ...	ditto ditto ...	2164
,, 12th	32	8vo rl ...	1st ...	1,000	ditto ..	0 4 0	Umesh Chandra Datta.	Articles suited to female tastes ...	2165
May 9th	32	8vo rl ..	1st ...	1,000	ditto ...	0 4 0	ditto ...	ditto ditto ...	2166
Feb. 26th	58	8vo rl ...	1st ...	1,000	ditto ...	0 6 0	Svarna Kumári Debi, Kasiabagan Garden House, Ultadingi, Calcutta.	Continues the articles on the Baillie Guard at Lucknow and on the Vedanta and Kantian systems of Philosophy.	2167
April, 12th	102	8vo rl ...	1st ...	1,000	ditto ...	0 12 0	ditto ...	Continues the description of the Baillie Guard at Lucknow.	2168
May 22nd	62	8vo rl ...	1st ...	1,000	ditto ..	0 6 0	ditto ...	Continues the article on the Vedanta and Kantian Schools of Philosophy.	2169
Feb. 28th	8	4 to dy...	1st ...	1,200	ditto ...	.....	.....	The writer thinks that the cultivation of *Iragrostis Abyssinica*, the seed of Shyámá grass, and lotus seed is likely to prevent the possibility of famines and scarcities in India.	2170

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name of firm of publisher.
						I.—BENGALI
	MISCELLANEOUS—*contd.*					
2171	Bhárat Sanjiban. India Revived. A monthly paper. Vol. I. No. 2	Bengali	Edited by Bhupati Náth Dás and Brothers.	Miscellaneous.	Printed and published at the Budhodaya Press, Hugli.	Printed and published by Siddheswar Dás.
2172	Ditto ditto. Vol. I. No. 3.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2173	Ditto ditto. Vol. I. No. 4.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2174	Dipiká. A monthly paper. Vol. II. No. 2.	ditto ...	Edited by Pyári Mohan Haldar.	ditto ...	Printed at 17, Sri Náth Das's Lane, and published by 54, Malanga Lane, Calcutta.	Printed by Amrita Lál Ghosh, and published by the Sulabh Sáhitya Prakásh Karyyálaya.
2175	Ditto. ditto. Vol II No. 3.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2176	Ditto. ditto. Vol. II No. 4.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2177	Ditto. ditto. Vol. II. No. 5.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2178	Ditto. ditto. Vol. II. No. 6.	ditto ..	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2179	Ditto. ditto. Vol. II. No. 7.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2180	Kalpaná. A monthly paper. Vol. VI. No. 3.	ditto ..	Edited by Haridás Banerji.	ditto ...	Printed at 23, and published at 25, Panchánantalá Lane, Calcutta.	Printed by Rámbrahma Kumar, and published by Bipin Bihári Basu.
2181	Karnadhár. The Helmsman A monthly paper Vol. I. No. 2.	ditto ...	Edited by Hárán Chandra Rakshit.	ditto ...	Printed at 3, Maniktalá Street, and published at 19, Cornwallis Street, Calcutta.	Printed by Nagendra Nath Basu, and published by Jogindra Nath Rakshit.
2182	Krirá O Kautuk. Fun and Frolic. A weekly paper. Vol. I. No. 9.	ditto ...	Edited by Rádhesh Chandra Set.	ditto ...	Printed and published at 3, Maniktalá Street, Calcutta.	Printed and published by Nagendra Nath Basu.
2183	Ditto ditto. Vol. I No. 10.	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...
2184	Ditto ditto. Vol. I. No. 11.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2185	Ditto ditto. Vol. I. No. 12.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2186	Nabyabhárat. New India. A monthly paper. Vol. VI. No. 12.	ditto ...	Edited by Debi Prasanna Ráya Chaudhuri.	ditto ...	Printed at 36, Káliprasád Datta's Street, and published at 210-4, Cornwallis Street, Calcutta.	Printed by Son and Son, and published by Debiprasanna Raya Chaudhuri.
2187	Ditto ditto. Vol. VII. No. 1.	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...
2188	Nabajiban. The New Life. A monthly paper Nos. 50-51 (together).	ditto ...	Edited by Akshaya Chandra Sarkár.	ditto ...	Printed and published at 65, Akhil Mistri's Lane, Calcutta.	Printed and published by Rái Chandra Ghose.
2189	Ditto ditto. No. 52	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2190	Sakhá. Companion. A monthly paper. Vol. VII. No. 3.	ditto ...	Edited by Annadá Charan Sen.	ditto ..	Printed and published at 2, Benetola Lane, Calcutta.	Printed and published by Natabar Chakrabartti.
2191	Ditto ditto. Vol. VII. No. 4.	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto. ditto ...
2192	Sachitra Banga Rahasya Illustrated Bengali Punch. Vol. I. Nos. 3 and 4.	ditto ...	Edited by Dwáraká Nath Mukharji.	ditto ...	Printed at Uttarpárá, and published at Calcutta.	Printed and Shashibhushan Ghose, and published by Dwarakánath Mukharji.
2193	Sáhitya-Ratna Bhándár. The Store-house of the Gems of Literature. Vol. I. No. 1.	ditto ...	Edited by Krishna Chandra Mukharji.	ditto ...	Printed at 113, Masjidbári Street, and published at 2, Kánái Lál Dhar's Lane, Calcutta.	Printed by Jogendranáth Mallik, and published by Bhairab Chandra Dás.

Quarter ending 30th June 1889—continued.

8	9	10	11	12	13	14	15	16	17
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PERIODICALS—continued.									
1889	Pages.					Rs. A. P.			
Mar.,	16	8vo	1st	1,000	Printed	0 2 0	Bhupati Náth Dás and Brothers, Chinsura.	The avowed object of this new monthly is to support idolatry, and to oppose every proposal for a change in any direction.	2171
April, 27th	16	8vo	1st	1,000	ditto	0 2 0	ditto	ditto ditto	2172
May, 31st	16	8vo	1st	1,000	ditto	0 2 0	ditto	ditto ditto	2173
Mar., 27th	24	8vo dy	1st	2,000	ditto	0 4 0	Pyári Mohan Haldar, 54, Malanga Lane, Calcutta.	Articles of social, literary and antiquarian interest.	2174
„ 27th	24	8vo dy	1st	2,000	ditto	0 4 0	ditto	ditto ditto	2175
„ 27th	24	8vo dy	1st	2,000	ditto	0 4 0	ditto	ditto ditto	2176
April, 1st	24	8vo dy	1st	2,000	ditto	0 8 0	ditto	ditto ditto	2177
„ 1st	24	8vo dy	1st	2,000	ditto	0 4 0	ditto	ditto ditto	2178
„ 1st	24	8vo dy	1st	2,000	ditto	0 4 0	ditto	ditto ditto	2179
„ 5th	40	8vo dy	1st	1,000	ditto	0 8 0	Haridás Banerji, 25, Panchánantalá Lane, Calcutta.	Articles of literary and social interest.	2180
Mar., 15th	24	8vo dy	1st	400	ditto	0 2 0	Haran Chandra Rakshit, Mazilpur.	Pándit Hrishikesha Shástri ridicules those hypocrites who, having neglected orthodox rites and eaten English dinners all their lives, have now become orthodox Hindus, read the Bhagabadgítá without understanding it, fast on the eleventh day of the moon and boast of their Aryan origin.	2181
„ 23rd	4	Fcap	1st	300	ditto	0 0 3	Baikantha Náth Raya, Tahirpur.	Witty and funny sayings	2182
„ 23rd	4	Fcap	1st	300	ditto	0 0 3	ditto	ditto ditto	2183
„ 23rd	4	Fcap	1st	300	ditto	0 0 3	ditto	ditto ditto	2184
„ 23rd	4	Fcap	1st	300	ditto	0 0 3	ditto	ditto ditto	2185
April, 18th	76	8vo rl	1st	1,400	ditto	0 10 0	.....	Contains an account of Mukuta Ráya, who, about two centuries ago, tried to unite the different sections of the Brahmans of Bengal under one social system; and an article in which the writer exhorts his countrymen to adopt a middle course between radical go-aheadism and lifeless conservatism in the matter of social and national reforms.	2186
„ 29th	56	8vo rl	1st	1,500	ditto	0 7 0	.....	Contains articles on a variety of subjects.	2187
May, 7th	128	8vo dy	1st	1,000	ditto	0 5 0 per No.	Akshaya Chandra Sarkár, 61, Mirzápur Street, Calcutta.	In an article on the Congress the writer does not think that educated Bengalis are the representatives of the people.	2188
„ 15th	64	8vo dy	1st	1,000	ditto	0 5 0	ditto	One of the writers complains of the way in which school books are chosen. The Inspectors patronise their favourites at the expense of authors of high merit.	2189
Mar., 28th	16	8vo s rl	1st	1,500	ditto	0 1 6	Annadá Charan Sen, Calcutta.	Designed for the amusement and instruction of boys.	2190
April, 29th	16	8vo s rl	1st	1,500	ditto	0 1 6	ditto	.....	2191
May, 7th	24	8vo dy	1st	500	ditto	0 2 0	Dwaráká Nath Mukharji, Calcutta.	Witty stories and anecdotes	2192
April, 18th	16	8vo dy	1st	1,500	ditto	0 1 0	.....	Under the supervision of two of the well-known pundits of Calcutta. It contains articles of literary interest only.	2193

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						I.—BÉNGALI
	MISCELLANEOUS—*concld.*					
2194	Sáhitya-Ratna Bhándár The Store-house of the Gems of Literature. Vol. I. No. 2.	Bengali	Edited by Krishna Chandra Mukharji.	Miscellaneous.	Printed at 113, Masjidbari Street, and published at 2, Kánái Lál Dhar's Lane, Calcutta.	Printed by Jogendranáth Mallik, and published by Bhairab Chandra Dás.
2195	Shikshá Parichara. The Companion of Education. A monthly paper. Vol. I. No. 1.	ditto ..	Edited by Sarach Chandra Chaudhuri.	ditto ...	Printed and published at 92, Bowbazar Street, Calcutta.	Printed by Kishori Mohan Sen, and published by Prasanna Kumár Bhattácháryya.
2196	Sukhi Pákhi. The Happy Bird. A monthly paper Vol I. Nos. 7 and 8	ditto ...	Edited by Sáradá Prasád Basu.	ditto ...	Printed and published at Jessore.	Printed by Kshetra Gopál Sinha, and published by Sáradá Prasád Basu.
2197	Shuk Shári. The Parrot and his Mate. A monthly paper. Vol. I. No. 2.	ditto ...	Edited by Nibáran Chandra Kábyatirtha.	ditto ...	ditto ditto ...	Printed by Kshetra Gopal Sinha, and published by the Author.
	RELIGION.					
2198	Bedabyás. A monthly paper. Vol. III. No 12.	ditto ...	Edited by Bhudhar Chatterji.	Religion, H.	Printed and published at 34, Benetola Lane, Calcutta.	Printed by Ashutosh Banerji, and published by Amrita Lal Chatterji.
2199	Ditto ditto. Vol. IV No. 1.	ditto ...	ditto ...	ditto ...	ditto ditto ...	Printed and published by Ashutosh Banerji.
2200	Dharmabandhu. The Friend of Religion. A monthly paper. Vol. VIII. No. 1.	ditto ..	ditto ..	ditto, B.	Printed at 24, Beadon Street, and published at 100-4, Mechuábázár Road, Calcutta.	Printed by Mani Mohan Rakshit, and published by the Dharmabandhu Office.
2201	Khrishtiya Bándhab The Christian Friend A monthly paper Vol. XI. No. 1.	ditto ...	Edited by G. H. Rouse.	Religion, C.	Printed and published at the Baptist Mission Press, Calcutta.	Printed and published by G. H. Rouse.
2202	Ditto ditto. Vol. XI. No. 4.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2203	Ditto ditto. Vol XI. No. 5.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
2204	Shástra Páth-Sammilani An Association for the Study of the Holy Scriptures. A monthly paper. No. 1.	ditto ...	Edited by W. G. Brochway.	ditto ..	ditto ditto ...	ditto ditto ...
2205	Ditto ditto. Vol I. No. 2.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
						II.—ENGLISH
	ART.					
734	The Indian Agricultural Gazette. Vol. I.	English	Edited by G. C. Bose.	Art ...	Printed and published at 34-1, Kalutola Street, Calcutta.	Printed and published by Bihari Lal Sarkár.
735	Ditto ditto Vol. IV. Nos. 46 to 48.	ditto ..	ditto ...	ditto ..	Printed at Serampore, and published at Calcutta.	Published by H. Pátra: ...
	MISCELLANEOUS.					
736	Journal of the Asiatic Society of Bengal, Vol LVII. Part II. No. 4 1888.	ditto ...	Edited by the Natural History Secretary.	Miscellaneous.	Printed at the Baptist Mission Press, and published at 57, Park Street, Calcutta.	Printed by G. H. Rouse, and published by the Asiatic Society.
737	The Calcutta Review April 1889.	ditto ...	Edited by H. A. D. Phillips, C.S.	ditto ...	Printed and published at 12, Bentinck Street, Calcutta.	Printed and published by Thomas S. Smith.

Quarter ending 30th June 1889—continued.

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PERIODICALS—concluded.									
1889.	Pages.					Rs. A. P.			
June, 4th	16	8vo dy...	1st ...	1,000	Printed	0 1 0	Dwaráká Nath Mukharji, Calcutta.	Issued under the supervision of two well-known pundits of Calcutta. It contains articles of literary interest only.	2194
April, 20th	24	8vo rl...	1st ...	1,000	ditto ...	0 3 0	Sarach Chandra Chaudhuri, Putiya.	The objects of the work are the spread of correct ideas about education, the moral training of students, and the reformation of the present system of education.	2195
„ 24th	12	8vo dy...	...	.....	ditto ...	0 0 6	Sárádá Prasád Basu.	Articles of literary interest ...	2196
Mar., 20th	16	8vo dy ..	1st ...	1,000	ditto ...	0 1 6	Nibáran Chandra Kábyatirtha, Jessore.	Articles of literary, historical and scientific interest.	2197
April, 28th	22	8vo dy...	1st ..	800	ditto ...	0 4 0	Bhudhar Chatterji.	An organ of the Hindu revivalists of the Conservative school. In an article on the Congress the writer characterises the movement as mere childishness. It aims at impossibilities. It aims at cajoling Englishmen for the purpose of obtaining political privileges for natives. But the English are wide awake. The writer sounds a note of alarm warning orthodox Hindus against the attempt of a section of the Congressists to encourage widow marriage, to discourage early marriage, and to remove the social obstacles in the way of undertaking journeys to England.	2198
May, 15th	28	8vo rl...	1st ...	900	ditto ...	0 4 0	Gáyatri Sundari Debi.	.....	2199
April, 28th	32	8vo dy...	1st ...	550	ditto ...	0 4 0	.....	An organ of the Sádháran Brahmo Samaj.	2200
Jan., 12th	24	8vo rl....	1st ...	550	ditto ...	0 1 6	G. H. Rouse, Baptist Mission Press, Calcutta.	An organ of the Christian community of Bengal.	2201
Mar., 30th	24	8vo rl....	1st ...	550	ditto ..	0 1 6	ditto ...	ditto ditto ...	2202
May, 2nd	28	8vo rl....	1st ...	500	ditto ..	0 1 6	ditto ...	ditto ditto ..	2203
April, 11th	8	8vo rl....	1st ...	2,000	ditto ...	.....	Revd. W. G. Brochway, Bhawanipur.	ditto ditto ...	2204
May, 3rd	20	8vo rl....	1st ...	2,000	ditto ...	.....	ditto ...	ditto ditto ...	2205
PERIODICALS.									
...	288	4to Fc...	1st ...	500	ditto ...	...	G. C. Bose, 116, Bow Bazar Street, Calcutta.	Articles on a variety of agricultural and economic subjects. Twelve parts issued together.	734
June, 5th	32	4to Fc...	1st ...	250	ditto ...	2 0 0	ditto ...	The Assam Agricultural Department; Horse and Pony breeding Operations in the Madras Presidency; Coir fibre; Jute trade of Calcutta; Gunny bags, Gunny cloth; James Montgomery on China grass.	735
Mar., 23rd	124	8vo rl ...	1st ...	650	ditto ...	1 8 0	Asiatic Society, 57, Park Street, Calcutta.	.....	736
April, 1st	263	8vo dy...	1st ...	350	ditto ...	4 0 0	.....	.....	737

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Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						ENGLISH
	MISCELLANEOUS—*concld.*					
738	The National Magazine. New Series. Vol. III. No. 1.	English	Edited by Káli Prasanna De.	Miscellaneous.	Printed at 132, Lower Circular Road, and published at 32, Kálidás Sinha's Lane, Calcutta.	Printed by J. Larkins, and published by Káli Prasanna De.
739	Ditto ditto, Vol. III. No. 2.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
740	Ditto ditto, Vol. III, No. 3.	ditto ...	ditto ...	ditto ...	ditto ditto ..	ditto ditto ...
	The following work is designed for educational purposes.					
741	The Boys' Own Magazine. Vol 1. No. 1.	ditto ...	Edited by Manmatha Nath Datta.	ditto ...	Printed and published at 65-2, Beadon Street, Calcutta.	Printed by R. K. Bhattácháryya, and published by Trailokya Náth Datta.
	RELIGION.					
742	The Indian Evangelical Review for April 1889.	ditto ...	Edited by K. S. Macdonald, M.A.	Religion, C.	Printed and published at 20, British Indian Street, Calcutta.	Printed and published by D. M. Traill.
743	The Indian Church Quarterly Review. Vol. 11. No. 2.	ditto ...	Edited by A. Saunders Dyer, M.A.	ditto ...	Printed and published at 132, Lower Circular Road, Calcutta.	Printed and published by J. Larkins.
						III.—HINDI
	MISCELLANEOUS.					
63	Kshatriya Patriká. A monthly paper. Vol. VIII. No. 10.	Hindi ...	Edited by Rámdin Sinha.	Miscellaneous.	Printed and published at the Khargabilás Press, Bankipur.	Printed and published by Saheb Prasád Sinha.
64	Ditto ditto. Vol VIII. No. 11.	ditto ..	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
65	Ditto. ditto. Vol. VIII. No. 12.	ditto ...	ditto ...	ditto ..	ditto ditto ...	ditto ditto ...
66	Ditto. ditto. Vol. IX. No. 1.	ditto ...	ditto ..	ditto ...	ditto ditto ...	ditto ditto ...
						IV.—URDU
	RELIGION.					
38	Anjamani Masihi. A Christian Paper. No. 11.	Urdu ...	Munshi Enyat Ullá.	Religion, C.	Printed at the Baptist Mission Press, and published at 31, Mirzapore 2nd Lane, Calcutta.	Printed by G. H. Rouse, and published by Munshi Enayatulla.
						V.—URIYA
	MISCELLANEOUS.					
51	Ashá Hope. A monthly paper. Vol. I. No. 6.	Uriya ...	Edited by Sádhu Charan Ráya.	Miscellaneous.	Printed and published at the Victoria Press, Cuttack.	Printed and published by Abhin Nayak.
						II.—BI-LINGUAL
						I.—BENGALI AND
	RELIGION.					
60	The New Light. O Banga Bandhu. A fortnightly paper. Vol. V. Nos. 13 to 24 and Vol. XIX, Nos. 13 to 24.	Bengali and English.	Edited by Nabin Chandra De.	Religion, B.	Printed and published at the East Bengal Press, Dacca.	Printed and published by Nabin Chandra De.

8	9	10	11	12	13	14	1	16	17
Date of issue from the press, or place of publication.	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	REMARKS.	Number.
PERIODICALS—concluded.									
1889.	Pages.					Rs. A. A.			
April, 5th	40	8vo dy...	1st ...	900	Printed	1 0 0	Káli Prasanna De.	Articles of literary and historical interest.	738
May, 8th	40	8vo ...	1st ...	900	ditto ...	1 0 0	ditto ...	ditto ditto ...	739
„ 19th	40	8vo ...	1st ...	900	ditto ...	1 0 0	ditto ...	Contains an account of travels through Bohemia, Vienna, and the Tyrol, by Mr. R. C. Datta.	740
April, 27th	20	8vo dy	1st ...	500	ditto ...	0 4 0	Manmatha Náth Datta, 65-2, Beadon Street, Calcutta.	.....	741
„ 1st	126	8vo dy	1st ...	400	ditto ...	1 4 0	Rev. K. S. Macdonald, 32-6, Beadon Street, Calcutta.	The usual contents	742
„ 29th	95	8vo rl	1st ...	400	ditto ...	2 0 0	A. Saunders, Dyer.	ditto	743
PERIODICALS.									
1889.									
Mar., 15th	24	8vo rl	1st ..	200	ditto ...	0 8 0	Rámdin Sinha, Khargabilas Press, Bankipur.	Has an article on the subject of educating public opinion.	63
„ 16th	23	8vo rl	1st ...	200	ditto ...	0 8 0	ditto ...	Has an article on Chinese transliteration of Sanskrit words.	64
May, 12th	24	8vo rl	1st ...	200	ditto ...	0 8 0	ditto ...	Vaishnab songs and the preparation of various kinds of sweetmeats.	65
„ 13th	24	8vo rl	1st ...	150	ditto ...	0 8 0	ditto ...	Translations from the Spectator and from Goldsmith's work.	66
PERIODICAL.									
May, 2nd	4	8vo dy	1st ...	100	ditto ...	.....	Munshi Enayatulla, 31, Mirzapore 2nd Lane, Calcutta.	The usual contents	38
PERIODICAL.									
Mar., 17th	40	8vo rl	1st ...	200	ditto ...	0 1 0	.....	In one of the articles entitled *Swádhínatá* the writer bewails the unfortunate lot of India, and asks his readers to cultivate a love of independence. In another Mazzini is praised as the liberator of his country.	51
PERIODICALS.									
ENGLISH PERIODICALS.									
April, 10th	71 sheets.	F cap.	1st ...	200	ditto ...	3 0 0	.....	An organ of the Navabidhán Church containing the history of the missionary work of that Church during the year 1888.	60

1	2	3	4	5	6	7
Number.	Title (to be translated into English when the title-page is not in that language).	Language in which the book is written.	Name of author, translator, or editor of the book, or any part of it.	Subject.	Place of printing and place of publication.	Name or firm of printer, and name or firm of publisher.
						II.—BENGALI AND
	MEDICINE.					
61	Chikitsá Darpan. The Medical Journal. A Monthly Paper. Vol. II. No. 8.	Bengali and Sanskrit.	Edited by Rajani Kánta Mukharji.	Medicine. E. and N.	Printed at 37, Mochhuá-bazar Street, Calcutta, and published at Mollábelia, Nuddea.	Printed by Sarat Chandra Deb, and published by the Editor.
62	Ditto. ditto. Vol. II. No. 9.	ditto ...	ditto ...	ditto ...	ditto ditto ...	ditto ditto ...
						III.—TRI-LINGUAL
	MISCELLANEOUS.					I—BENGALI, ENGLISH, AND
	The following works are designed for educational purposes.					
1	The Students' Weekly. Standard No. 1.	Bengali, English, and Sanskrit.	Edited by Ashutosh Mitra.	Miscellaneous.	Printed at 78, Amherst Street, and published at 79, Cornwallis Street, Calcutta.	Printed by Bánikánta Basu, and published by the Star Depository.
2	Ditto ditto. Standard No. 2.	ditto ...	ditto ...	ditto ...	Printed and published at 78, Amherst Street, Calcutta.	Printed by Ambiká Charan Shom, and published by the New Britannia Press Depository.

Quarter ending 30th June 1889—concluded.

8	9	10	11	12	13	14	15	16	17
Date of issue from the press, or place of publication	Number of sheets, leaves, or pages.	Size.	First, second, or other edition.	Number of copies of which the edition consists.	Printed or lithographed.	Price at which the book is sold to the public.	Name and residence of proprietor of copyright, or any portion of it.	Remarks.	Number
SANSKRIT PERIODICALS.									
1889.	Pages.					Rs. A. P.			
Feb, 25th	22	12mo rl	1st ...	500	ditto ...	0 4 0	Rajani Kánta Mukharji, Nuddea.	The Sanskrit portion contains the chapter on the medicines of fever from a Sanskrit work entitled Jogámritam, which treats of medicines prepared by the combination of a variety of drugs.	61
Mar., 10th	24	12mo rl	1st ...	500	ditto ...	0 4 0	ditto ..	ditto ditto ...	6
PERIODICALS.									
SANSKRIT PERIODICALS.									
Mar, 10th	48	12mo dy	1st ..	1,000	ditto ...	0 1 0	[illegible]	Designed for the use of students in the higher classes of English schools.	
May, 6th	24	12mo dy	1st ...	1,000	ditto ...	0 1 0	[illegible] ..	ditto ditto ...	

1	2	3	4	5	6	7
Number.	The title of the book and the contents of the title page, with a translation into English of such title or contents when the same are not in the English language.	The place of printing and the place of publication.	The name or firm of the printer, and the name or firm of the publisher.	The date of issue from the press, or of publication.	The name and residence of the proprietor of the copyright or of any portion of such copyright.	The date on which the entry was registered.
				1889.		
997	Komal Kabitá. Easy Verses.	Printed and published at the Girish Press, Dacca.	Printed by Kalimuddin, and published by Hara Kumár Bose.	25th March ...	Káli Prasanna Ghosh, Dacca.	.....
998	Pati Sevá. A book on the duties of Wives towards their Husbands.	Printed and published at the Ramendra Press, Noakhali.	Printed and published by Muhammad Yusaf Ali Munshi.	10th July ...	Muhammad Yusaf Ali, thana Haksham, village Chandame.	.....
999	Medical Hints for the Hills.	Printed and published at Lochnagar, Darjeeling.	Printed and published by Nanda Lál Ráya.	15th Aug. ...	Dr. S. O. Bishop, Darjeeling.	.....
1000	Adab-ul. Mufrad. Lessons on Morals and Manners.	Lithographed and published at Arrah.	Lithographed by Muhammad Idris, and published by Abu Muhammad Ibrahim.	7th April ..	Abu Muhammad Ibrahim, Arrah.	.....
1001	Musnad-i-Imam Safái. Imam Safái's Throne.	ditto ...	ditto ...	20th Mar. ...	ditto ...	.....
1002	Saral Dhárápát. Easy Arithmetical Tables.	Printed and published at the Roy Press, Bogra.	Printed by Binod Bihári Banerji, and published by Náráyan Chandra Bhattácháryya.	22nd Feb. ...	.....	.....

The Catalogue of Books received in the Bengal Library during the Second Quarter ending 30th June 1889 contains the following :—

No.	Language.	Books.		Total.
		Non-educational.	Educational.	
	Uni-linguals.			
1	Arabic	2	.....	2
2	Assamese	3	3	3
3	Bengali	178	240	418
4	English	29	58	87
5	Hindi	36	9	45
6	Musalmani-Bengali	24	.....	24
7	Nepalese	1	.....	1
8	Persian	.....	2	2
9	Sanskrit	28	1	29
10	Urdu	4	.....	4
11	Uriya	10	15	25
	Total Uni-linguals ...	315	328	643
	Bi-linguals.			
1	Arabic and Musalmani-Bengali	1	.....	1
2	Arabic and Urdu	1	.....	1
3	Bengali and English	4	25	29
4	Bengali and Pali	1	.....	1
5	Bengali and Sanskrit	27	5	32
6	English and Hindi	.....	1	1
7	English and Sanskrit	.....	1	1
8	English and Uriyá	.....	1	1
9	Persian and Urdu	1	.....	1
10	Sanskrit and Uriya	1	.....	1
	Total Bi-linguals ...	36	33	69
	Tri-linguals.			
1	Bengali, English, and Sanskrit	.....	3	3
	Total Tri-linguals ...	.....	3	3
	Uni-lingual Periodicals.			
1	Bengali Periodicals	64	.....	64
2	English Periodicals	9	1	10
3	Hindi Periodicals	4	.....	4
4	Urdu Periodicals	1	.....	1
5	Uriya Periodicals	1	.....	1
	Total Uni-lingual Periodicals ...	79	1	80
	Bi-lingual Periodicals.			
1	Bengali and English Periodicals	1	.....	1
2	Bengali and Sanskrit Periodicals	2	.....	2
	Total Bi-lingual Periodicals ...	3	.....	3
	Tri-lingual Periodicals.			
1	Bengali, English, and Sanskrit Periodicals	.....	2	2
	Total Tri-lingual Periodicals ...	.....	2	2
	Grand Total of Books, &c., &c. ...	433	367	800

Calcutta;

The 5th December 1889.

HARAPRASAD SHASTRI,

Offg. Librarian of the Bengal Library and Keeper of the Catalogue of Books under Section XVIII, Act XXV of 1867.

[REGISTERED No. 29.]

No. 9 of 1890.

SUPPLEMENT TO
The Calcutta Gazette.

WEDNESDAY, FEBRUARY 26, 1890.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT *separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.*

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Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., Cap. 67.

THE Council met at the Council Chamber on Saturday, the 15th February, 1890.

Present:

The HON'BLE SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant-Governor of Bengal, *presiding.*

The HON'BLE SIR CHARLES PAUL, K.C.I.E., *Advocate-General.*

The HON'BLE F. B. PEACOCK.

The HON'BLE P. NOLAN.

The HON'BLE T. T. ALLEN.

The HON'BLE SIR HENRY HARRISON, KT.

The HON'BLE SIR ALFRED CROFT, K.C.I.E.

The HON'BLE C. H. MOORE.

The HON'BLE H. PRATT.

The HON'BLE SHAHZADA MAHOMMED FURROKH SHAH.

The HON'BLE DR. RASH BEHARY GHOSE.

The HON'BLE RAJA RAMESHWAR SING BAHADUR.

CALCUTTA PORT BILL.

The Hon'ble Sir Henry Harrison moved that the Report of the Select Committee on the Bill to consolidate and amend the law relating to the Port of Calcutta, and to the appointment of Commissioners for the said Port, be taken into consideration in order to the settlement of the clauses of the Bill.

The Motion was put and agreed to.

The Hon'ble Sir Henry Harrison also moved that the clauses of the Bill be considered for settlement in the form recommended by the Select Committee.

He said:—"I think the Select Committee may fairly claim to be satisfied with the work which they have put before the Council. It is perfectly clear that in regard to one section, eighty-five, and other matters cognate thereto, we have been confronted with very great difficulties which, I am free to admit that though we have tried our best to surmount, still remain for discussion. But putting that section aside, and the questions arising out of it, and looking to the fact that no other amendments are proposed except in regard to that matter, I think we may claim to have settled the Bill in a manner satisfactory to all parties.

"There were several other controversial questions: for instance, the question of the number of Commissioners, in regard to which the Bill can only be said not to have given general satisfaction, because the National Chamber of Commerce have expressed their dissatisfaction; but upon that point the Lieutenant-Governor gave a hearing to the representatives of that Chamber, and at the end, I think, they also were satisfied. Anyhow, it seems that no member of the Council has moved an amendment on that section. The number of members asked for has been given to the Bengal Chamber of Commerce. And, as regards the number of native Commissioners, we think it better to trust to the probability that two of the members who will be returned by the elective bodies themselves will be natives, than to say that two of the elected Commissioners must be natives. Your Honour yourself has pointed out that to the Bengal Government are allotted only five members, whereas it may be said that six interests, including the Chairman of the Municipality, require representation. As regards the Municipality, I think it is clear from our proceedings that we do not suggest any guarantee that the Chairman shall be nominated; and I may say that this is one of the six interests for which there are five vacancies—but what the Select Committee have considered, and what the Government, I believe, have accepted, is that, if the Chairman is to be a member then he can be nominated. Anyhow, it is intended that the Municipal Commissioners ought to have the right of free election without having to consider that, if they do not elect their Chairman he cannot be a member of the Port Commission.

"Then, as regards the questions as to the control of the Government over the budget and over rules to be passed by the Port Commissioners and other matters, we have settled them in a way which, from the absence of any amendment, seems to have given satisfaction to all parties.

"Lastly, as to the important question of the equitable assessment of the Port Trust property, we have introduced a new assessment section which appears to give satisfaction on the one hand to the Port Trust, and on the other hand to the Municipality and the Local Government. Your Honour appears to be satisfied with the duty imposed on the Government of mediating in the matter should it appear necessary.

"As regards the one debatable section, its details will be discussed when the amendment comes before the Council. All I wish to say now generally is, that I think the Hon'ble Mr. Moore will admit that from the first the Council has endeavoured to meet the question in a conciliatory manner, and that the impression that there was an endeavour to harden the law or to make the law more drastic, is without foundation. From the very first we introduced some modification in the former section by giving the Local Government the power of awarding compensation when they are satisfied it should be given; but it appears that the persons who are interested do not consider that an executive guarantee of that kind is satisfactory. They consider that they are entitled to some legal guarantee, and therefore in that form the section is no longer before the Council, but has been modified. Still I may fairly claim to say that from

the first the Select Committee, wherever they have touched questions of this kind at all, have always touched them in the way of softening rather than of hardening previous laws.

"It may be objected that the section was so worded as to have retrospective effect; but the old section required to be re-introduced with retrospective effect, because it has been in force for the last twenty years: and when we found there must be a discussion on it, we placed it in the more simple form of giving it retrospective effect instead of giving it effect from 1870. If the solution of giving it effect from 1870 had been considered satisfactory, no doubt the Select Committee would readily have compromised upon that basis. The only reason why it was put in the simpler form was, that the principle might come before the Council in the widest possible form; as they understood from the Hon'ble Mr. Moore that it would be contested. Otherwise no one would have objected to alter in such a way as not to take away any rights which the previous law had not taken away."

The Motion was put and agreed to.

The Hon'ble MR. MOORE moved that the following clause be added to section 2 of the Bill:—

'Nothing herein contained shall deprive any person of any right of property or other private right except as hereinafter expressly provided.'

He said:—"I have not come here with any long-set speech on this subject. All I wish to do is to capture your votes, and the less I trouble you the more chance I shall have of succeeding."

[The Hon'ble SIR HENRY HARRISON interrupting, asked whether it was more convenient that the discussion should take place over the present amendment or over the next: he was willing to accept this amendment?]

The Motion was put and agreed to.

The Hon'ble Mr. MOORE also moved that, for section 85 of the Bill, the following be substituted:—

'85. In case any wharf, quay, stage, jetty, pier, erection or mooring may have been or hereafter shall be, made, erected, or fixed within or without high-water-mark without the limits of the port, and thereafter the limits for the time being of the port shall be extended so as to include the place on which such wharf, quay, stage, jetty, pier, erection or mooring shall have been made, erected, or fixed, it shall be lawful for the Commissioners, when the safety of navigation or the improvement, maintenance, or good government of the port so requires, to remove, fill up, or destroy such wharf, quay, stage, jetty, pier, erection or mooring:

Provided that when any such work has, under this section, been so dealt with, the Commissioners shall, when such work was made on behalf of the public for the convenience of public traffic, make or provide for the use of the public such sufficient wharves, quays, stages, jetties, piers, erections or moorings as the Local Government may direct, and shall, when such work was made by any private person for the convenience of private traffic—

(*a*) on land belonging to the Government, with the previous consent of the Local Government in writing, or of which the making, erecting, or fixing has been subsequently sanctioned by the Local Government in writing; or

(*b*) on land belonging to the private owner, whether acquired by grant from the Government, or by prescriptive right, or otherwise,

make compensation therefor to the owners thereof to such an amount as may be determined by agreement by and between the Commissioners and such owners, or by the Civil Court in which a suit may be brought to establish and enforce such right of compensation.'

He said:—"I presume, I may hope, you have all read the memorial of the Chamber of Commerce, because that memorial, coupled with the dissent I previously recorded, I put in, so to speak, as my case. I wish at the outset to state that every legal allusion, historical and otherwise, in that memorial was submitted, approved, and settled by Mr. Woodroffe, the Counsel consulted by the Chamber. I specially mention this, because I have heard it has been concluded that Mr. Woodroffe did not approve the arguments set out in the first two pages of the memorial, because in the opinions quoted in the annexures he did not specially allude to them. That is easy of explanation. The opinions merely replied to specific points put to him, which did not happen to include those arguments the drift of which, I think, the Council understands.

"Briefly it is this: I maintain that this Bill as drafted discards the principle existing in the governing Ports Bill of the Supreme Government that, certain private property cannot be included within the limits of a port, and that every sense of reason and justice demands that this Bill should be brought into conformity with that principle, that is to say, with the Bill of the Supreme Government. If it is not so, it gives rise to great anomalies, as it makes the tenure of property on foreshores ruled by the Port Act totally different to that ruled by the substantive law of the land; and as no limit is ascribed to the distance to which the port may be extended, no holder of such property is secure in the understanding of his liabilities and obligations, as at any time a stroke of the pen may entirely change them. The Port Law may with the port go up to Chinsurah or Hooghly, or down to Diamond Harbour, or anywhere, and surely the perpetuation of such a state of affairs is neither sound nor just legislation.

"The section which I move indicates the principle I fight for, as well the further essential and equally sound doctrine that, when private property and rights have to be acquired for the public good,—the power to acquire which, I do not contest, must under proper conditions exist—complete compensation must be given for what is taken away, and confiscation without compensation must under no kind of circumstances be legalised.

"That was the principle enunciated by the Supreme Government when it re-enacted their Ports Bill in 1875, and it was deliberately enunciated because the true interpretation of the Act of 1855 on this point had been misunderstood in the administration of the Bengal Act V of 1870, which is shown in the remark of Mr. Hobhouse at the time, that the literal construction of the section (*i.e.*, the section in the Act of 1855 to which all my remarks refer) could not have been intended (that is to say, the construction that a private wharf could be included within the limits of the port) taken in connection with the fact that on literal construction the Port Commissioners had under Act VII of 1870 acted in regard to a private wharf, the owners of which drew the attention of Mr. Hobhouse to the circumstance, with the result that he spoke as quoted and introduced the change named.

"Now that we are re-enacting our Act passed five years before this change in the Government of India Bill, it behoves us to follow the same lines, and correct our Bill as the Supreme Government corrected theirs which governs ours. Towards this result I ask for your votes for my motion; and have only further to point out that this Bill is to rule the Port Commissioners, who are the guardians of the trade of the port, which is represented by the traders whom I represent in this Council. There is no antagonism of thought on this point between traders and their guardians; and as the representative of the traders, I say we are strongly in favour of the principle that, private property and rights within or without the port must be respected, and when acquired for public good must be paid for; that we are the people who have to pay, and being willing and desirous of paying what is equitable and proper, we press that legislation which is for us should be on these lines.

"I cannot find one dissentient voice to what I urge outside the walls of this Council; and to the best of my belief, therefore, if this motion is lost, the only opponents to it connected with the port of Calcutta will be the majority which reject it, who will by such rejection, to the best of my belief, be denying that the administration of the port should in any way recognise that private property and rights exist."

The Hon'ble SIR HENRY HARRISON said:—"It will probably be most convenient if, simultaneously with the amendment moved by the Hon'ble Mr. Moore, I move the amendment which stands in my name, as it covers the same ground. On this point, I think, I labour under a certain disadvantage, because the Hon'ble Mr. Moore has not made any allusion to this amendment; he has not stated in what respects it falls short of what he thinks right and proper. This I find a great difficulty, because the clause which I propose has been carefully worded to meet the very principles for which the hon'ble member contends."

The HON'BLE MR. MOORE continued:—"I was not aware I could allude to another amendment in discussing this. My main objections are in the third

opinion of Mr. Woodroffe, who points out the thick veil of ambiguity in which the context of the word 'lawfully' is concealed, and what it here means and implies. That in the sanction to be given by the Local Government to destruction of a jetty, it is not laid down that the party interested is to receive previous notice of the intention of the Port Commissioners, and such sanction might be applied for and given as a matter of routine by an Under-Secretary without the person interested knowing anything of it, until the notification dooming his property was pasted upon it. That my section more clearly defines the exact circumstances under which compensation is due and must be paid, and it sets out the principles which justifies private property being touched, namely, when necessary for the safety of navigation or good government of the port; whereas under the Hon'ble Sir Henry Harrison's section, power of seizure is given without naming any reason for it at all."

The Hon'ble SIR HENRY HARRISON then moved by way of amendment that, for section 85 of the Bill, the following be substituted :—

'In case any wharf, quay, stage, jetty, pier, erection or mooring may have been, or shall hereafter be, made, erected, or fixed below high-water-mark without the limits for the time being of the port, and thereafter the limits of the port shall be extended so as to include the place on which such wharf, quay, stage, jetty, pier, erection or mooring shall have been made, erected, or fixed, it shall be lawful for the Commissioners, with the sanction of the Local Government in writing, to remove, fill up, or destroy such wharf, quay, stage, jetty, pier, erection or mooring:

Provided that any person who may have lawfully made, erected, or fixed such wharf, quay, stage, jetty, pier, erection or mooring, or who may have acquired a prescriptive right thereto by possession of sixty years or upwards, his representatives or assigns, shall be entitled to institute a civil suit for the award of compensation to him for the injury caused by the removal, filling up, or destruction hereinbefore mentioned.'

He said:—"I think I interpret the general feeling of the Council when I say that if the objections to this clause are what has been stated, they are not of a very formidable character, and there is no great gulf between the Hon'ble Mr. Moore and myself. The only reason why no such clause as that to which the hon'ble member refers has been inserted is, because it is not usual to do so; because it is obviously right and proper that the Lieutenant-Governor should consult the persons to be affected, that being the usual way for the management of business. If that is the only objection raised, there will be nothing to prevent the insertion of words which will substantially secure that the interest to be affected has warning of the intention of the Port Commissioners before any order is passed." [The PRESIDENT:—"That could be done by rules."] "So far that objection can be easily removed.

"The other objection which has been taken is, that the words used are obscure. The question is, whether the obscurity is to be found in the framing of the amendment or in the subject-matter of it. If the matter itself is obscure, then legislation regarding it must, to a certain extent, correspond to that obscurity. These words were very carefully selected because it was supposed that they honestly conceded the whole principle which the Hon'ble Mr. Moore has enunciated, and which I may say generally is accepted by this Council as much as by those outside, namely, that if the Port Commissioners have to acquire any private rights they must pay for those rights. The idea of confiscation is entirely repugnant to every member of the Council, and none of us repudiate the idea less strongly than the Hon'ble Mr. Moore himself.

"The whole difficulty lies in the question, whether or not any rights do exist? It is perfectly true that the India Act of 1875 was framed with scrupulous care to prevent the possibility of its being interpreted against private rights. At the same time, I am sure, the hon'ble member will remember that Mr. Hobhouse, on being pressed to go further, not only to protect private rights but to bestow rights, said that the section would not go so far. If the India Council were asked to arbitrate in this matter, it was very probable their decision would not be in the direction wished; but they were careful to maintain any rights which did exist, and that is precisely what my amendment is intended to do.

"Now in a matter of this kind there ought not to be any strong party feeling, because it is, if I may say so, an interest legislating for itself. In many

cases where the Government or the Legislature are deciding matters, unfortunately they are obliged to recognise the existence of rival interests. The Government, whilst considering the interests of the whole community and representing it, occupies the position of an arbitrator, and is obliged to take cognizance of the fact that there are rival interests, and that it must endeavour to hold the balance evenly between them. But fortunately in this instance there are no rival interests. The Government is merely legislating on behalf of the Port Trust, and this Trust may be fairly described as a body in which the trade and commerce of Calcutta is able to organise itself for the purpose of its own benefit, for the purpose of facilitating and improving the trade of the port.

"On the other hand, the objections are raised on behalf of individual members of the community engaged in the trade of the port. So that really we here enjoy the special advantage that we are not in any way deciding between rival interests, or in any way defending one interest against another; but simply we are considering within the circle of one and the same interest how much ought to be given to the interests of the trade as a whole, and how much is fairly due to the interests of its individual members. And on this matter I am bound to say that the remark made by the Hon'ble Mr. Moore, that it is the wish of those interested in the trade that the greatest possible liberality should be shown to individual interests, ought to commend itself very much to our consideration.

"Still we are not legislating for the hour, and we must not, therefore, attach too much weight to what may be merely the sentiment of the hour. We must try and frame the law in accordance with sound and tenable principles, and must bear in mind that as the Port Trust are a body which only levies what it needs for its expenditure, and that whatever compensation is to be paid must come from the trade of the port as a whole, and whatever is saved is similarly saved to the trade of the port. Therefore I hope it will be fully realised by every member of the Council that, this case is not a very invidious one, and can in no case subject us to any invidious criticism of sacrificing the interests of one class to those of another. What we are considering is, how far the trade and commerce of the Port of Calcutta can be legitimately charged for the compensation to be paid to individual members whose interests come into conflict with those of their own body. Now putting it in that way, I must say it seems to me that the answer ought to be very simple; that every private right ought to be scrupulously respected.

"But is not it equally clear that to go beyond this is wrong and bad legislation? Supposing there is no right; supposing somebody is wrongly holding adversely to the interests of the community at large; is it not equally clear that the interests of persons with no rights ought not to be allowed to block the interests of the community? Is it not perfectly clear that the interests of the community are paramount? If you admit these two principles—and I can hardly conceive any one contending that they are not proper principles—then we are justified in passing the present amendment. We carefully preserve existing rights. Power must be given to the Port Commissioners to remove any jetty or wharf, or other structure which interferes with the working of the port; but then comes the question how far compensation ought to be given. The amendment says: 'Provided that any person who may have lawfully made, erected, or fixed such wharf, &c., or who may have acquired a prescriptive right thereto by possession of sixty years or upwards, his representatives or assigns, shall be entitled to institute a civil suit for the award of compensation.' We are told that this is ambiguous, but the ambiguity is in the character of the right, not in the wording of the section; and this is an ambiguity from which we cannot escape. We say that if a person has lawfully put up a particular jetty, then he shall be entitled to sue for compensation. Surely, this is as much as we can be fairly expected to say. If it has been lawfully put up, a suit for compensation will lie; and if, though not lawfully put up, a prescriptive right can be shown, in that case also a suit can lie for compensation. Therefore do we not here do everything that can be asked, unless we are asked to give more than exists? We say that, private rights are to have their full sixteen annas in the rupee: we only object to giving them twenty-four annas.

"The objection which fairly lies against the Hon'ble Mr Moore's amendment is, that it makes the Council the judge beforehand of a matter which should be left to the judgment of a Court of Law, namely, that compensation shall be given; that is to say, that though the Court may find that there is no case for compensation, yet we are asked to decide beforehand that compensation shall be given.

"It is well known that Courts of Law are on the whole sympathetic with the rights of individuals, and yet we are asked to legislate that in all cases compensation is to be given; that the Court is not to decide upon the question whether any compensation ought to be given, but only what the amount of compensation should be. I appeal to you to say whether, in reality, it is not *we* who have principle on our side; whether it is not we who are raising our protest against confiscation, *i.e.*, the confiscation of the rights of the public? If the principle be what the Hon'ble Mr. Moore recommends, if it is only a question of this principle, I think he would have every one of us on his side; but his own amendment does not carry out the principle. It seeks to add something to private rights. The amendment framed here has been scrupulously worded with the precise object of giving effect to what the Hon'ble Mr. Moore asks, namely, that there should be no confiscation of rights which exist; but we say also that there should be no addition of rights which do not exist.

"I may even say that my amendment goes further. Although by a law of twenty years' standing greater powers are given, namely, that the law says that no compensation shall be given, we limit it to what we think right and proper, and just; we amend the law and say, provided the structure is lawfully erected, or has acquired a prescriptive right, compensation is to be given.

"If no further fault can be found with the amendment than what has already been alleged, I ask the Council to say in what respect it falls short of what is right and proper? Does it not concede everything which the earliest opinion, and even the second opinion, of Mr. Woodroffe asked for? It concedes the case in which jetties have been lawfully put up, and the removal of which causes injury, and in such cases it specially prescribes that compensation may be claimed; and it leaves to the Courts to determine whether, according to the law of the land, a case for compensation has been established or not.

"Therefore, I hope, on all these grounds the Council will see its way to accept my amendment. I say it does not differ much from the Hon'ble Mr. Moore's amendment, but where it does differ, it is precisely upon those points on which the Council ought to insist, namely, that it refuses to give further rights—rights which do not exist; it refuses to say that a person who has not a right to compensation shall have right to get it. With these remarks I beg to recommend my amendment to the Council."

The Hon'ble MR. PEACOCK said:—"I desire to say a few words in support of the Hon'ble Mr. Moore's amendment; and I support the amendment chiefly on the ground that, by the legislation of the Government of India, an example has been set which, I think, might well be accepted by this Council. In the Acts of 1875 and 1889 largely, and certainly in the Act of 1855 to a smaller extent, not only was there no infringement of private rights—perhaps I ought not to say infringement of rights, as that would be going too far—but certainly any interference with private property has been carefully avoided.

"In section 57 of Act V (B.C.) of 1870 for the first time this principle of interference was introduced, in so far that it gave to the Port Commissioners certain rights which, it seems to me, might be carried too far in certain cases. But in section 85 as proposed in the Bill as amended by the Select Committee the same thing is re-enacted, and to a greater extent, in so far that retrospective effect is given to this power. In this section, however, there is a proviso added, that it shall be lawful for the Local Government to direct the payment of such compensation as under the circumstances may seem fair and equitable.

"But in the amended section proposed by the Hon'ble Sir Henry Harrison this proviso is entirely withdrawn, and he has explained the reasons why it was withdrawn. I am bound to say that, speaking for myself, that does not appear

to be altogether satisfactory. The Port Commissioners have now the power of doing anything in the way of removing jetties or wharves, for which they can obtain the sanction of the Lieutenant-Governor. Now, I venture to say that the Port Commissioners will never have any difficulty in putting forward so plausible an *ex parte* case that it will be almost impossible for the Lieutenant-Governor to refuse sanction. At all events, I venture to predict that sanction will be withheld in very few cases.

"Of course I know the argument which has been and which will be used against me that those encroachers on the foreshore are persons without any semblance of right, and are consequently not entitled to any consideration whatever. I am bound to admit that in this argument there is very great force, and if it were so that the limits of the port were never likely to be largely extended, I should be with the Hon'ble Sir Henry Harrison; but when we have to consider the probability, or certainly the possibility, of the port limits being extended at any moment to almost any extent in either direction, I think the case is different.

"Take the case of a man who at Titaghur erects a jetty for the landing of his goods. This may have been done even before the passing of Act V (B.C.) of 1870; he knows that he is well outside the limits of the port; he thinks, as far as he is capable of thinking on the subject, as in all probability his ideas of the rights of the Government to the foreshore are not very clear, that what he has done is absolutely legitimate; it interferes with no traffic of the river, neither can it be said to be an obstruction. But because by a stroke of the pen, as the Hon'ble Mr. Moore said, the limits of the port are extended so as to include this erection of his, it may be swept away at a moment's notice without any compensation.

"I cannot help thinking in the case, more particularly where the erection is a long way out of the port limits, that a provision such as this is likely to operate harshly. I know that I may also be met by the statement that all this opposition to section 85 is unnecessary and uncalled for; because it may be assumed that because the Port Commissioners have never done anything high-handed or inequitable, they never will do so. I am sorry I cannot accept this proposition. It may be taken for granted that the Port Commissioners will do nothing which they believe to be unfair and inequitable in any way; but at the same time, when a project is under consideration, it is astonishing how easily the facts are made to fit with what is desired; how private rights are lost sight of, more particularly where the infringement of those private rights costs nothing. For these reasons I support the amendment of the Hon'ble Mr. Moore."

The Hon'ble MR. NOLAN said:—"The motion which stands in my name on the list of business, to the effect that the existing law, as embodied in section 57, Act V (B.C.) of 1870, should be retained without alteration, was framed when the only alternative proposal before the Council was one which many considered defective, and which has since been discreetly withdrawn. The amendment now put forward by the hon'ble member in charge of the Bill seems to have been drawn with the intention of meeting, so far as is thought practicable, the wishes of the hon'ble members who represent the commercial interest, and that appears to me to be the proper course to adopt. I, therefore, support the Ho 'ble Sir Henry Harrison. The law in its present form was passed at the instance of the commercial members who sat in Council in 1870, and may very properly be altered on the motion of their successors, to whose opinion we all attach the greatest weight. Indeed I would be inclined to go further, and to let the Hon'ble Mr. Moore and those who act with him regulate the matter precisely as they propose, if the effect of our decision could be confined to the area with which they desire to deal. The section itself is of no great importance; it has been in existence for twenty years without ever being put in force, and, as the procedure it prescribes is less convenient than that of the Land Acquisition Act, it might exist unused for another century. It is the Mrs. Harris of our legislation, much talked of, but never seen. I wish we could let the Hon'ble Mr. Moore deal with it just as he wills, but unfortunately his motion is so worded as to touch other interests not contemplated by him, and to be most inconvenient as a precedent.

"In the first place, his amendment provides that private wharves and so forth shall be interfered with only 'when the safety of navigation, or the improvement, maintenance, or good government of the port, so requires.' To this there is no objection whatever; but the Hon'ble Mr. Moore fails to indicate any authority to decide whether such requirements exist or not, and thus silently remands the issue to the ordinary tribunals. This is a new principle in Indian legislation; all previous laws for the acquisition of land for public purposes having made the Local Government sole judge as to whether the land is really required or not, and I fail to see how any law can be worked without some such provision. The alternative is to leave the question to the Courts of Law, calling on the Judges to pronounce what is or is not requisite for navigation and good government, and thus creating a new source of litigation. This, however, is a small matter, to which if it stood alone I would not refer.

"But in the second place, while the Hon'ble Sir Henry Harrison provides for compensation in every case where a wharf has been lawfully erected, the Hon'ble Mr. Moore goes further, and would liberally give compensation whether the erection was lawful or not. Now this might be generous were we dealing with our own money; but it seems scarcely fair when the general tax-payer has to pay for all. And regarded in the light of a precedent, I cannot but consider the studied omission of the word *lawfully* as of the worst example. In ports, such as Calcutta, the public right of way on our great rivers is guarded by stringent laws and an elaborate organisation; but in the interior, the District Magistrates are left to defend our communications as best they can against the attacks of a hundred riparian proprietors, each very naturally caring less for the general commerce of the country than for his own private pier, or fishing stockade, or landing charges. The struggle is always going on with varying success. I speak of it from experience, having had to try many prosecutions of the kind myself as a Magistrate. Now what will be the effect on such contentions of the omission of this word *lawfully?* Obviously to indicate to those concerned that all constructions by riparian owners are legal in the opinion of this Council. Such a maxim, published without qualification, would have a very mischievous tendency by encouraging encroachments of every kind on the most important highways of our Bengal commerce; and I must maintain that the maxim itself is altogether incorrect, as a person may be the owner of land between high and low-water-mark on a tidal river, and yet have no right to make thereon any permanent erection to the injury of navigation, or without the sanction of some officer appointed in that behalf. Take, for instance, the case of a proprietor within the present bounds of the port, who has a title to the foreshore, and examine what right we have left him to make future erections, and what compensation we provide for him in case such erections are destroyed. This matter is settled by the section of the present Act preceding that now under discussion, a provision which has never been opposed, and which is re-enacted without objection in the Bill before us. It runs as follows:—

'It shall not be lawful for any person or persons, save the Commissioners, to make erect, or fix below high-water-mark within the port any wharf, quay, stage, jetty, pier, erection or mooring without the consent in writing of the Lieutenant-Governor first had and obtained. Any matter or thing which may be so erected or fixed may be removed by the Commissioners, and the persons who shall have so made, erected or fixed any such matter or thing shall be liable on conviction to a fine which may extend to Rs. 1,000, and to a further fine which may extend to Rs. 100 for every day during which such matter or thing shall have been permitted to remain so made, erected or fixed after notice to remove the same shall have been given.'

"In Calcutta, it will be seen, instead of compensation, the proprietor who builds a wharf without authority has to pay a fine of a thousand rupees to begin with, and has the prospect of subsequent fines as refreshers. Now the original proprietary rights of zemindars within the port were precisely the same as those of the zemindars whose lands lie on the other side of that fleeting boundary, from which I draw the inference that no one approving section 56 of Act V (B.C.) of 1870, and the corresponding clause in our Bill, can maintain that all proprietors as such have an indefeasible right to build wharves of any description on the foreshore they possess by the river Hooghly. It is only on the supposition that they have no such right that the law, as the Hon'ble Mr. Moore agrees to re-enact it, can be defended.

"In explanation of this limitation on the powers of zemindars, even when the land has been settled with them, I may repeat the statement contained in a written opinion of the Hon'ble Sir Charles Paul's given in 1873, and subsequently confirmed by Mr. Woodroffe, that the foreshore originally belonged to the Crown. The Crown can grant rights over it, and has done so by Regulation XI of 1825, which gives to all riparian proprietors a contingent and reversionary interest in river beds, inasmuch as the land will become an accretion to their estates when the waters change their course. Moreover, the banks and even the beds of rivers have been settled with zemindars in many cases, thereby conveying to them a right to the property for proper purposes. But the interest thus conveyed is subject to the dominant right of the public to use the river up to its utmost limit, and the adjoining tow-path, if such there be, for navigation, and inferentially to the right of the legislature to regulate that use, prohibiting whatever may interfere with its due exercise. How this was provided for at the time of settlement I may indicate by referring to the proceedings of Mr. Crow, Deputy Collector, who settled fifty-five villages near Calcutta in 1847. I will read an extract from his final report:—

'These lands therefore are in every sense of the word in their *bonâ fide* possession down to the low-water-mark in the dry season, and these landholders must accordingly be made to pay the Government revenue assessable on these lands.

'The third point regarding these banks is the right to track boats along the riverside. Of this privilege I think the boatmen should never be deprived, notwithstanding any settlement that might be made for the lands over which they are obliged to pass with ropes, or to which they have to fasten their vessels, not to mention the loss of life and property which might attend. Any interference on the part of the landholders with the boatmen at particular times—the obstructions to the navigation of the river (situated as the Hooghly is on the side of the capital of our Eastern Empire) that would follow from any prohibition which our inconsiderate landholders might think fit to put on the privilege of tracking and fastening boats—would be so serious an injury to the interests of the public that the very thought of allowing those people to interfere with the said privileges could not for a moment be entertained Yet want of due attention to these particulars has been the cause of serious and dangerous obstruction to the navigation along the bank in this and other localities near the city. Ghâts with high sides and pucca bastions of various kinds have been built up in many places right across the tracking paths, and several kinds of other obstructions caused without the least regard to the comfort and safety of those who are obliged to navigate along the banks.

'With due regard to these circumstances, which I consider of the last importance, I have, in settling these alluvial lands with the owners of the kurari properties, distinctly explained to them that the settlement now made with them will not in any manner entitle them to deprive the boatmen, who are obliged to make use of the tracts settled with them, of any of the least privileges which they have hitherto enjoyed; nor, indeed, will they be permitted hereafter to raise new obstructions along these tracks without the sanction of the authorities entrusted with the conservative care of these public thoroughfares.'

"This is the settlement to which the riparian proprietors referred when on former occasions they impugned the action of the Port Commissioners, and may be taken as indicating the title by which the land affected by this section is held.

"I willingly acknowledge that most of the works constructed on the river-bank are useful or ornamental structures, which do not interfere with navigation, and have therefore been lawfully made. For these, compensation would be payable under the Hon'ble Sir Henry Harrison's amendment. But some are said to be obstructions to which the District Magistrates might turn their attention with advantage. These are unlawful, and if they are removed, why should we give compensation for the nuisance? If the commercial members, and those with whom they act, think otherwise, they will doubtless be able to give effect to their views, commanding, as they do, the ascendant influence on the Port Commissioners. In the end, probably, compensation will be paid, however we word the section. I doubt if anyone will gain or lose a rupee by our action to-day. But I object to moulding our laws on the assumption of a principle which is not correct, and which, if generally applied, would be most injurious to commerce—the assumption, namely, that all constructions on the foreshore belonging to private owners are lawful.

"Before sitting down I would say a word in defence of the existing law, which we will naturally re-enact should neither of the amendments before us be adopted. It has been represented as a measure for confiscating property without compensation, but nothing could be more remote than this from its

character. Its real object is to enable those who constructed suitable wharves and so forth after its enactment to secure themselves by obtaining the sanction of Government, with full assurance of compensation in the event of an extension of the port; also to deter proprietors from building obstructions which could not be sanctioned. The restriction which it implies as to riparian rights near the port is much less than that imposed within the port by our present Bill. Applications under the section are constantly made and are dealt with in a very liberal spirit. These applications and the petitions made to Government in 1874 show that the law is much better known to those concerned, than the dissenting members of the Select Committee believed. If any one has through ignorance failed to apply hitherto, he can do so now that attention is drawn to the subject. As to the complaints that the section has been worked harshly, they rest on a misapprehension, for, otherwise than as a procedure for voluntary registration, it has never been worked at all. The disputes have been under the Land Acquisition Act, and with regard to another section of this Act, never as to anything done under the authority of section 57. While willing to accept any modification which does not give a sanction to nuisances, I cannot help thinking that this part of the law might very well have been let alone. It has never been worked to the injury of any man, and has been useful, in its way, by giving an assured title to the owners of many useful works."

The Hon'ble DR. RASH BEHARY GHOSE said:—"I regret that I am unable to accept the Hon'ble Mr. Moore's amendment. Apart from the criticisms which have been made by the previous speakers, it seems to me that the amendment, as it stands, is open to some very serious objections. It says, amongst other things, that it shall be lawful for the Commissioners, when the safety of navigation or the improvement, maintenance or good government of the port so requires, to remove, fill up, or destroy such wharf, quay, &c., and it then goes on to say that, if the wharf, &c., is destroyed, the owner shall be entitled to compensation.

"But I take it to be undoubted law, quite apart from any statutory provision on the subject, that when any such structure, whether erected by the Government or by any private individual, interferes with the safety of navigation, it becomes a public nuisance, and it is open to any subject of the Crown to abate the nuisance: and I do not see any reason why the Port Commissioners should be the only persons—in this country—who are to be incompetent to exercise a privilege possessed by all other subjects of Her Majesty. It is elementary to say that you do not give compensation for removing a public nuisance, and that it is in the power of any person to abate it. A public nuisance is a public offence, and it would be absurd to give compensation to a public offender.

"Then, again, I cannot congratulate the gentleman who drafted this amendment on his skill in drafting. We have heard something said about the English of the Bengal Council. But the English of our opponents is not altogether unexceptionable. Now this amendment, clause (*b*), I find speaks of 'land belonging to the private owner, whether acquired by grant from the Government or by prescriptive right;' that is to say, land acquired by prescriptive right. But, as every lawyer knows, you do not acquire land by prescriptive right, you may acquire it by prescription; but to speak of land being acquired by prescriptive right is language not familiar to lawyers. This, however, is a comparatively trifling objection.

"But there are graver objections to the proposed amendment. Compensation is claimed by the Hon'ble Mr. Moore whether the structure was lawfully or unlawfully erected. I am not now dealing with cases in which what was originally unlawful might, in the course of time, ripen into something not unlawful. The structure must be either lawful or unlawful. If it is lawful, then the amendment proposed by the Hon'ble Sir Henry Harrison would entitle the injured person to compensation. If it was an unlawful work, I do not think anybody, however liberal his views may be, however strong his notions may be with regard to what is called the sanctity of private property, would propose to give compensation for something which was unlawful. I find that the Hon'ble Mr. Moore, acting upon the opinion of the eminent Counsel consulted by the Chamber of Commerce, objects to the use of the word 'lawful' in the Hon'ble Sir Henry Harrison's amendment. If that is the only objection which the ingenuity of Counsel can make to the amendment, I do not think we have much to fear from hostile criticism.

"Confiscation of private property is no doubt a very good cry, and it is a cry which it is very easy to raise; but is there any foundation, having regard to the amendment proposed by the Hon'ble Sir Henry Harrison, for saying that we are going to confiscate private rights? We are only going, under this Act, to authorise the Port Commissioners to remove unlawful structures; but, certainly, we are not going to confiscate anything which was lawful either when it was done or which, by reason of long enjoyment, has become lawful.

"I do not propose to follow the Hon'ble Mr. Nolan through the discussion which he has raised on the vexed question, as to the rights of the Crown or of the Government in this country to the foreshore of tidal or navigable rivers. The question is, no doubt, surrounded with a great deal of difficulty; and as the amendment proposed by the Hon'ble Sir Henry Harrison renders the discussion wholly unnecessary, I do not see the good of engaging in what, under the circumstances, would be a purely academic discussion.

"'We render unto Her Majesty's Courts of justice the things which belong to them: and if I understood the Hon'ble Mr. Moore rightly, when this matter was before the Select Committee, the only grievance he felt was that we, the Members of the Bengal Legislative Council, from our imperfect appreciation of the law on the subject, took upon ourselves to determine the particular cases in which alone compensation was to be allowed; instead of leaving the determination of those cases to those who are best able to deal with them.

"Now, the Hon'ble Sir Henry Harrison's amendment proposes to do what we were told we ought to do; whilst the amendment put forward by the Hon'ble Mr. Moore would virtually exclude, as the Hon'ble Sir Henry Harrison has already pointed out, from determination by the Courts of justice of those questions which we were told only two short months ago were eminently proper to be dealt with by Her Majesty's Judges."

The Hon'ble SIR ALFRED CROFT said:—"It is with great diffidence that I rise, and I do so merely to ask what is the interpretation of the last line of the Hon'ble Mr. Moore's amendment. It has been said by the Hon'ble Sir Henry Harrison, and confirmed by the Hon'ble Dr. Rash Behary Ghose, that if the question is referred to the Courts of Law when the Port Commissioners and the private owner cannot come to an agreement, the Courts are bound to give compensation, although the structure has not been lawfully erected.

"It appears to me that the last line of the Hon'ble Mr. Moore's amendment bears no such construction. It does not say 'or by the Civil Court in which a suit may be brought to determine the amount of such compensation' but it says 'to establish and enforce such right of compensation.' What is there in the amendment to prevent the Court from declaring that there is no such right? And if no such right can be shown, that is, if the structure has not been lawfully erected, the compensation awarded will be *nil*.

"But I would now take the opportunity of saying that each of the three amendments on the paper seems to me, in the light of the discussion that has preceded, to be open to objection; and I should be very glad to know how these objections are met. I take first the Hon'ble Mr. Nolan's amendment. The objection to this seems to lie in the assumption which it makes that every wharf or jetty built below high-water-mark must have been unlawfully erected, unless the written consent of the Lieutenant-Governor of Bengal has been obtained. But I understand from what has been said by previous speakers that this is in some instances a doubtful matter, and if so, it cannot be right for this Council to declare that in no such case shall compensation be given, for that is a point which in such cases can only be decided by a Court of Law.

"Then the Hon'ble Sir Henry Harrison's amendment leaves out two points for which provision is made in the Hon'ble Mr. Moore's amendment. The first point is, that it does not state the grounds upon which it shall be lawful for the Commissioners to remove any such structure, a point for which the Hon'ble Mr. Moore's amendment does provide; because it says that the structure shall only be removed if the 'safety of navigation, or the improvement, maintenance or good government of the port so requires.' This point has been referred to by the Hon'ble Mr. Nolan, who objects to the proviso on the ground that it does not state who is to decide. It seems to me desirable that such a proviso should be adopted, qualified by some such words as 'when in the opinion of the Lieutenant-Governor the safety of navigation, &c., so requires.'

"The Hon'ble Mr. Nolan and other hon'ble members have conclusively shown that it would not be right to omit the word 'lawfully' before 'made' in the line preceding proviso (*a*) in the Hon'ble Mr. Moore's amendment, because it appears that works may be raised on private lands which still are not 'lawful' because they interfere with public rights. If, therefore, no compensation ought to be given to private owners who erect structures which interfere with public rights, then we cannot accept an amendment which gives them a right to bring a suit for compensation.

"The Hon'ble Mr. Moore's amendment further provides for cases in which wharves and piers have been erected on behalf of the public. It provides that in case such works are removed or destroyed, corresponding works giving equal facilities shall be provided by the Commissioners. But the Hon'ble Sir Henry Harrison's amendment leaves out this proviso."

The Hon'ble SIR CHARLES PAUL said:—"That is provided for by the further section (85A) to be moved by the Hon'ble Sir Henry Harrison."

The Hon'ble SIR ALFRED CROFT said:—"In that case my remark does not apply."

The Hon'ble MR. ALLEN said:—"It appears to me that Act V (B.C.) of 1870 has hardly met with fair treatment in this Council up to the present. We may assume that the Bengal Council which passed Act V of 1870 was not less competent or less capable than the Council which meets here to-day; and we may fairly presume that in passing what has been said to be a very arbitrary measure, with little regard to the rights of private individuals, the members of that Council had just as much regard for the rights of private individuals as any one here present. Now if the law as a whole is examined, it will be found that not the smallest wrong was perpetrated by the section of that Act now under consideration. The principle upon which the Act of 1870 was based was, that the responsibility for taking care of the port of Calcutta, for levying tolls on trade and for raising money to construct works of utility, by which the facilities for shipping and unshipping goods would be increased, should not rest upon private individuals; but that a public body under the control of the Government should be incorporated, in which the management would vest: looking not for dividends to be divided among shareholders, or profits to be carried off by transitory merchants, but that this public body should borrow money and simply provide for paying interest thereon, not charging the shipping anything more than was necessary for that purpose.

"The portion of the river Hughli upon which works for the discharge of cargo could be constructed is limited, and therefore such a provision was very reasonable: it constituted a monopoly which must prevail against all private rights in the port. As soon as this public body had constructed jetties and other necessary works, it was invested with the power of forbidding ships to go to any private jetty; they must come to the public jetties and pay the tolls levied at such jetties. At the time when that provision was framed, the Peninsular and Oriental Steam Navigation Company's jetty was the only jetty which had any existence, and therefore in forbidding the erection of jetties the framers of the Act of 1870 were touching no existing interests. They were merely laying down rules for the future, and warning persons who had private property on the banks of the river that they must use their private rights, subject to the rights of the Port Commissioners; and that they must not erect private jetties to compete with those erected by the Port Commissioners.

"Having made this provision with regard to jetties within the port, they further provided that in the case of jetties constructed in any other part of the river above or below the limits of the port, without the sanction of the Lieutenant Governor, afterwards, should the port be extended so as to include that part of the river, such jetties should have no advantage over jetties which might be so constructed within the former limits of the port. They touched no jetty then in existence, but they warned private persons that they should not put up such jetties, without sanction from the Lieutenant-Governor, below high-water-mark. They touched nothing above high-water-mark; but they clearly asserted that the property in the foreshore below high-water-mark

was in the Government And whatever assumed or supposed right the zemindars may assert, there is the decision of the Privy Council that the property in the bed of the river Hughli below high-water-mark, belongs to the Government.

'When we in the Select Committee had to consider that section, we found as a fact that the provision in Act V of 1870 had not been used; but instead of allowing the law to remain as before, we made a suggestion that, when any private jetty below high-water-mark is removed, the Lieutenant-Governor may order the Commissioners to make compensation. For my own par, I consider that in doing that we gave the fairest conclusion to the whole question which it was possible to give. As a shareholder in several of these mills, I myself should infinitely prefer the mercy of the Lieutenant-Governor, to taking my stand on the supposed legal rights that the Chamber of Commerce pretend to maintain

"Counsel's opinion has been taken in this matter. Mr. Woodroffe's name, no doubt, stands for a good deal; but, I must say that, as far as I have experience of Counsel's opinion, consulting Counsel is very much what consulting the Delphic oracle used to be. The consultor invariably gets an opinion which confirms him in the course which he had already determined upon. At the same time Counsel takes good care, while confirming his client in his opinion, whatever the result, that his own professional reputation shall in no wise suffer. The manner in which this is done is ingenious. Mr. Woodroffe's name is sufficient guarantee that any naked statement of law by him shall not be open to objection. His professional reputation would be terribly affected if he laid down a proposition of law which was incorrect; therefore, as far as the mere statement of the law goes, both the Advocate-General and I have no objection to what is laid down by Mr. Woodroffe. But the Chamber of Commerce imagine his opinion is entirely on their side. How is this result achieved? It is in the manipulation of the facts to which the law is to be applied. There the sympathetic effect comes in so that the client's feelings are flattered, and he feels himself a most ill-used individual. Let us see how Mr. Woodroffe does this. In paragraph 2 at the top of page 8, Mr. Woodroffe says:—

'Paragraph 6 of the Hon'ble Mr. Moore's minute of dissent gives instances in which grants of the fore-shores of such rivers have been made to private individuals, or in which individual subjects have, by prescription, acquired rights in or over such foreshores in derogation of the rights of the public.'

"Well, Sir, I challenge a reference to that paragraph of the Hon'ble Mr. Moore's dissent. There I find no such instances given, but I find a very modest statement by the Hon'ble Mr. Moore of the possibility that such a case may exist. The actual instance to which the Hon'ble Mr. Moore refers, as I have learned the facts from him and the Advocate-General, is this: A certain Deputy Collector, when out at settlement work, found some logs of wood lying on the bank below high-water-mark, and thereupon made an extra assessment on the riparian owner in respect of the use he was making of the foreshore. Does this, as far as we know, unauthorized zeal of a Deputy Collector amount to a grant by the Crown or Government of the foreshore of the river? Under the colonnade of the Great Eastern Hotel here you may see a number of hobby-horses, boxes and other articles on the foot-path; suppose the municipal assessor, when next valuing the Great Eastern Hotel, clapped on an extra Rs. 5 or Rs. 6 on account of the benefit thus enjoyed; is that to be deemed a grant to the Hotel of so much of the foot-path? Mr. Woodroffe apparently thinks it is.

"The second instance noticed by the Hon'ble Mr. Moore is this: A certain riparian owner acquired the land from a zemindar who professed also to convey the foreshore, and before doing so submitted the title to an eminent firm of solicitors, and this the Hon'ble Mr. Moore says is *primâ facie* evidence of title to the foreshore. Did he consult Mr. Woodroffe on that point? Would Mr. Woodroffe consider that the mere passing of the title through a solicitor's office was evidence of anything? Probably, if Mr. Woodroffe had been consulted he would have told him that three-fourths of the litigation which arises is due to the blunders of eminent firms of solicitors. The fact that an eminent firm of solicitors passed a title, to my mind, goes a very small way. A flimsy title backed by money is, for practical purposes, no bad thing;

and sometimes foundation enough on which to issue a prospectus and start a company. The eagerness to float companies has often been a zeal which has outrun discretion. Even if the legal point as to the foreshore between high-water and low-water is conceded to mill-owners, I believe it will be found they have transgressed in putting up jetties much below low-water-mark.

"In the second opinion of Mr. Woodroffe, the manipulation of facts is carried to a greater extent. The whole of the last paragraph of the second opinion consists in the quiet assumption of a state of things, the exact opposite of which we say is the true state. But to meet this the Hon'ble Sir Henry Harrison has introduced an amendment, by which every jetty lawfully erected is secure of compensation. What has Mr. Woodroffe to say to this? The first paragraph of his third opinion declares that, this amendment offers little security to existing jetties. This shows how from the first he had a strong suspicion that on the law of the case these gentlemen have not a leg to stand upon. No additional security for existing jetties, when every lawful jetty is to have compensation! If this is not telling them that they have no stronger case now to go to court with than they had before, then I am incapable of interpreting language.

"But the Hon'ble Mr. Moore has brought in the Government of India against us, as, in its proceedings of 1875, overruling and crushing up our Act of 1870. I very much regret the speech made by Mr. Hobhouse in 1875, as I think with all submission, that his remarks as to the intention of the Legislature in 1855 were made simply under a misapprehension, as to the bearing of the section in that Act. I see great objections to assuming that the Council in years gone by was less competent or less able than the Council of 1875; and I have a shrewd suspicion that the Council of the Government of India in 1855 was as sensible and as careful of private rights, as the Council of 1875. The only change made, however, by the Act of 1875 was to introduce the saving clause about private rights into the earlier portion of the section defining the limits to which the port might be extended by the Local Government. But the Hon'ble Mr. Moore alleges that this restriction has a sort of coercive authority over us sitting in this Legislative Council. The Act of the Government of India of 1875 does not touch the Act of this Council The section is purely a direction for the Executive Government. The Executive Government it is that has to extend the limits of the port; but when so extended, our Act of 1870, would come into full force throughout the whole area.

"The two Acts are of equal authority; the one legislature is equally sovereign as the other in authority. The Government of India, so far from having any intention to touch our Act of 1870, has shown its marked approval of it in the best way; for in 1879, in passing a Ports Act for Rangoon, the Government of India actually re-enacted section 57 of Act V (B.C.) of 1870:—

'In case any wharf, dock, quay, stage, jetty, pier, erection or mooring is, after the date on which this Act comes into force, without the consent in writing of the Local Government, made, erected or fixed below high-water mark without the limits for the time being of the port, and thereafter the limits of the port are extended so as to include the place in which such wharf, dock, quay, stage, jetty, pier, erection or mooring has been made, erected, or fixed, the Commissioners may remove, fill up, or destroy such wharf, dock, quay, stage, jetty, pier, erection or mooring, without making any compensation therefor.'

"Would it be possible to have more complete evidence of thorough approval of our legislation than to find the Government of India in its legislative capacity, with all the talent available in its Legislative Council, instead of enacting a new section, bodily transferring our section into their Act?

"As to the amendment now before the Council. The Hon'ble Mr. Moore proposes that the Port Commissioners shall be authorized to remove a wharf only in the event of its interfering with the 'safety of navigation, or the improvement, maintenance or good government of the port.' Any man who can once get his wharf on the bed of the Hughli, under the first clause of the Hon'ble Mr. Moore's amendment is protected from its removal, unless it interferes with navigation, lawful or unlawful. That, to my mind, is a most fatal objection to the Hon'ble Mr. Moore's amendment. But there is another objection to the amendment, and that is that there is not the least necessity for



its existence, inasmuch as under the provisions of the Indian Ports Act of 1889, section 12,—

'If any obstruction or impediment to the navigation of any port subject to this Act has been lawfully made, or has become lawful by reason of the long continuance of such obstruction or impediment, or otherwise, the Conservator shall report the same for the information of the Local Government, and shall, with the sanction of that Government, cause the same to be removed or altered, making reasonable compensation to the person suffering damage by such removal or alteration.'

"The existence of this section in the Ports Act of the Government of India of 1889 does away with the necessity for the Hon'ble Mr. Moore's amendment, which simply proposes to re-enact in a feebler manner what is already the law. Mr. Woodroffe in his complaisant third opinion objects to the word 'lawful,' as being ambiguous. There is precedent enough, seeing the Government of India in the Act of 1889 uses this word. No ambiguity lies in the word 'lawful,' but the ambiguity lies in the peculiar circumstances under which most of these jetties have been run out. I take two objections to the first clause of the Hon'ble Mr. Moore's amendment—*first*, because it does not authorise the Commissioners to remove a jetty erected without any legal right until it becomes an obstruction to navigation; and *secondly*, because it is a mere repetition of section 12 of the Ports Act of 1889; and these objections ought to be fatal to the amendment proposed by him.

"With reference to the amendment proposed by the Hon'ble Sir Henry Harrison, I certainly think it concedes everything that the Chamber of Commerce or the gentlemen in whose name it speaks have any right to expect. But, after all, what is the whole dispute? The whole discussion on section 85 is without any practical bearing. It is a mere fight in the air. I suppose some gentlemen here have kept dogs and know that on full moon young dogs bark furiously at the moon. The legend is, they fear, the moon is about to fall on them. This seems to me the best illustration of the fantastic fears which have stirred up the Chamber of Commerce gentlemen. They are alarmed lest something should happen which cannot possibly happen. The only possibility of its happening is if the port should be extended up the river to Barrackpore. Did any one ever hear of a port that moved up a river? I challenge any gentleman to show me a case, and especially up such a river as the Hooghly. But I quite agree with what has fallen from the Hon'ble Mr. Nolan, as to the importance of not letting in words into this Act which may lead to a false interpretation of the general law, and which would have effects far beyond the port of Calcutta. We know that throughout the mofussil on the banks of rivers the zemindars are asserting rights which are entirely incompatible with the free navigation of those rivers, and for the most part they succeed in carrying their point. Therefore, it is of the utmost importance not to introduce any words in this Act which could in any way strengthen or back up encroachments of this kind."

The Hon'ble SIR CHARLES PAUL said:—"I wish to say a few words. I consider the subject not capable of any serious discussion. Whilst on the one hand we are to remember that in legislating we should not confiscate property belonging to others; on the other hand we should equally remember that we should not enact anything which would enable the Port Commissioners to throw away their money, and put it into the pockets of people who are not entitled to receive it.

"The Hon'ble Mr. Moore has correctly enunciated his first proposition, namely, that a person should be fully recompensed for the loss of his private rights. I quite agree with him; but if there are no private rights, public money should not be thrown away in paying for what does not exist. The question therefore reduces itself to this: Are there such private rights as have been stated to exist? In 1870, this Council decided that there were no such private rights, and enacted that nobody should, after 1870, make any wharves or jetties without the permission of the Lieutenant-Governor. To that provision of law exception had been taken, and we have been told that we should not decide upon such rights.

"And yet, looking to the Hon'ble Mr. Moore's amendment, it is plain that we are called upon to recognise such rights as he puts forward, and to give compensation for their removal. But if we are called upon to decide as

to such rights, there are members of Council here present who are quite strong enough to decide upon such rights, and to decide upon them in the way in which Sir Arthur Hobhouse informed the memorialists that he would decide them if he were forced to do so. It was because this Council did not wish to decide upon such rights that a middle course has been taken in the proposal put forward by the Hon'ble Sir Henry Harrison.

"Now the Hon'ble Mr. Moore wants us to recognise those rights; he wants that, whenever a person puts up a wharf, or a jetty, or a stage on the foreshore of the river, you should, whenever it becomes necessary in the interests of the public to remove such wharf, or jetty, or stage, make compensation as if the man had a right to put up the wharf or jetty there. He wants us to recognise that principle. But if, in the opinion of persons competent to judge, there is no such right, then why should compensation be paid?

"Take the case which the Hon'ble Mr. Allen has put, that somebody, having no possible right to do so, presumed to put up an obstruction on the foreshore of the river. Would it be fair to give him compensation for the removal of that obstruction? The Hon'ble Mr. Moore would say, I do not ask for that. He says compensation should be given when the obstruction is put up on land belonging to the private owner, whether acquired by grant from the Government, or by prescriptive right or otherwise. 'Otherwise' may include by theft or by invasion. There is nothing to prevent a person clandestinely putting up an obstruction in a remote part of the river. Let us see whether the right is one which can exist or not.

"Mr. Woodroffe in his first opinion points out that the right cannot exist when it interferes with the navigation of the river. Therefore, if you ask for compensation, you must first satisfy the person who has to award the compensation that it does not interfere with the navigation of the river, because, if it does interfere with navigation, it is removable under the general law of the land and Regulation XI of 1825.

"Then, take the cases which the Hon'ble Mr. Moore gives of obstructions raised on lands granted by the Government. These grants referred to settlements made by Mr. Crow of lands down to low-water-mark. In considering those cases you would have to examine the meaning of the settlement. What was settled? What was given? Were they given for agricultural purposes, or for what purposes? If you come to the conclusion that they were given for agricultural purposes, that would give a right to cultivation down to low-water-mark.

"We all know that in the dry season lands are in some places cultivated down to low-water-mark, but it never was intended that the settlements so made should be in derogation of public rights of navigation. They could not in any way interfere with the rights of navigation. It never could have been intended that under settlements of that sort a man, instead of growing crops upon the land, would have a right to put up a jetty down to low-water-mark.

"In the case of lands granted by the Government, the parties who ask for compensation would come in and say, this is our land and we can do what we like with it; and if we do put up a house or a stage, we have lawfully done it, and if you remove what we have put up, you shall pay in compensation. If the case is put in that way, it is a case that might admit of the answer already given. And, suppose such a case could be put, it would be a disputed case.

"Then is it right for the Hon'ble Mr. Moore and those who are with him to say that, although the case may well be disputed, whether land granted for purposes of cultivation can be used so as to interfere with the navigation of the river, yet such dispute should be shut out by legislation. Take the case of the consent of the Local Government given in writing, which would be generally considered as a strong case. Even, in such a case, a question may arise as to the competence of the Lieutenant-Governor to give his consent.

"We hear of people in Benares running their sewers into the river and thus polluting the river. I maintain that the consent of the Local Government would not justify any person in committing such a nuisance. The Port Commissioners are entitled to say that compensation should not be given for an unlawful act which was removable before by the executive authority, and which the law under consideration will enable him to remove.



Does the Hon'ble Mr. Moore want us to decide whether in such cases compensation should or should not be given? I, for one, am quite prepared to decide that question. It has been ruled by the Privy Council in 6, Moore's Indian Appeals, that the bed of the river Hughli up to high-water-mark is the property of the Crown; and it being so decided by the Privy Council, we may take it, that every person who makes any obstruction in the bed of the river commits an offence for which he may be indicted under the law.

"In England the law is so strict that, if you put up a stake or post in the river you will be liable to be indicted and to be severely punished; and yet can it be contended here that, while on the one hand any person putting up a structure between high-water and low-water-mark can be indicted for a nuisance and subjected to fine; on the other hand he is supposed to possess such a right that he is to be entitled to compensation for the removal of the obstruction? A misconception of this kind could hardly go farther. Therefore, if we are called upon to decide upon the alleged right, we should have no hesitation in deciding that we should give no compensation at all. But, since it might be a harsh measure to make this Council usurp the place of the judges of the land and prevent people from making claims, we propose to give them every opportunity to do so. Therefore, the section provides that, whoever lawfully makes or erects any such structure shall be entitled to institute a civil suit for the award of compensation to him for the injury caused by the removal of such structure. This word 'lawful' is used advisedly. Where the facts constitute a thing to be lawful, it shall be lawful; but we say questions of that kind must be determined by the Courts. In the section proposed by the Hon'ble Mr. Moore we have the word 'otherwise.'

"The word 'lawful' is in no sense ambiguous: the word 'otherwise' is clearly so. The amendment first proposed in behalf of the Government was objected to, and now, when the word 'lawful' is put in in order to admit of every possible claim, objection is taken to that word. I do not wish to enlarge on the subject because I always give credit to persons setting up rights that they are actuated by sincere feelings; though I am bound to say that in this case this matter has been looked at with one eye kept open, and the other closely shut, so as not to admit of an adverse view. I think I have shown inconsistences in the views advanced.

"We have steadily followed the lines laid down by Sir Arthur Hobhouse in the Act of 1875, which, he said, would not in any way prejudice or touch the rights of private property. If there is a cause of action, well and good: compensation will be obtained; otherwise the Courts will not give compensation. What is there to complain of? The Hon'ble Mr. Moore says, here is a wharf erected by me on land granted by Government. If that wharf does not interfere with the navigation of the river, the Courts will give compensation But if it is erected otherwise, the Courts will not give compensation. How can this Council recognise and confirm private rights, the existence of which is asserted on one side and denied on the other side? The only remedy is to let the Courts decide whether or not those rights exist. If they want a decision on this point, I am quite ready to abide by Mr. Woodroffe's opinion. No lawyer in the land, much less a lawyer of the experience of Mr Woodroffe, would come to a different conclusion. The law is clear; but, as the Hon'ble Dr. Rash Behary Ghose said, in this country, the question to whom the bed of a river belongs when the river has deserted its course and gone in another direction, is doubtful. It is quite possible it belongs to the zemindar of the adjacent lands with whom the settlement has been made. But that is not the question here. We have here a river which remains in one channel, and in regard to which the Privy Council has decided that its bed is the property of the Government. We must either decide upon the alleged rights ourselves or leave it to the claimants to bring their suits; and the section has therefore been so drawn as to give every possible freedom for legal remedies (if any).

"I need hardly say anything further beyond pointing out, as observed by the Hon'ble Mr. Nolan, that as in the case of large tracts of land the declaration of the Government is taken as final; so where a notification of Government made under similar circumstances regarding a much less important matter, should be admitted to be final. That the parties should have a right to represent their case to the Government is right and proper,

and I have no doubt that some rule or order to that effect will be made. The Government is most desirous to control the arbitrary power of the Port Commissioners, and one would have thought that, having regard to the future constitution of that body, the use of the word 'arbitrary' as applied to them, would disappear. The Bill, however, provides a restraint upon the power of the Commissioners by interposing the judgment of one who, without risking his position, could not act 'arbitrarily.' That people may arbitrarily interfere is possible, but there are checks to arbitrary interference. Government officers and others are subject to some sort of jurisdiction when they act arbitrarily, and the Courts of Justice can be trusted to interfere when public bodies act in infraction of the law.

"I entirely dispute the proposition involved in the section proposed by the Hon'ble Mr. Moore to be substituted for section 85, and I support the amendment of the Hon'ble Sir Henry Harrison, which, I think, is conceived in a spirit of fairness. The amendment proposed by the Hon'ble Mr. Moore would give compensation, whether the act done was lawful or unlawful; and that was a form of compensation which, I think, the Legislature would not be disposed to give out of the pockets of the Port Commissioners."

The Hon'ble MR. MOORE said in reply:—"It is exceedingly difficult for me to reply to all the objections which have been made to my amendment; especially when arrayed against me is one of the ablest advocates of the Bar, and I have not Counsel at my elbow to advise me. But I find one crumb of comfort in his speech, that he is willing to trust to Mr. Woodroffe's opinion." (SIR CHARLES PAUL:—"His first opinion.") "Well, it is in that first opinion that Mr. Woodroffe says, I have ample reasons for pressing for the protection of existing rights. I am very gratified to find that the whole tenour of the debate concedes this necessity which I have pressed, and there only remains the form of section to be agreed to in place of the existing one. I am perfectly willing to concede the main objections which have been raised to my draft. I see the force of the Hon'ble Sir Alfred Croft's objection that, it is not laid down who is to judge whether a structure is in the way of navigation, &c., and I am willing to meet this by adding in line 6 the words 'when in the opinion of the Local Government.' I also beg to repudiate the idea that I suggest, or ever intended to suggest, that any works unlawfully made should be compensated, for of course, if the law has been broken, the consequences must be abided; and in testimony of this, I am willing to add the word 'lawfully' in line 13 between the words 'was' and 'made,' though, I believe, I am in the alteration to a certain extent giving myself away. Other objections made are more in matter of detail, and if, as the Hon'ble Dr. Rash Behary Ghose pointed out, the words 'by prescriptive right' ought to read 'by prescription,' I alter them to such effect. With the changes thus made I commit my amendment to the votes of the Council."

His Honour the PRESIDENT said:—"Before putting the various amendments to the vote, I wish to say a few words for my own part. And, first, I must say I agree with the Hon'ble Mr. Nolan that for practical purposes the whole fight—and a very interesting fight it has been—has been of a purely academical character, and it is a phantom from whichever point of view you regard it. In the first place, this section only takes effect in case of the limits of the port being extended. Whoever has read the history of the port, which was extended from Calcutta downwards—not because we wanted an extension, but because we wanted Budge-Budge—and really supposes that, under existing conditions, the Port Commissioners will desire to have the port extended up the river—I can only say I cannot understand on what possible grounds such a probability could be expected. From that point of view, I think the whole discussion has been a purely academical one; as also from another point of view, which was put forward by the Hon'ble Mr Nolan, namely, that the Port Commissioners have had this section on the Statute Book for the last twenty years and have apparently never used it.

"But from another point of view, the discussion has been a very useful one. It has opened out, not without inconvenience perhaps, certain large questions, but it has enabled us to justify the object and history of this section. That some justification is necessary, I think you will admit, when I read to you what has been said about this Council by a gentleman who telegraphs home

information from Calcutta to the *Times* newspaper. Speaking of this section, he describes it as follows:—'The inequitable and mischievous character of the power proposed to be conferred on the Commissioners in all cases of extension of the port to remove and destroy all buildings'—mark that, please,—not buildings in the bed of the river, nor buildings between high and low-water-mark—but 'all buildings which may have been erected prior to such extension without formal sanction by the Local Government and without making any compensation' This is what we are deliberately accused of doing on the authority of the gentleman who telegraphs to the *Times*. Then he goes on to say:—'This power of arbitrary confiscation would be a serious blow dealt at commercial interests, and would imperil mills and other commercial property exceeding in value a crore of rupees.' Perhaps my hon'ble friend can tell me what mills are referred to as in jeopardy to the extent of one crore of rupees. 'Corporations,' he continues, 'are proverbially high-handed'—(I believe in this case there are at least five members of the Chamber of Commerce on the Corporation referred to)—'and the callous conduct of the Government in like cases in the past by no means justifies unlimited confidence to their commercial justice in the future.'

"Now, that is the sort of assertion that goes about all Europe in regard to legislation conducted by this Council. To understand the section at all you must study the Act of 1870, and as it has been recently altered, a certain knowledge of the history of the whole question is necessary, which probably those who have been attacking us have not taken the trouble to acquire That history has been gone into pretty fully in to-day's discussion, and I shall, for my part, only refer to it very briefly indeed. We need not go behind the Act of 1855, which was the basis of the subsequent legislation by the Government of India, namely, the later Act of 1875, and again the present Act of 1889 in regard to ports and port fees. That Act was, as has been pointed out here, a direction to Executive Governments in dealing with ports which were not brought under any special enactment. But subsequently—and among them Calcutta—various other ports have been brought under special enactments. The section which was introduced into the Act of 1870 was no doubt introduced in conformity, or in supposed conformity, with the law of 1855 as it stood then. There was very little discussion in the Bengal Council about it. I have referred to that discussion and have it here. But what little discussion there was, consisted in the commercial members extending and not limiting its scope. As originally proposed, it was only in cases of extension of the port within one mile of the then limits, and the commercial members said: 'No. If this is the law, why limit it to one mile? Wherever the port is extended the law shall stand.' This was accepted. But it does not seem to have attracted very much attention at the time.

"Subsequently, when the Act of 1855 was before the Government of India for amendment, it attracted attention. There were two memorials presented, and the whole matter was discussed by Mr. Hobhouse. The memorials were based upon the claim of riparian owners to have the right of ownership in the foreshore, which the Act of 1870 had jeopardised, and which they wanted to be in some way, by some side-wind, acknowledged and admitted into the Act of 1875, and this Sir Arthur Hobhouse distinctly refused to admit. I need not read all he said, but there are one or two points I wish to make clear about it. He said:—

'Now, I mentioned that the riparian owners took a lively interest in this Bill, and the reason is that they are engaged in a controversy with the Port Commissioners, or the Bengal Government, or both, respecting some rights claimed by them over the foreshore down to low-water-mark. So they have addressed us on paper, and have also had the kindness to meet us in conference, and have urged that the new Bill ought to contain something to place them in some more favourable position, by recognising the fact of their claims, and at all events the possible validity of them, which, they say, is denied by their opponents. Now, there may be claims to private property of such a kind and on such a scale as to justify the Legislature in interfering to settle them. But these Calcutta controversies did not appear to us to be of such character. They appear to possess the characteristics of ordinary lawsuits, and we could not see why we should be called upon to interfere on one side or on the other Indeed, I do not suppose that the riparian owners would be pleased if we interfered on the side of the public, and neither the Port Commissioners nor the Bengal Government have asked us to do so. Well, then, our position is that whatever right the public have against the claims of private property, and whatever protection private property has received against the claims of

the public, are to be found in the existing Act of 1855 and have been thereby ascertained and regulated for twenty years. It may indeed be for more than twenty years, but we have not looked behind the Act of 1855. At all events for twenty years the public have had the rights which the existing law gives them, and we could find no reason why those rights should now be lessened.'

"The result of that was, that Mr. Hobhouse distinctly said that he looked upon these questions between riparian owners and the Government of Bengal, or rather the Port Commissioners, as questions for litigation and not for legislation. He distinctly rejected the claim of the memorialists to put anything into the Act, which should imply that our section in the Act of 1870 was in any way wrong or erroneous. As the Hon'ble Mr. Allen has pointed out, this is the identical section about which such very strong language has been used in the *Times* newspaper, and this identical section was deliberately repeated word for word and incorporated in the Act passed by the Government of India for the port of Rangoon—not before the discussion of 1870, but in 1879, after the whole question was before them. The main object of the section of 1870 was, as I understand it, to give riparian owners a warning that, in future, if they chose to erect jetties, or any of those other erections, on ground below high-water-mark, they must get permission to erect it, otherwise they were doing it at their own peril, and they must not expect compensation for it. This has been the law of the land for the last twenty years, and since 1875, I do not think anybody has heard any complaint.

"The Select Committee in altering the Bill necessarily gave the wording of the Act of 1870 a retrospective shape. So 'shall' they necessarily changed into 'may have been' so as to make it in accordance with the law of 1870; but they did not include what they might have included—an exception for anything built or erected before 1870. If they had done so, I do not think there would have been a word altered: it would have remained exactly as it stood, and I do not see how anybody could have taken exception to it. But it is perhaps not a very serious matter, as I understand the number of jetties built previous to 1870 is something exceedingly small. Now, however, the whole principle has been taken exception to. Well, on receiving the protest of the Hon'ble Mr. Moore, as a member of the Select Committee, I discussed the question with the members of the Select Committee, and the outcome of it was, the amendment as it stood to be introduced into the Council some three weeks ago. Well, that amendment apparently did not meet altogether with the views of the Chamber of Commerce. The point about the amendment was, that it tried to state explicitly the only circumstances under which compensation could be claimed, but that it did not satisfy the hon'ble member opposite (Mr. Moore), may be taken from the fact that his own amendment inserts the words 'or otherwise' after repeating practically what was in the amendment of the Hon'ble Sir Henry Harrison.

"Very well: finding that that did not satisfy him, and after reading the memorial of the Chamber of Commerce, the matter was subjected to further reconsideration, and the result was this section as it now stands This section, as it now stands, is based exactly upon what Sir Arthur Hobhouse said in Council in 1875, that these questions between the Government and the riparian owners are questions not for legislation, but for the Law Courts. If they appealed to the Law Courts, the Law Courts would settle them. We decline to say or to give any indication of the circumstances under which compensation shall be given, except that the jetty or other erection shall have been lawfully erected and built. Nobody, I think, could criticise that section on the ground that the word 'lawfully' is not sufficiently clear. To say that it is ambiguous shows either one of two things—either that they want to include more than is lawful, or that they must be very hard put to find fault with our amendment. I must say for myself that I was inclined to prefer the amendment as originally drawn up, but now that I have seen the very weak nature of the objections taken to the amendment as it stands, I unhesitatingly give my opinion in favour of the new amendment.

"The only point which has not been really noticed in the discussion which has taken place to-day is, the objection that the Government of Bengal will not give the party injured an opportunity of being listened to. I observe that that remark was supported by my hon'ble friend on my left (Mr. Peacock), for many years Secretary to the Government of Bengal, and

who ought to know perfectly well what does really happen. I do not think it is necessary to introduce any remedy for this in the Bill, but I am perfectly prepared to remedy it by a rule setting forth that in any case in which an application is made to the Government of Bengal for direction to demolish these jetties, no order shall be passed upon it until an opportunity has been given to the persons concerned of being heard. And, so far as I am myself concerned, I pledge this Government to carry that out.

"We have received, besides the memorial from the Chamber of Commerce, a memorial from the British Indian Association. That memorial covers a very large area of ground; it goes into the question of the rights of riparian owners all over Bengal. Now, I say emphatically that the questions raised by the British Indian Association do not arise in connection with this question. The question is a very difficult one, and may be a very important one; but this Bill at all events is not the occasion on which to discuss it. It does not arise necessarily out of anything in this Bill, and 'sufficient to the day is the evil thereof.' When the time comes for raising the discussion, I have no doubt the British Indian Association will put their views before us in full form and with full force. But as I said before, after giving their memorial all consideration, I find that really it at no point touches the question that now comes before us.

"The only question remaining is, that as between the amendment proposed by the Hon'ble Mr. Moore and the amendment proposed by the member in charge of the Bill. I am bound to say that the alterations which the Hon'ble Mr. Moore has now made in his amendment, have taken away a very considerable amount of objection to it. But, on the whole, I think that the Hon'ble Sir Henry Harrison's amendment is, if not in appearance, in reality more liberal, because it does not pretend to define the circumstances under which compensation may be claimed as the Hon'ble Mr. Moore's does; and I think the Hon'ble Sir Henry Harrison's amendment the more convenient one and a better drafted one, and I myself prefer it."

The Hon'ble MR. MOORE moved that the following revised section be substituted for section 85 of the Bill:—

"85. In case any wharf, quay, stage, jetty, pier, erection or mooring may have been or hereafter shall be, made, erected, or fixed within or without high-water-mark without the limits of the port, and thereafter the limits for the time being of the port shall be extended so as to include the place on which such wharf, quay, stage, jetty, pier, erection or mooring shall have been made, erected, or fixed, it shall be lawful for the Commissioners, when in the opinion of the Local Government the safety of navigation, or the improvement, maintenance or good government of the port so requires, to remove, fill up, or destroy such wharf, quay, stage, jetty, pier, erection or mooring:

Provided that when any such work has, under this section, been so dealt with, the Commissioners shall, when such work was made on behalf of the public for the convenience of public traffic, make or provide for the use of the public such sufficient wharves, quays, stages, jetties, piers, erections or moorings as the Local Government may direct, and shall, when such work was lawfully made by any private person for the convenience of private traffic—

(*a*) on land belonging to the Government, with the previous consent of the Local Government in writing, or of which the making, erecting, or fixing has been subsequently sanctioned by the Local Government in writing; or

(*b*) on land belonging to the private owner, whether acquired by grant from the Government, or by prescription, or otherwise,

make compensation therefor to the owners thereof to such an amount as may be determined by agreement by and between the Commissioners and such owners, or by the Civil Court in which a suit may be brought to establish and enforce such right of compensation."

The amendment being put, the Council divided:—

Ayes.	*Noes.*
The Hon'ble Raja Rameshwar Sing Bahadur.	The Hon'ble Dr. Rash Behary Ghose.
The Hon'ble H. Pratt	The Hon'ble Shahzada Mahommed Furrokh Shah.
The Hon'ble C. H. Moore.	The Hon'ble Sir Alfred Croft.
The Hon'ble F. B Peacock.	The Hon'ble Sir Henry Harrison.
	The Hon'ble T. T. Allen.
	The Hon'ble P. Nolan.
	The Hon'ble Sir Charles Paul.
	His Honour the President.

So the Motion was lost.

The Hon'ble SIR HENRY HARRISON's amendment that, for section 85 of the Bill, the section as proposed by him be substituted, was put to the vote and agreed to.

The Hon'ble MR. NOLAN, by leave of the Council, withdrew the following notion of which he had given notice:—

'That the existing law on the subject, as contained in section 57 of Act V of 1870, be left unaltered. Section 85 of the Bill will then run as follows:—

"In case any wharf, dock, quay, jetty, pier, erection or mooring shall, after the seventeenth day of October, 1870, without the consent in writing of the Lieutenant-Governor of Bengal, have been fixed, excavated, erected, or built below high-water-mark without the limits for the time being of the port, and thereafter the limits of the port shall be extended so as to include the place in which such wharf, dock, quay, jetty, pier, erection or mooring shall have been fixed, excavated, erected or built, it shall be lawful for the Commissioners to remove, fill up, or destroy such wharf, dock, quay, jetty, pier, erection or mooring without making any compensation therefor.'

The Hon'ble SIR HENRY HARRISON moved that, between sections 85 and 86 of the Bill, the following section be inserted:—

'85 A. Whenever any wharves, quays, stages, jetties, piers, erections or moorings have, under the last preceding section, been removed, filled up, or destroyed, the Commissioners shall make or provide for the use of the public such sufficient and convenient wharves, quays, stages, jetties, piers, erections or moorings in the place of those that may be removed, filled up, or destroyed, as the Local Government may direct'

The Motion was put and agreed to.

The further consideration of the Bill was postponed till the next sitting of the Council.

The Council adjourned to Saturday, the 22nd February, 1890.

CALCUTTA;
The 20th February, 1890.

C. H. REILY,
Assistant Secretary to the Govt. of Bengal, Legislative Department.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 22nd February, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.			
	Western Districts.		
BURDWAN DIVN. 1	Burdwan Feb. 22, '90	Nil	Weather—rather warm. Prospects of *rubbi* crops favourable. Sugarcane promising. Potato almost fair. Prices of common rice :— Srs. Burdwan ... ... 18 / Culna ... ... 16 / Cutwa ... ... 16½ / Kanigunge ... ... 20 } per rupee.
2	Bankoora „ 22, '90	Nil	Weather—getting warm. *Rubbi* crops coming on well; a ten-anna outturn is expected. Pressing of sugarcane proceeds; outturn 13½ annas. Common rice 19 seers per rupee at Suddor and 20 seers at Bishenpore.
3	Birbhum „ 22, '90	Nil	Weather—warmer. Prospects of crops fair. Common rice selling at 17 to 20 seers per rupee.
4	Midnapur „ 22, '90	Nil	Weather—getting warm. General prospects good. *Rubbi* being gathered in the Sudder subdivision. Prospect fairly good. Indigo doing well. Prices of rice :— Srs. Sudder ... ... 18 / Contai ... ... 26 / Tamluk ... ... 18 / Ghatal ... ... 20 } per rupee.
5	Hooghly „ 22, '90	Nil	Weather—seasonable. *Rubbi* yielding good outturn. Prices of common rice :— Srs. Sudder ... ... 12½ / Serampore ... ... 14 / Jehanabad ... ... 17½ } per rupee.
	Howrah „ 22, '90	Nil	Weather—warm in the day, cool at night. Transplantation of *boro* paddy completed. Prospects good. Prices of common rice :— Srs. Howrah ... ... 12½ / Uluberia ... ... 16 } per rupee.
	Central Districts.		
PRESIDENCY DIVN. 6	24-Perghs. Feb. 22, '90	Nil	Weather—seasonable. Good *amun* crop has been harvested. Winter crops are being harvested, and promise well. *Boro* rice doing well. Price of common rice 16 seers per rupee.
7	Nuddea „ 22, '90	Nil	Weather—seasonable. Prospects of crops on the ground favourable. Linseed, mustard, and tobacco being harvested. Cultivation of land for *aus* going on. Rain wanted.
8	Khoolna „ 22, '90	Nil	Weather—warm during the day, but cool at night. State of *boro* and *rabbi* crops fair.
9	Jessore „ 22, '90	Nil	Weather—days hot, but nights cold. Ploughing of rice lands and harvesting of winter crops going on. Outturn of linseed expected to be 12 annas. Prices of rice stationary.
10	Moorshedabad „ 22, '90	Nil	Weather—cool and clear. *Rubbi* harvesting has begun.
RAJSHAHYE DIVN. 11	Dinagepur „ 22, '90	Nil	Weather—days hot, but nights cool Harvesting of *amun* rice nearly over Land is being ploughed for *bhadoi*. Harvesting of winter crops and pressing of sugarcane continue.
12	Rajshahye „ 22, '90	Nil	Weather—hot in the day, but cool at night. Harvesting of *amun* paddy over in the Nattore subdivision with an average outturn of 10 annas only. Prospects of *rubbi* crops good generally. Ganja manufacture continues at Nowgong. Rice sells at 17 seers 2 chittacks per rupee.
13	Rungpur „ 22, '90	Nil	Weather—hot days, but cool nights. Mustard is being gathered with a fair outturn. Other standing crops are promising. Ploughing operations are in active progress.
14	Bogra „ 22, '90	Nil	Weather—seasonable. Land is being ploughed for *aus* paddy and jute. State of standing crops (such as peas, linseed, gram, &c.) reported to be good. Common rice selling at 22 seers per rupee.
15	Pubna „ 22, '90	Nil	Weather—seasonable, Mustard and tobacco expected to be 12-annas crops. Sugarcane deficient. Rain wanted, especially for *cheena* and *kaon*.
16	Darjeeling „ 22, '90	Nil	Weather—fair. Wheat and barley progressing favourably. In Terai, land is being prepared for *bhadoi* crops and jute. Price of common rice continues the same as in last week, viz.,— Srs. Darjeeling ... ... 12 / Kurseong ... ... 13 / Silliguri ... ... 19 } per rupee.
17	Julpigoree „ 22, '90	Nil	Weather—seasonable. Tobacco crop injured by hail in the northern taluks of Mynagori tehsil, but in other places it is favourably reported on. No change in prices.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—*concluded.*			
	Eastern Districts.		
18	Dacca Feb. 22, '90	Nil	Weather—days getting warm, but nights cool. Winter crops doing well. *Cheena* and *kaon* being sown. Mustard and sugarcane being cut. Fodder is available. No special change in the prices of food-grains. Common rice 13 to 14½ seers per rupee.
19	Furreedpur „ 22, '90	Nil	Weather—growing warm; night of 17th especially sultry. Mustard nearly picked; outturn 10 annas. Other *rubbi* crops promise fairly, as also *jali* rice. Cultivation for *aus* rice and *til* in progress. Sugarcane and date-juice being made into molasses. Coarse rice selling at 16 seers per rupee at Sudder and Goalundo, and at 15 seers per rupee at Madaripur.
20	Backergunge „ 22, '90	Nil	Weather—seasonable. Prospects of *rubbi* crops good. Rain wanted. Common rice sells at 14 seers a rupee.
21	Mymensingh „ 22, '90	Nil	Weather—seasonable. Cultivation of *aus* and jute in some lands has begun. Mustard is still being cut. Pulses, viz., *mug*, *khesari*, and *matar kalai*, ripening. Coarse rice is being sold at 13 seers 14 chittacks per rupee.
22	Chittagong „ 22, '90	Nil	Weather—seasonable. The state of winter crops good, but rain is wanted in the south, where weather is reported unsettled.
23	Noakholly „ 22, '90	Nil	Weather—getting warm; occasionally cloudy. Harvesting of *rubbi* crops and ploughing of land for *aus* commenced. Rain wanted in some places. Price of rice stationary.
24	Tipperah „ 22, '90	Nil	Weather—rather warm for this time of the year. *Chillies* being reaped. Other winter crops (pulses, &c.) thriving. Rice selling at from 14½ to 16 seers per rupee.
25	Chittagong Hill Tracts. „ 21, '90	Nil	Weather—cold in the morning throughout the week. Gathering of mustard continues; outturn estimated at about 6 annas. Tobacco and *chillies* doing well. *Jum* cutting has commenced in some places. Best and middle class rice selling at 12 seers 5 chittacks and 13 seers 14 chittacks per rupee respectively.
	Hill Tipperah „ 22, '90	Nil	Weather—getting warm. Sugarcane and tobacco still being cut. Mustard being gathered. *Jums* still being cleared in the hills.
BEHAR.			
26	Patna „ 22, '90	Nil	Weather days warm, but nights cool. Wheat and barley have not yet ripened. Other spring crops are being reaped. Collection of opium continues. Prospects favourable. Prices of food-grains almost stationary.
27	Gya „ 22, '90	Nil	Weather—getting warm in the day. *Rabbi* crops arriving to maturity. Mustard, *masuri*, and gram being reaped. Extraction of opium going on. Food-stocks sufficient.
28	Shahabad „ 22, '90	Nil	Weather—days hot, nights still cool. Pulses being gathered with fair outturn. Other *rubbi* crops promising Prospects of opium crop good. Prices of food-grains stationary.
29	Durbhunga „ 22, '90	Nil	Weather—days getting warm. Wheat, barley, and linseed approaching maturity; outturn estimated at 12 annas on an average. Poppy blossoming, and prospects continue good. Mustard being reaped. Mango trees are abundantly in flower. Common rice selling at 19½ seers per rupee.
30	Mozufferpur „ 22, '90	Nil	Weather—warmer with west wind. Condition and prospects of *rubbi* crops good. Outturn of mustard from 12 to 16 annas.
31	Sarun „ 22, '90	Nil	Weather—getting hot. *Rubbi* and poppy crops doing well, and give favourable prospect. Lands in churs are being prepared for paddy.
32	Chumparun „ 22, '90	Nil	Weather—bright and warm; occasionally stormy with high west wind. *Rubbi* ripening; reaping will commence in the next fortnight. Poppy well in flower and keeping healthy.
33	Monghyr „ 22 '90	Nil	Weather—seasonable. Harvesting of mustard and pulses going on Wheat and barley ripening. Indigo being sown in the Begusarai subdivision. Prices of food-grains almost stationary.
34	Bhagulpur „ 22, '90	Nil	Weather—getting warmer. It is now too late for rain to do good, and the *rubbi* crop must be a light one. Cereals on dearahs may yield 10 to 12 annas, but on high lands will be below 8 annas. Pulses very fair. Mango blossoms profuse.
35	Purneah „ 22, '90	Nil	Weather—days rather warm with west wind. Tobacco being gathered. All *rubbi* crops doing well. Ploughing going on.
36	Maldah „ 22, '90	Nil	Weather—days getting warmer, but nights still cool. Gathering of *kalai* and mustard over, except in one or two places. The outturn is expected to average about 12 annas, but from thanas Gumashtapur and Bholahat it is reported to be about 8 annas. Transplantation of *boro* paddy going on; in some places the plants are up. Prospects of other standing crops good, but damage is apprehended for want of rain. Common rice selling at an average of 18 seers per rupee.
37	Southal Perghs. „ 22, '90	Nil	Weather—becoming warmer. *Rubbi* crops doing well. *Boro* paddy being planted. Mango trees full of blossom.

	No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospect of the crops.
ORISSA.				
Orissa Divn.	38	Cuttack Feb. 22, '90	Nil	Weather—fine. Tobacco doing well. General prospects ———
	39	Pooree „ 21, '90	Nil	Weather—seasonable. Threshing of winter crop (late *sarad*) still continues. *Dalua* crop has come up in places. Prices of rice stationary.
	40	Balasore „ 22, '90	Nil	Weather—warm for the time of year. *Rubbi* crops doing fairly well.
CHOTA NAGPORE.				
		South-West Frontier Agency.		
Chota Nagpore Divn.	41	Hazaribagh Feb. 22, '90	Nil	Weather—seasonable. Full *rubbi* crop expected except in Chowpárun. Poppy prospects favourable.
	42	Lohardugga „ 22, '90	Nil	Weather—days hot, mornings cool. Prospects of *rubbi* crops favourable at head-quarters. In Palamow, wheat tolerably developing; *musoor*, peas, and mustard being harvested; *rabar* greatly damaged by frost.
	43	Singbhoom „ 22, '90	Nil	Weather—warm. Pulses, oilseeds, and wheat all thriving Full crop expected Prices stationary.
	44	Manbhoom „ 22, '90	Nil	Weather—hotter. Spring crops doing well, except *arhar*, of which the outturn is estimated to be from 8 to 10 annas.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 25th February, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (*RETAIL*) OF FOOD-GRAINS, FIREWOOD AND SALT IN THE HEAD-QUARTER STATION BAZARS OF THE DISTRICTS OF BENGAL DURING THE FORTNIGHT ENDING THE 15TH FEBRUARY 1890.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

QUANTITIES PER RUPEE IN

Number.	DISTRICTS.	WHEAT			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLUM. (*Sorghum Vulgare*).		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
	BENGAL.															
	Western Districts.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
1	Burdwan	14 8	14 8	12 0		No sale.		14 4	12 12	15 0	17 1	16 14	18 0	...	...	...
2	Bankoora	14 8	14 8	12 8	14 0	14 0	15 0	17 8	17 8	17 8	21 4	21 0	20 0			
3	Beerbhoom ...	15 0	15 8	11 0	...	..	...	13 8	13 8	13 0	16 8	16 8	15 12	...	...	...
4	Midnapore	13 0	13 0	10 0	..	...	...	14 0	12 8	15 0	18 0	17 0	20 0	.	..	...
5	Hooghly	13 0	13 0	13 0	..	..	..	8 0	8 0	10 0	13 0	13 0	13 0	.		...
	Howrah ..	...	...		...	...	...	11 8	9 8	12 0	14 8	14 0	15 .2	.	..	...
	Central Districts.															
	Calcutta	13 9	13 12	12 6	17 2	18 0	14 14	9 1	9 2	9 7	13 15	13 14	14 12	21 0	20 3	16 0
6	24-Pergunnahs	14 8	15 0	13 4	16 0	16 0	16 0	9 0	9 0	8 0	17 0	16 8	16 8	...	...	...
7	Nuddea	15 0	15 0	14 0	17 12	17 12	17 12	10 10½	10 10½	13 5	12 14	12 14	17 1¼	.		..
8	Khoolna ...			...				14 0	13 0	16 0	16 0	16 0	18 0	..	.	..
9	Jessore	12 12	12 12	12 0				9 0	9 0	14 0	16 0	16 0	18 0	..		...
10	Moorshedabad	16 0	16 0	13 5	..		.	15 8	15 8	13 5	16 0	16 0	16 0	...		.
11	Dinagepore	17 6	16 0	12 0	20 0	19 0	10 0	15 8	14 0	13 8	19 9	19 0	17 0	...		...
12	Rajshahye .	16 8	15 12	13 8	22 8	18 12	26 4	15 0	14 4	14 4	16 2	16 2	15 15	.	.	...
13	Rungpore	13 5	14 8	12 4	.		...	9 6	9 6	10 8	14 8	14 8	16 0	...		.
14	Bogra .	Best. 12 0 / Common. 15 0	13 5 / 16 8	9 15	...	...	.	12 0	12 0	13 8	19 2	18 12	19 8	...	...	.
15	Pubna .	15 0	13 5	15 12				6 12	7 2	7 8	16 .4	16 8	18 0			...
16	Darjeeling	10 0	10 0	10 0	9 0	10 0	6 0	5 0	5 8	6 0	12 0	10 0	13 0	.	..	...
17	Julpigoree	13 0	13 0	10 0	16 0	16 0	16 0	8 0	8 0	8 0	18 0	17 0	.7 0	.		.
	Eastern Districts.															
18	Dacca .	13 0	13 0	15 8	16 0	16 0	20 0	14 0	14 0	15 0	16 0	16 0	17 0	...	...	...
19	Furreedpore .	12 0	12 0	16 0	14 0	12 0	20 0	10 0	10 0	9 0	14 0	14 0	16 0	.		...
20	Backergunge ...	.	.	..	.	...	...	12 13	13 5	13 8	15 0	16 0	16 0	..	.	...
21	Mymensingh	10 0	11 8	10 0	.	..	.	8 0	10 8	13 0	14 0	14 0	18 0	..	...	...

A In subdivisions retail prices of salt per rupee are :—Cuima 10 seers, Cutwa 10 seers 6 chittacks, and Raneegunge 10 seers.
B At Ramporo Haut retail price of salt 10 seers per rupee.
C In subdivisions retail prices of salt per rupee are :—Ghattal 10½ seers, Tumlook 8 seers, and Contai 9 seers.
D In subdivisions retail prices of salt per rupee are :—Serampore 10 seers and Jehanabad 10 seers.
E In subdivisions retail prices of salt per rupee are :—Baruset 9 seers, Basirhat 9 seers, Diamond Harbour (at Magrahat) 10 seers, Barrackpore 9 seers 2 chittacks, and Dum-Dum 10 seers.
F In subdivisions retail prices of salt per rupee are :—Kooshtea 10 seers, Meherpore 10½ seers, Chooadanga 9 seers, and Ranaghat 9 seers 2 chittacks.
G In subdivisions retail prices of salt per rupee are :—Satkhira 9 seers and Bagirhat 8 seers.
H In subdivisions retail prices of salt per rupee are : —Jhenida 9 seers, Magura 9½ seers, Narail 9½ seers, and Bongong 10 seers.
I In subdivisions retail prices of salt per rupee are : —Lalbagh 10½ seers and Kandi 1 ¼ seers.

Districts of Bengal on the 15th February 1890.

SEERS OF 80 TOLAHS.

BAJRA OR CUMBU. (*Pennisetum typhoideum.*)			MARUA OR RAGI. (*Eleusine Coracana.*)		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.

FIREWOOD.		SALT.			WHOLESALE PRICES PER MAUND OF 40 SEERS. SALT.			DISTRICTS.
Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
								BENGAL.
								Western Districts.
100 0	107 0	A 10 0	10 0	10 7¼	3 11 0	3 11 0	3 11 0	Burdwan.
28 0	28 0	10 0	10 0	10 0	3 15 0	3 15 0	3 14 0	Bankoora.
160 0	...	B 10 8	10 8	10 0	3 10 0	3 10 0	3 13 0	Beerbhoom.
160 0	160 0	C 10 3	10 3	10 4	3 15 0	3 15 0	3 14 0	Midnapore.
120 0	120 0	D 9 0	9 0	9 0	3 11 6	3 11 6	4 6 0	Hooghly.
100	100 0	10 0	10 0	10 8	3 13 0	3 13 6	3 11 0	Howrah.
								Central Districts.
100 0	100 0	10 2	10 2	10 5	3 11 0	3 11 6	3 9 7	Calcutta.
100 0	100 0	E 10 0	10 0	10 0	3 9 6	3 9 6	3 10 0	24-Pergunnahs
...	...	F 9 2	9 2	9 2	3 14 0	3 14 0	3 14 0	Nuddea.
160 0	160 0	G 9 8	8 0	9 2¼	4 4 0	4 4 0	4 0 0	Khoolna.
160 0	160 0	H 9 2	9 3	9 2	4 0 0	4 0 0	4 0 0	Jessore.
200 0	200 0	I 10 12	11 0	10 0	3 12 0	3 12 0	4 0 0	Moorshedabad.
160 0	160 0	J 9 8	9 8	9 8	4 0 0	4 0 0	4 0 0	Dinagepore.
240 0	240 0	K 9 0	9 0	9 9	4 2 8	4 2 8	4 0 0	Rajshahye.
100 0	120 0	L 8 14	8 14	9 6	4 8 0	4 8 0	4 4 0	Rungpore.
90 0	96 0	9 0	9 0	8 4	4 4 0	4 1 0	5 0 0	Bogra.
200 0	200 0	M 8 11½	8 11½	9 9	4 0 0	4 0 0	3 15 0	Pubna.
120 0	120 0	8 0	8 0	8 0	N 5 0 0	5 0 0	5 0 0	Darjeeling.
128 0	128 0	O 9 0	9 0	9 0	4 2 0	4 2 0	4 4 0	Julpigoree.
								Eastern Districts.
160 0	120 0	P 9 8	9 4	9 14	4 2 0	4 4 0	4 0 0	Dacca.
120 0	120 0	9 0	9 0	10 0	4 4 0	4 4 0	3 14 0	Furreedpore
120 0	120 0	Q 10 5	10 10	10 10	3 14 0	3 14 0	3 12 0	Backergunge.
		R 9 0	9 4	9 10	4 4 0	4 2 0	4 2 0	Mymensingh.

f salt 8 seers per rupee.
pee are:—Nattore 9 seers and Nowgong 8 seers 11 chittacks.
pee are:—Nilphamari 9 seers, Kurigram 9 seers, and Gaibanda 8 seers.
per rupee.
per maund.
etail price of salt 8 seers per rupee.
pee are:—Manickgunge 8 seers, Moonsheegunge 8 seers 14 chittacks, and Naraingunge

ipee are:—Patuakhali 9 seers, Bhola 8 seers, and Perozepore 9 seers.

R In subdivisions retail prices of salt per rupee are:—Kishoregunge 8 seers, Jamalpore 10 seers, Sherpore 8 seers, and Netrokona 8 seers.

PRICES-CURRENT (retail) of Food-grains, Firewood

Number.	DISTRICTS	WHEAT. Present return.	WHEAT. Next preceding return.	WHEAT. Corresponding return of last year.	BARLEY. Present return.	BARLEY. Next preceding return.	BARLEY. Corresponding return of last year.	RICE, BEST SORT. Present return.	RICE, BEST SORT. Next preceding return.	KANGNI OR KAKUN, ITALIAN MILLET. (*Setaria italica.*) Present return.	KANGNI OR KAKUN, ITALIAN MILLET. (*Setaria italica.*) Next preceding return.	KANGNI OR KAKUN, ITALIAN MILLET. (*Setaria italica.*) Corresponding return of last year.	GRAM, CHANA, CHHOLA, KADALAY OR SUNAGA. (*Cicer arietinum.*) Present return.	GRAM, CHANA, CHHOLA, KADALAY OR SUNAGA. (*Cicer arietinum.*) Next preceding return	GRAM, CHANA, CHHOLA, KADALAY OR SUNAGA. (*Cicer arietinum.*) Corresponding return of last year.
	***Eastern Districts*—concluded.**	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
22	Chittagong ..	11 0	11 0	11 0	.			12 0	11 0	.	...	..	13 0	12 0	11 0
23	Noakholly ...	...	.	...		...	..	15 0	16 0	...	...	.	12 0	10 0	12 0
24	Tipperah ...	12 5	11 7	12 8				10 0	10 0	..	....	..	13 5	Gobindabhag. 16 14	16 0
25	Chittagong Hill Tracts		..					12 4	2 4	..	..	...	..	...	...
	Hill Tipperah ..	6 0	6 0	6 0				9 0	8 0	...	..	.	12 0	12 0	10 0
	BEHAR.														
26	Patna ...	7 8 / 15 8	Red. 17 8 / White. 15 8	18 0	.		23 0	24 0	22 0	10 8	10 8	1	22 0	19 0	15 8
27	Gya ...	15 0	16 0	14 0	23 0	23 0	18 0	10 8	10 8	1	15 0	15 0	13 0	24 0	23 0	19 8
28	Shahabad ...	16 0	16 0	15 8	24 0	23 0	20 0	9 0	9 0		...	...	...	20 0	21 0	20 0
29	Durbhunga ...	14 4	13 3	16 0	27 8	27 8	18 0	11 0	9 14	1	...	...	...	28 8	20 0	18 12
30	Mozufforpore	14 0	14 0	12 0	20 0	20 0	.	9 0	9 0		...	...	...	18 0	18 8	16 0
31	Sarun ...	15 8	15 8	15 0		21 0	21 8	9 0	9 4		16 0	16 0	15 0	20 4	20 8	17 12
32	Chumparun ..	12 0	13 0	13 0	21 0	.	18 0	8 0	10 0		...	...	...	23 0	23 0	15 0
33	Monghyr ...	17 14	18 10	15 0	21 0	21 0	..	16 12	16 12		16 12	16 12	10 8	21 0	21 0	18 9
34	Bhagulpore ...	16 6	16 6	15 2	20 3	20 3	17 0	Old. 11 6 / New. 15 2	11 6		...	...	...	20 3	20 3	16 11
35	Purneah ...	18 0	18 0	13 0	...	...	...	17 0	18 0		...	...	...	18 0	16 0	13 0
36	Maldah ..	18 0	16 0	13 0	..	.		11 0	8 0		...	...	...	16 0	13 0	15 0
37	Sonthal Perghs.	13 0	13 0	11 0				13 0	12 0		...	...	...	17 0	16 0	14 0
	ORISSA														
38	Cuttack ...	13 2	11 13	13 2				...	10 8	10 8	...		...	14 7	15 12	19 11
39	Pooree ...	13 2	13 2	13 2	...	.		17 1	15 12		...	...	...	17 1	Kalai. 17 1	17 1
40	Balasore ...	15 0	15 0	13 0	13 6	13 0	13 0	13 0	13 0		.	.	...	14 0	14 0	12 8
	CHOTA NAGPORE														
	South-West Frontier Agency.														
41	Hazaribagh ...	13 0	13 8	13 0	15 0	15 0	...	10 0	10 0		...	...	...	16 0	16 0	15 0
42	Lohardugga ...	10 8 / 12 8	White. 11 12 / Red. 13 12	13 0	3 0	.	...	15 0	17 0		...	...	...	12 8	14 12	13 0
43	Singbhoom ...	10 0	10 0	10 0	12 0	15 0	14 0	16 0	16 0		...	...	...	10 0	10 0	12 0
44	Manbhoom	13 5	13 5	13 5	..	.	...	15 0	14 0		...	..	...	16 0	15 12	14 0

S At Penny Hât retail price of salt 8 seers per rupee.
T In subdivisions retail prices of salt per rupee are :—Buxar 10½ seers, Sassera
U At Samastapor in the Tajpore subdivision retail price of salt 11 seers per ru
V In subdivisions retail prices of salt per rupee are :—Hajipore 9¾ seers and Sit
W At Bettiah retail price of salt 9¾ seers per rupee.

CALCUTTA,
The 25th February, 1890.

Station Bazars of the Districts of Bengal on the 15th February 1890—(concluded).

INDIAN-CORN OR MAIZE (*Zea Mays.*)			ARHAR OR THUR. CADJAN PEA. (*Cajanus indicus.*)			FIREWOOD.			SALT.			WHOLESALE PRICES PER MAUND OF 40 SEERS. SALT.			DISTRICTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return	Next preceding return.	Corresponding return of last year.	
															Eastern Districts—concluded.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
...	...	...	...	...	...	110 0	110 0	108 0	9 0	9 0	9 8	4 4 0	4 0 0	4 0 0	Chittagong.
...	...		8 0	7 0	...		...	...	S 9 0	9 0	8 0	4 0 0	4 0 0	4 8 0	Noakholly.
...	...	...	8 6¼	8 6¼	9 0	.	.	...	8 11	8 14	8 0	4 8 0	4 8 0	4 6 0	Tipperah.
...	...	..	.	.	...	320 0	320 0	320 0	8 0	8 0	8 0	4 8 0	4 8 0	4 8 0	Chittagong Hill Tracts.
...	...	...	8 0	8 0	8 0	...	...	...	8 0	8 0	8 0	4 6 0	4 6 0	4 6 0	Hill Tipperah.
															BEHAR.
23 0	22 8	21 8	21 0	21 8	24 0	130 0	130 0	130 0	10 0	10 0	10 0	3 13 6	3 14 0	3 12 6	Patna.
...	...	...	20 0	19 0	18 0	160 0	160 0	200 0	9 2	9 2	8 12	4 2 0	4 2 0	4 2 9	Gya.
...	...	...	19 0	19 0	14 0	160 0	140 0	160 0	T 10 0	9 12	10 0	3 15 0	3 15 6	4 0 0	Shahabad.
23 0	24 3	18 0	17 9	16 8	21 0	200 0	200 0	176 0	U 10 4	10 0	11 0	3 11 0	3 12 0	3 10 3	Durbhunga.
26 0	26 0	17 0	18 0	18 0	20 0	160 0	160 0	160 0	V 10 0	10 0	10 0	4 0 0	4 0 0	3 12 0	Mozufferpore.
23 0	21 12	20 12	19 8	19 8	20 12	160 0	160 0	160 0	10 0	9 8	10 0	4 0 0	4 0 0	3 15 0	Sarun.
24 0	24 8	18 0	17 0	17 8	22 0	160 0	160 0	160 0	W 10 0	10 0	9 8	4 1 0	4 1 0	4 1 0	Chumparun.
28 0	22 1	16 4	16 12	16 12	17 5	147 0	47	147 0	X 9 11	9 11	9 8	4 0 0	4 0 0	4 0 0	Monghyr.
22 6	22 11	17 0	16 6	17 11	17 0	176 12	164 0	176 8	10 1	10 1	...	3 15 6	3 15 6	4 0 0	Bhagulpore.
...	...	...	16 0	16 0	16 0	130 0	120 0	200 0	Y 9 0	9 0	9 0	4 7 0	4 7 0	4 5 0	Purneah.
...	...	...	...		.	120 0	60 0	120 0	9 0	9 0	10 0	4 2 0	4 4 0	4 0 0	Maldah.
25 0	25 0	19 0	20 0	20 0	23 0	200 0	200 0	200 0	9 0	9 0	9 0	4 0 0	4 0 0	4 3 0	Sonthal Perghs.
															ORISSA.
...	...	...	14 7	14 7	17 1	80 0	80 0	80 0	11 0	11 0	11 0	3 12 0	3 12 0	3 12 0	Cuttack.
...	...	..	15 12	15 12	15 12	80 0	80 0	80 0	Z 11 13	11 13	11 13	3 6 0	3 6 0	3 6 0	Pooree.
...	...	...	...	...	...	160 0	160 0	160 0	Z1 10 0	10 0	8 8	3 14 0	3 14 0	4 4 0	Balasore.
															CHOTA NAGPORE.
															South-West Frontier Agency.
21 0	21 0	18 0	16 0	17 0	16 0	320 0	320 0	320 0	8 0	8 0	8 0	4 6 0	4 6 0	4 4 0	Hazaribagh.
32 0	30 0	16 0	Small. 19 12	17 0	15 0	120 0	140 0	140 0	8 8	8 8	8 8	4 5 0	4 6 0	4 8 0	Lohardugga.
20 0	24 0	...	12 0	12 0	15 0	240 0	240 0	200 0	8 8	8 8	8 0	4 12 0	4 12 9	5 0	Singhbhoom.
32 0	32 0	26 0	20 0	20 0	16 0	00 0	200 0	200 0	Z2 9 2	9 2	9 0	4 2 0	4 2 6	4 2 0	Manbhoom.

X In subdivisions retail prices of salt per rupee are: Begusarai 9¼ seers and Jamui 9 seers.
Y At Kishengunge retail price of salt 8 seers per rupee.
Z In the Khoordah subdivision retail price of salt 11 seers per rupee.
Z1 At Bhudruck retail price of salt 9 seers per rupee.
Z2 At Govindpore retail price of salt 9 seers per rupee.

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt

Number.	MARTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta ...	2 10 11	2 10 9	2 15 0	2 1 8	1 15 11	2 7 0	4 2 7	4 2 7	3 15 4	2 10 3	2 10 1	2 7 8
2	Serajgunge ...	2 2 0	2 4 0	2 10 0	...	...	...	4 10 0	5 8 0	3 14 0	2 12 0	2 10 0	2 10 0
3	Dacca ...	3 0 0	3 0 0	2 8 0	2 7 0	2 7 0	2 0 0	2 13 0	2 14 0	2 10 0	2 7 0	2 7 0	2 5 0
4	Naraingunge	...	...	...	...	...	...	2 12 0	3 0 0	2 6 0	2 8 0	2 12 0	2 4 0
5	Chittagong ...	3 8	3 8 0	3 9 0	...	...	...	3 4 0	3 8 0	3 4 0	2 8 6	2 9 0	2 10 0
6	Patna ...	Red. 2 4 0 / White. 2 8 0	Red. 2 4 0 / White. 2 8 0	... / 2 2 0	1 10 6	1 10 0	1 12 0	3 12 0	3 12 0	3 8 0	2 1 0	2 1 0	2 7 0
7	Balasore ...	2 8 0	2 8 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 4 0	2 0 0	2 0 0	1 12 0
8	Pooree ...	...	...	...	...	...	...	...	...	...	1 12 0	1 12 0	2 2 6
9	Cuttack ...	3 0 0	3 4 0	3 0 0	...	...	...	3 10 0	3 0 0	3 4 0	1 11 0	1 14 0	2 0 0

CALCUTTA,
The 25th February, 1890.

engal on the 15th February 1890.

PRICES PER MAUND

...RAH OR CHOLUM. (...holcus Vulgare.)			BAJRA OR CUMBU. (Pennisetum typhoideum.)		
...ceding return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
0 7	1 11 0	2 4 0	2 4 6	3 6 7	2 10 7
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
3 6	1 12 0	1 10 0	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...

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...IZE.	ARHAR OR THUR. CAJAN PEA. (*Cajanus indicus.*)			FIREWOOD.			SALT.			MARTS.
...corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
A P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
4 0	1 15 11	1 15 10	2 2 8	0 5 6	0 5 6	0 5 9	3 11 0	3 11 0	3 9 7	Calcutta.
...	...	...	...	...	...	...	3 12 0	4 0 0	3 12 0	Serajgunge.
..	2 12 0	2 12 0	2 8 0	0 4 0	0 4 0	0 5 0	4 2 0	4 4 0	4 0 0	Dacca.
..	3 2 0	3 4 0	3 2 0	0 8 0	0 8 0	0 10 0	3 12 0	3 12 0	3 12 0	Narainguage.
..	...	...	...	0 6 0	0 6 0	0 5 0	4 4 0	4 0 0	4 0 0	Chittagong.
2 6	1 13 6	1 13 0	1 10 0	0 5 0	0 5 0	0 5 0	3 13 6	3 14 0	3 12 6	Patna.
..	...	...	...	0 4 6	0 4 6	0 4 6	3 14 0	3 14 0	4 4 0	Balasore.
..	...	..	...	...	...	...	3 6 0	3 6 0	3 6 0	Pooree.
..	2 12 0	2 12 0	2 0 0	0 8 0	0 8 0	0 8 0	3 12 0	3 12 0	3 12 0	Cuttack.

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of Benga

STATION OBSERVATIONS.

Meteorological Division.	District.	Representative station.	Air pressure. Mean barometric height, 8 A.M.	Air pressure. Mean reduced to sea-level.	Air pressure. Variation from mean.	Wind. Prevailing direction.	Wind. Mean wind velocity.	Temperature. Highest during week.	Temperature. Date.	Temperature. Lowest during week.	Temperature. Date.	Temperature. Mean maximum temperature.	Temperature. Mean minimum temperature of week.	Temperature. Mean daily temperature of week.	Temperature. Variation from normal mean of week.	Mean 8 A.M. temperature
Orissa.	Pooree	Pooree ...	29·898	29·911	—	SW	175	86·2	19th Feb.	?	?	84·6	?	?	?	75·
		Gopalpore	29·887	29·949	—·093	NW	291	84·2	19th ,,	65·9	15th Feb.	82·8	71·2	77 0	+6·9	76·
		False Point ...	29·891	29 913	—·117	W	237	86·4	20th ,,	61 0	19th ,,	84·5	69 9	75 7	+1·8	75·
	Cuttack	Cuttack ...	29·844	29·927	—·006	Calm	35·7	95·9	18th, 21st Feb.	62·8	15th ,,	93·5	66·9	80·4	+2·4	71
	Balasore	Balasore ...	29·850	29·911	—·120	North-easterly.	65·2	94·4	18th ,,	61·6	19th ,,	90·8	65·0	77·9	+5·0	69
South-West Bengal.	South-West Midnapore / South 24-Pergunnahs	Saugor Island	29·888	29 915	—·109	Variable	274	86 2	20th ,,	65·4	18th ,,	85·0	69 8	76 4	+2 8	7·
	Midnapore	Midnapore ..	29 762	29 918	—·127	Variable	65·3	95·3	18th ,,	61·2	15th, 19th Feb.	92·0	63 6	77 8	+5·6	69·
	24-Pergunnahs ... ... / Howrah ... ... / Hooghly	Calcutta	29 889	29·911	—·118	Calm	93	88 5	18th ,,	59 3	19th ,,	85·4	64·6	75·0	+3·9	69·
	Burdwan	Burdwan	29·804	29 908	— 124	Westerly	38 3	92·0	18th, 19th Feb.	57 9	19th ,,	90 0	61 8	75 9	+5 3	66
	Bankoora	Bankoora ...	29·584	29·897	—·114	Calm	55·0	92·7	18th ,,	57·8	15th ,,	90·0	61·7	75 8	+5 1	68·
	Beerbhoom ... ... / West Burdwan	Ranegunge	29·577	29 924	—·11	NW	53·4	93·5	18th ,,	57·9	15th ,,	90·4	60·9	75 6	+5 4	66·
	Moorshedabad	Berhampore...	29·837	29·908	— 124	NW	48·5	91·1	18th ,,	55·7	16th ,,	87·2	58 7	73 0	+4·0	64·
	Nuddea	Krishnaghur...	29·865	29·933	—·091	WSW	87·1	90·9	18th ,,	51·5	15th ,,	88·3	58·4	73·3	+5·0	68
	Jessore ... ... / Khoolna	Jessore ...	29·871	29 906	—·118	Calm	49·2	89·7	18th ,,	59·5	19th ,,	86 3	63 7	75 0	+5·4	67·
East Bengal.	Chittagong	Chittagong	29 842	29·935	— ·038	Westerly	66·6	89 1	21st ,,	58·6	15th, 16th Feb.	84 5	62 1	73 3	+3 0	67
	Chittagong Hill Tracts	Demagiri ..	Observations not received													
	Backergunge	Barrisal ..	29 904	29·917	—·088	Calm	69·7	86·8	18th Feb.	51·6	15th ,,	84 2	63 6	75·9	+4 0	69·
	Noakholly	Noakholly ...	29·889	29·953	—	Variable	82·5	87·0	21st ,,	55·8	15th ,,	85·0	62·5	73 8	—	71·
	Furreedpore	Furreedpore...	29·873	29·915	— 111	SW	64·7	85 .	18th & 21st Feb.	57·0	19th ,,	84 7	61 8	73 2	+5 4	66·
	Dacca	Dacca ...	29·876	29 899	—·124	SSW	88·9	89·1	18th ,,	58 8	19th ,,	86·5	62 5	74 5	+4 6	69·
	Tipperah	Commillah ..	29·886	29·923	—·095	S	64·3	86·9	21st ,,	57·0	15th ,,	84·9	62 8	73·8	+4 5	68·
	Mymensingh	Mymensingh	29·847	29 908	— 121	Easterly	61 2	84 0	21st ,,	56 1	19th ,,	82 8	59 9	71·3	+4 2	66
North Bengal.	Bogra	Bogra	29·872	29·879	—·119	Calm	48·6	88·3	18th ,,	55·1	16th ,,	86 2	56 8	71 5	+4·5	61·
	Pubna	Serajgunge ..	29·941	29·899	— 125	WSW	24·7	87·9	18th ,,	52 9	19th ,,	86·0	56·1	71 1	+4·5	64
	Rajshahye	Rampore Boalieah.	29·826	29·899	— 104	Variable	57·0	88·3	18th ,,	54·5	16th ,,	85 4	58 5	71 9	+5 7	65
	Maldah	Maldah ...	29·854	29·919	—	NW	56 6	88 6	21st ,,	51·2	16th ,,	80 6	58 8	69 2	—	65·
	Dinagepore	Dinagepore ..	29 761	29 891	— 142	SW	59 6	87 1	18th ,,	50 2	16th ,,	85 2	53 5	69 4	+3 7	59·
	Rungpore	Rungpore ...	29·778	29 909	—·126	Calm	20 6	85 4	18th ,,	49·8	16th ,,	83·7	55·0	69 3	+4·0	61
	Julpigoree ... ... / Cooch Behar	Julpigoree ...	29·596	29 898	—·131	N	65·7	82·9	19th ,,	49 9	19th ,,	76·4	55 3	64·9	+1·7	60
	Darjeeling Hill Tracts ...	Darjeeling .	22·896	—	—	WSW	141·0	54 6	19th, 20th Feb.	38·5	21st ,,	55·2	39·9	46·6	4	4
North Behar.	Purneah ... ... / North Bhagulpore ...	Purneah .	29·765	29·898	—·124	Calm	94 4	84 7	20th, 21st Feb.	49·0	16th ,,	83 .	51 7	67 5	+2·3	59
	Mozufferpore	Mozufferpore	Observations suspended.													
	Durbhunga	Durbhunga ...	29·732	29 908	—·122	WSW	94·1	85·4	18th Feb.	?	?	83 2	?	?	?	60
	Chumparun	Motihari	29·659	29·901	— 109	Variable	183·0	84·2	21st ,,	48·9	15th, 19th Feb.	81·8	50·8	66·3	+3·0	56
	Sarun	Chupra	Observations incomplete.													
South Behar.	Shahabad	Dehree / Buxer / Arrah	29·672 / 29·700	29 927 / 29 914	—·114 / —·100	WSW / SW	113 0 / 104·7	88 4 / 86·7	17th ,, / 21st ,,	Ditto. 53·4 / 52·9	15, 18 ,, / 15th ,,	85 5 / 85 9	56·3 / 54 9	70·9 / 70·0	+5·7 / +5·1	62 / 61
	Gya	Gya	29·534	29 930	—·107	S	99 0	91·2	17th ,,	56·2	16th ,,	87 0	49·0	73 5	+4 5	65
	Patna ...	Bankipore	29·716	29 909	—·131	SW	69·0	85·1	17th, 18th Feb.	54·2	15th, 16th Feb.	8 2	56·6	70 4	+5·1	64
	South Bhagulpore .. / Monghyr	Bhagulpore ...	29·720	29·889	—·120	Calm	18 0	88 7	18th ,,	52 5	16th ,,	80·7	55 6	71 2	+5·3	64·
	Sonthal Pergunnah ..	Deoghur ..	29·394	29 915	—	NW	65·0	90·8	18th ,,	53·1	16th ,,	87·3	57 1	72·2	—	65·
Chutia Nagpur.	Hazaribagh	Hazaribagh	27·875	29 936	—·093	W	187·4	88 0	17th ,,	56·3	18th ,,	83 0	59 3	71 4	+5·5	66
	Lohurdugga ... ... / Manbhoom	Ranchee ..	27 715	29 924	—·092	Calm	130 4	87·1	17th ,,	56·4	15th & 19th Feb.	84·3	58·5	71·4	+4·0	65
	Singbhoom	Chyebassa ...	29·138	29·930	—	Southerly	30·0	93·4	21st ,,	57·2	16th ,,	90·7	61·2	76·0	—	6

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the l
The *humidity* of the atmosphere is expressed at percentage, saturated air being presented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The numb
are the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional station for the period in question during the p
stations in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth or an inch fell.

for the week ending Friday, the 21st of February 1890.

Average humidity at 8 A.M.	Average cloud amount at 8 A.M. for week.	Rainfall of week at observing station.	OF WEEK. Mean for district.	OF WEEK. Normal mean.	DISTRICT OBSERVATIONS. RAINFALL. Since 1st of month. Mean for district.	Since 1st of month. Normal mean.	Since 1st of month. Variation.	Since 15th May 1889. Mean for district.	Since 15th May 1889. Normal mean.	Since 15th May 1889. Variation.	Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
83	1·0	Nil	Nil	0·31	Nil	0·69	−0·69	71·94	56·32	+15·62	0·0	0·4	Pooree	Pooree	Orissa.
73	0	Nil											Gopalpore		
90	3·1	Nil											False Point		
70	2·4	Nil	Nil	0·30	Nil	0·73	−0·73	66·30	62·71	+13·68	0·0	0·4	Cuttack	Cuttack	
80	0	Nil	Nil	0·23	Nil	0·82	−0·82	49·96	54·13	−4·17	0·0	0·4	Balasore	Balasore	
88	0·6	Nil	Nil	0·18	Nil	1·10	−1·10	58·57	63·47	−4·90	0·0	0·4	Saugor Island	South-West Midnapore	South-West Bengal.
73	0	Nil	Nil	0·21	Nil	0·81	−0·81	46·39	52·38	−5·99	0·0	0·5	Midnapore	South 24-Pergunnahs	
85	0·6	Nil	Nil	0·30	Nil	1·10	−1·10	54·10	52·76	+1·34	0·0	0·5	Calcutta	Midnapore	
75	1·4	Nil	Nil	0·22	Nil	0·89	−0·89	43·89	47·60	−3·71	0·0	0·4	Burdwan	24-Pergunnahs	
56	0	Nil	Nil	0·21	Nil	0·63	−0·63	55·93	52·91	+3·02	0·0	0·3	Bankoora	Howrah	
59	0	Nil	Nil	0·28	Nil	0·91	−0·91	52·46	52·53	−0·07	0·0	0·5	Ruteegunge	Hooghly	
64	0	Nil	Nil	0·26	Nil	0·74	−0·74	51·17	51·29	−0·12	0·0	0·4	Berhampore	Burdwan	
73	0·1	Nil	Nil	0·30	Nil	0·92	−0·92	51·61	50·06	+1·55	0·0	0·4	Krishnaghur	Beerbhoom	
91	1·7	Nil	Nil	0·27	Nil	0·92	−0·92	54·75	54·14	+0·61	0·0	0·6	Jessore	West Burdwan ...	
82	3·1	Nil	Nil	0·19	Nil	0·60	−0·60	100·35	114·38	−14·03	0·0	0·4	Chittagong	Moorshedabad ...	
			Nil	0·26	Nil	0·74	−0·74	67·17	82·34	−17·17	0·0	0·4	Dumagiri	Nuddea	East Bengal.
92	1·6	Nil	Nil	0·28	Nil	0·99	−0·99	78·41	77·91	+0·50	0·0	0·4	Barrisal	Jessore	
84	0	Nil	Nil	0·25	Nil	0·89	−0·89	93·82	108·00	−14·18	0·0	0·4	Noakholly	Khoolna	
89	1·4	Nil	Nil	0·37	Nil	0·98	−0·98	67·22	56·70	+10·52	0·0	0·5	Furreedpore	Chittagong	
86	1·1	Nil	Nil	0·32	Nil	1·01	−1·01	76·19	60·61	+15·58	0·0	0·5	Dacca	Chittagong Hill Tracts	
87	2·4		Nil	0·23	Nil	0·88	−0·88	57·62	70·19	−12·57	0·0	0·5	Sonmollah	Backergunge	
85	1·7	Nil	Nil	0·20	Nil	0·83	−0·83	88·78	68·14	+20·64	0·0	0·4	Mymensingh	Noakholly	
81	0	Nil	Nil	0·30	Nil	0·77	−0·77	65·62	58·00	+7·62	0·0	0·5	Bogra	Furreedpore	
84	0	Nil	Nil	0·26	Nil	0·98	−0·98	55·37	54·33	+1·04	0·0	0·5	Serajgunge	Dacca	
74	0·1	Nil	Nil	0·25	Nil	0·69	−0·69	54·35	54·57	−0·22	0·0	0·4	Rampore Beauleah	Tipperah	
64	0	Nil	Nil	0·23	Nil	0·58	−0·58	39·76	54·80	−15·04	0·0	0·4	Maldah	Mymensingh	
76	0·1	Nil	Nil	0·20	Nil	0·47	−0·47	57·49	57·87	−0·38	0·0	0·4	Dinagepore	Bogra	North Bengal.
81	0	Nil	Nil	0·15	Nil	0·41	−0·41	85·87	74·24	+11·63	0·0	0·4	Rungpore	Pubna	
85	0	Nil	Nil	0·18	Nil	0·37	−0·37	117·73	111·62	+6·11	0·0	0·5	Julpigoree	Rajshahye	
83	0·6	Nil	Nil	0·23	Nil	0·54	−0·54	133·46	121·91	+11·55	0·0	0·5	Darjeeling	Maldah	
69	0·1	Nil	Nil	0·11	Nil	0·48	−0·48	75·00	59·16	+15·84	0·0	0·4	Purneah	Dinagepore	
			Nil	0·07	Nil	0·36	−0·36	48·83	43·90	+4·93	0·0	0·3	Mozufferpore	Rungpore	North Behar.
66	0·3	Nil	Nil	0·09	Nil	0·49	−0·49	52·11	45·12	+6·99	0·0	0·3	Durbhunga	Julpigoree	
76	1·7	Nil	Nil	0·08	Nil	0·37	−0·37	63·96	47·16	+16·80	0·0	0·3	Motihari	Cooch Behar	
			Nil	0·16	Nil	0·40	−0·40	40·13	43·38	−3·25	0·0	0·3	Chupra	Darjeeling Hill Tracts	
53	1·0	Nil	Nil	0·10	Nil	0·37	−0·37	40·07	40·45	−0·38	0·0	0·2	Sarun	Purneah	
59	1·3	Nil											Dehree	North Bhagulpore ...	
													Buxar		
87	2·1	Nil	Nil	0·11	Nil	0·39	−0·39	37·07	42·01	−4·94	0·0	0·3	Arrah	Mozufferpore	South Behar.
52	1·0	Nil	Nil	0·10	Nil	0·44	−0·44	43·49	41·76	+1·73	0·0	0·3	Shahabad	Durbhunga	
54	0·3	Nil	Nil	0·19	Nil	0·19	−0·49	42·43	43·66	−1·23	0·0	0·4	Gya	Motihari	
57	0	Nil	Nil	0·11	Nil	0·44	−0·44	54·75	51·23	+2·52	0·0	0·3	Bankipore	Chumparun	
39	1·1	Nil	Nil	0·16	Nil	0·53	−0·53	43·03	50·99	−7·96	0·0	0·3	Bhagulpore	Sarun	
55	0·0	Nil	Nil	0·17	Nil	0·63	−0·63	44·34	49·76	−5·42	0·0	0·4	Gya	Gya	
			Nil	0·16	Nil	0·86	−0·86	38·36	47·78	−0·42	0·0	0·4	Hazaribagh	Patna	
63	0	Nil	Nil	0·22	Nil	0·80	−0·80	48·76	52·38	−3·62	0·0	0·5	Ranchi	South Bhagulpore ...	
													Chyebassa	Monghyr	
														Sonthal Pergunnahs...	
														Hazaribagh	Chutia Nagpur.
														Lohardugga	
														Manbhoom	
														Singbhoom	

ten years. Th variations are *negative* when the mean for the week is less than the corresponding normal mean, and *positive* when greater.
denoting cloud amount represents the part of the sky covered, the whole sky being denoted by 10. Under the head District observations of rainfall the normal means
17 years. The means of the district are the numerical average of the rainfall return received in the district, *i.e.*, from total rainfall at

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 21st of February 1890.

Meteorological division.	District.	Station.	Rainfall. Saturday, 15th February.	Sunday, 16th February.	Monday, 17th February.	Tuesday, 18th February.	Wednesday, 19th February.	Thursday, 20th February.	Friday, 21st February.	Total number of rainy days.	Total rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 16th May 1889.	Average rainfall from 16th May to date.
ORISSA ...	Pooree ...	Pooree ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	80·71	52·13
		Khurdah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·52	76·57	57·02
		Banpur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·74	65·0	49·74
		False Point ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·71	77·00	64·59
		Gop ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Pipli ...											?		?
	Cuttack ...	Jagatsingpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·55	74·49	47·03
		Banki ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·57	52·48	50·17
		Cuttack ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·70	75·18	57·05
		Kendrapara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·71	72·24	53·93
		Jajpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·00	57·64	54·45
		Dharmsala ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59·25	?
		Salipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72·47	?
	Balasore ...	Chandbali ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·92	55·04	53·39
		Bhuddruck ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·92	57·66	52·83
		Sorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·58	46·05	51·70
		Balasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·18	48·01	50·07
		Jellasore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·64	39·59	54·86
		Baripodah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·86	54·79	54·43
SOUTH-WEST BENGAL.	Midnapore ...	Contai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·02	55·18	62·29
		Sangor Island ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·03	50·74	08·13
		Tumlook ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·00	49·00	52·10
		Midnapore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·78	46·26	49·60
		Ghattal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·62	45·30	55·18
		Kukrahaty ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50·84	?
		Garbetta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46·29	?
	24-Pergunnahs ...	Diamond Harbour ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·25	63·79	59·79
		Canning Town ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·85	?
		Alipore Jail ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·31	52·87	57·16
		Barrackpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·21	52·12	51·07
		Dum-Dum ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·95	65·43	52·65
		Baraset ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·18	58·71	51·15
		Busseerhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·91	62·41	55·42
	Howrah ...	Howrah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·95	59·64	52·86
		Mohesreka (*Chiloberiah.*) ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·04	55·04	53·04
	Hooghly ...	Serampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·16	55·03	51 29
		Hooghly ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·18	37·53	49·30
		Jehanabad ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1 18	41·61	56·23
	Burdwan ...	Culna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·83	41·32	45·18
		Burdwan ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·77	47·25	48·50
		Cutwa ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·06	43·11	48·56
		Raneegunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·09	55·90	50·11
		Mankur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·80	?
	Bankoora ...	Bankoora ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·72	50·86	52·21
		Bishenpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·76	57·49	52·74
		Mahara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·46		52·39
		Khatra ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·58	65·91	54·79
		Indas ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	45·14	?
		Kotalpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48·40	?
		Auda ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40 44	?
		Gangajalghati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59 17	?
		Raspore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58·35	?
		Sonamukhi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54·44	?
	Beerbhoom ...	Bh. Soory ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·86	59·00	54·57
		Hetampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·91	47·07	55·21
		Rampore Haut ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·76	47·78	55·...
		Hotpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·04	?
		Murarai ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53 10	?
	Nuddea ...	Ranaghat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·83	50·10	47·89
		Kishnaghur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·89	42·95	46 93
		Chooadanga ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·01	49·86	52·00
		Meherpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·94	53·15	48·42
		Koushtea ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·95	56·06	55·36
	Khoolna ...	Satkhira ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·83	54·54	55·99
		Bagirhat ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·14	55·48	62·64
		Khoolna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·89	56·82	55·71
		Nakipur ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Rampal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Jessore ...	Narail ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·89	52·01	46·86
		Jessore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·92	63·90	55·27
		Jhenidah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·96	59·74	54·31
		Magoorah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·86	56·90	50·03
		Bongong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·91	47·64	52·67
	Moorshedabad ...	Kandi ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·82	53·58	51·90
		Berhampore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·89	46·28	52·19
		Lalbagh ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·90	47·13	51·61
		Azimgunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·72	?	51·92
		Jungipore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·68	55·01	49·81
		Lalgola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·63	59·02	51·57
		Jiagunge ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·20	?
		Akhriguj ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43·06	?
		Patkabari ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
EAST BENGAL	Chittagong ...	Cox's Bazar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	123·59	136·29
		Chittagong ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·72	77·08	95·14
		Kutubdia ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113·09	?
		Satkanya ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	63·06	?
	Chittagong Hill Tracts.	Rangamati ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·92	63·12	84·66
		Ruma ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·55	67·20	81·06
	Backergunge ...	Patuakhally ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·06	87·66	88·75
		Perozepore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·12	72·64	71·14
		Burrisal ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·83	73·21	68·58
		Bhola ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·64	80·09	82·66

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 21st of February 1890—contd

Meteorological Division.	District.	Station.	Rainfall: Saturday, 15th February.	Sunday, 16th February.	Monday, 17th February.	Tuesday, 18th February.	Wednesday, 19th February.	Thursday, 20th February.	Friday, 21st February.	Total: Number of rainy days.	Total: Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
EAST BENGAL —*concld.*		*Gournadi*	...	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	61·31	?
		Bauphal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	93·12	?
	Noakholly ...	Noakholly	.....	.....	.....	.....	...	.....	.....	Nil	Nil	Nil	0·08	102·58	108·48
		Feuny	.....	.....	.....	.....	...	.....	.....	Nil	Nil	Nil	1·09	79·03	107 81
		Harishpore ...	... ...	.....	.....	... ...	....	.....	.....	Nil	Nil	Nil	?	84·32	?
		Ramganj	.....	.....	.....	... ...	...	.....	... ..	Nil	Nil	Nil	?	86·75	?
	Furreedpore	Madaripore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·77	62·98	56·32
		Furreedpore...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·06	65·60	57·32
		Gomlando	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·13	58·05	54·07
	Dacca ...	Munshigunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1·08	77·51	71·16
		Dacca	... ...	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	0·90	76·45	69·38
		Narainkunge	.....	... ..	....	... ..	.....	... ..	.....	Nil	Nil	Nil	1·05	81·14	69·83
		Manickgunge	.....	.....	... ...	... ..	.....	... ..	... ..	Nil	Nil	Nil	1·09	69·67	61 00
		Joydebpore	.....	... ..	.....	... ..	.....	... ..	.....	Nil	Nil	Nil	?	68·55	?
	Hill Tipperah. Tipperah ...	Agartola	.....	.....	.....	.....	... ..	.....	.....	Nil	Nil	Nil	0·94	44·38	62 49
		Comilla	.....	.... .	... ...	... ..	.....	... ..	.... .	Nil	Nil	Nil	0·79	62·97	76·09
		Chandpore	.....	.....	.....	... ..	.....	... ..	.....	Nil	Nil	Nil	0·73	65·07	76·52
		Brahmunberia	... ..	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	1·08	53·12	62·79
		Rasmchandra-pore.	... ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60·82	?
		Nasirnagar ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	32·39	?
		Daudkandi ..	.....	.... .	.....	.....	.....	... .	.....	Nil	Nil	Nil	?	53·73	?
		Kasba ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	62 44	?
		Laksham ..	... ..	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	?	60·48	?
	Mymensingh..	Kishoregunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·80	70·80	70·02
		Atia (*Tangail*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1 02	62·60	56·45
		Mymensingh	.....	.....	... ..	.....	.....	... ..	... ..	Nil	Nil	Nil	0·87	67 03	74·85
		Jamalpore ..	.....	... ..	.....	.....	.....	.....	... .	Nil	Nil	Nil	1·03	86·01	65·19
		Netrekona	.....	... ..	... ..	.....	.....	.....	... .	Nil	Nil	Nil	0·45	126·47	73·19
		Subornakhali	.....	.....	.....	.....	.....	... ..	... .	Nil	Nil	Nil	?	57·43	?
		Durgapore ...	.....	.....	.....	.....	.....	...	.....	Nil	Nil	Nil	?	150 28	?
		Sherepore Town	.....	.....	.....	...	.....	.....	.....	Nil	Nil	Nil	?	88 17	?
		Dewanganj ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	57·08	?
NORTH BENGAL.	Pubna ...	Pubna ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·03	50·20	54·67
		Serajgunge ..	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	1·03	60·51	53·89
	Bogra ...	Sherepore ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·89	62·07	58·31
		Nowkhilla ...	.....	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	0 79	62·41	54·89
		Bogra ..	.....	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	0·83	71·33	61·42
		Panchbibi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·52	65·08	56·24
	Rajshahye ...	Beaulesh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·77	46·34	53·68
		Nattore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·89	58·84	55 81
		Naogaon	.....	... ..	... ..	.....	.....	.....	.....	Nil	Nil	Nil	0·40	67·87	61·82
		Lalpore ...	.....	.....	.....	.....	.....	...	.....	Nil	Nil	Nil	?	30·72	?
		Manda ...	.....	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	?	45·27	?
	Maldah ..	Maldah	.....	... ..	.....	.....	.....	...	... ..	Nil	Nil	Nil	0·51	50·51	52·23
		Chanchal ...	... ..	.....	.....	.....	.....	.....	... .	Nil	Nil	Nil	0 65	28·06	5·.·5
		Gajol ...	.....	.....	... ..	.....	.....	.....	.....	Nil	Nil	Nil	?	30·79	
		Sibganj ...	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	?	51·77	?
	Dinagepore ...	Mohadebpore	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0·04	53·63	57 03
		Churamon ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·47	51·82	53·05
		Raigange ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	62·37	58 31
		Dinagepore ..	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0·49	48·33	53·91
		Balooghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·25	61 29	51·77
		Thakoorgaon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	87·81	?
	Rungpore ..	Bhawanigunge (*Gyabanda*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·51	88·39	62·17
		Rungpore ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 33	74·08	74·88
		Kurigram ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 31	91 62	73·65
		Bagdogra (*Nilphamari*)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	88·40	85·02
		Ulipore ...	.....	.....	... ..	.....	.....	.....	.....	Nil	Nil	Nil	?	79·10	?
	Julpigoree ...	Julpigoree ...	... ..	.....	.....	... ..	.....	.....	... ..	Nil	Nil	Nil	0·27	123·45	117 27
		Alipore Door	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	119·58	?
		Fallacotta ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	128·23	?
		Debiganj ...	.....	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	?	90·94	?
		Bhagatpore (*Nayrakatta*).	.....	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	?	130·22	?
	Cooch Behar	Dinhatta ..	.....	.....	... ..	... ..	.....	.....	... ..	Nil	Nil	Nil	0·40	98·83	96·79
		Cooch Behar..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·28	125 89	118·58
		Mickilgunge..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·48	122·40	106·22
		Matabhanga....	.....	... ..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·42	118·03	112·06
	Darjeeling Hill.	Buxa ...	.....	... ..	.....	.....	... ..	.....	.....	Nil	Nil	Nil	0·68	102·37	103 3
		Silliguri ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0 29	121·02	108·69
		Darjeeling ...	.....	.....	.....	.....	.....	..	..	Nil	Nil	0·61	0 61	128·28	109 39
		Kalimpong ..	.....	.....	.....	... .	.....	.....	.....	Nil	Nil	Nil	0·52	92·15	88·49
		Kurseong ...	... ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	170 29	?
...TH BIHAR	Purneah ...	Kissengunge...	... ..	.....	... ..	.....	.....	... ..	.....	Nil	Nil		0·44	103·67	70·87
		Arrareah ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		0·52	79·75	64·20
		Purneah ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil		0·53	63·47	62·13
		Gondwara ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?		?
		Balarampore	.....	.....	.....	.....	.....	.....	.....			Nil	?		?
		Matsari ...	.....	.....	.....	.....	.....	.....	.....			Nil	?		
		Kaliaganj ...	.....	.....	.....	.....	.....	.....	.....			Nil	?		?
	North Bhagulpore.	Maddapore ..	.....	.....	.....	.....	.....	.....	.....			Nil			?
		Soopool ...	.....	.....	.....	.....	.....	.....	.....			Nil	0·51	60·85	50·06
		Protabganj ...	.....	.....	.....	.....	.....	.....	.....			Nil	0·39	67·26	48·57
														88·16	
	Durbhunga ...	Jeppore ...	.....	.....	.....	.....	.....	.....	.....			Nil	0·38	42·57	43 61
		Durbhunga ...	.....	.....	.....	.....	.....	.....	.....			Nil	0·41	50·24	46·27
		Madhubani ...	.....	.....	.....	.....	.....	.....	.....			Nil	0·30	63·56	45 47
		Bahera ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	69·96	?
		Koshera ...	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55·84	?
	Mozufferpore	Sitamarhi ..	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0·27	55·45	43 39
		Mozufferpore	.....	.....	.....	.....	...	.....	.....	Nil	Nil	Nil	0·39	48 47	45 97
		Hajipore ...	.....	.....					.....	Nil	Nil	Nil	0·42	42·57	42 47
		Pare ...	.....	.....					.....	Nil	Nil	Nil	?	37·09	
		Mahua ...	.....	.....					.....	Nil	Nil	Nil	?	41·04	?
		Sishar ...	.....	.....					.....	Nil	Nil	Nil	?	?	?
		Pupri ...	.....	.....					.....	Nil	Nil	Nil	?	48·14	?

atement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 21st of February 1890—concld.

Meteorological Division.	District.	Station.	Rainfall. Saturday, 15th February.	Sunday, 16th February.	Monday, 17th February.	Tuesday, 18th February.	Wednesday, 19th February.	Thursday, 20th February.	Friday, 21st February.	Total. Number of rainy days.	Total. Rainfall of week.	Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May to date.
8TH BEHAR *concluded*	Champaran ..	Motihari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'5	76'33	45'19
		Bettiah	... ..	.....	.....	.....	... ..	... ..	... .	Nil	Nil	Nil	0'39	52'57	48 57
		Raqaha ..	... ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	76'24	?
		Burhurwa	.....	.....	... ..	.....	.....	.....	.....	Nil	Nil	Nil	?	51'70	?
	Saran ...	Gopalgunge ...	.....	... ..	.....	... ..	.. ...	... ..	.....	Nil	Nil	Nil	0'48	3[illegible]'48	44'07
		Sewan	. ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'39	44'20	44'40
		Chuprah ...		.....	.....	.. ...	.....	.....	... ..	Nil	Nil	Nil	0'32	40'74	40'92
TH BEHAR	Shahabad	Buxar	... ..	.....	.....	.....	... ..	... ..	.....	Nil	Nil	Nil	0'31	47'44	38'03
		Dehree ...	... ..	.....	.....	.....	.....	.. ...	.....	Nil	Nil	Nil	0'21	43'06	40'26
		Bhaloosh ...	.....	.....	... .	... ..	... ..	.....	.....	Nil	Nil	Nil	0'46	38'16	41'43
		Sasseram ...	... ..	.....	.....	.....	.....	... ..	.....	Nil	Nil	Nil	0'42	20'41	41'74
		Arrah ...	.....	... ..	... ..	... ..	... ..	.....	.....	Nil	Nil	Nil	0'38	42'09	40'73
		Mohaniah	.....	... ..	.....	.....	.....	... ..	.....	Nil	Nil	Nil	?	?	
	Gya	Aurungabad .	.. ..	... ..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'31	38'48	43'23
		Gya ...	... .	... ..	... ..	.....	... ..	.....	... ..	Nil	Nil	Nil	0'46	39'85	43'13
		Nowadah ...	... ..	... .	.....	.....	...	... ..	.....	Nil	Nil	Nil	0'45	39'59	40'59
		Jehanabad ...	.....	.....	.....	... ..	... ..	... ..	... .	Nil	Nil	Nil	0'37	33'40	40'54
		Arwal .	.....	. ..	.....	... ..	... ..	.....	... ..	Nil	Nil	Nil	?	34'34	?
		Daudnagar	.....	... ...	.....	.....	.....	... ..	.....	Nil	Nil	Nil	?	26'69	?
		Sherghati .	... ..	.....	... ..	.....	.....	... ..	.....	Nil	Nil	Nil	?	29'20	?
		Rajauli	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17'02	?
		PakriBarawan	... ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31'90	?
	Patna .	Patna ..	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0'35	51'49	42'38
		Dinapore	.....	.....	.....	... ..	... ..	.....	... ..	Nil	Nil	Nil	0'31	45'53	41'66
		Behar ...	.....	... ..	...	... ..	... ..	.....	... ..	Nil	Nil	Nil	0'38	41'08	42'48
		Barrh ...	.....	... ..	.....	.	.....	.....	... ..	Nil	Nil	Nil	0'38	35'84	40'19
		Bickram ...	.....	... .	.....	... ..	.....	.....	.....	Nil	Nil	Nil	.	41'28	
		Hilsa ..	.....	... ..	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	35'21	?
	Monghyr ...	Begoosarai ...	.....	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0'52	47'62	40'74
		Monghyr	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'49	41'07	47'07
		Jamui .	... ..	... ..	... ..	.....	.....	... ..	.....	Nil	Nil	Nil	0 52	39'48	43'56
		Gogri ..	... ..	.	... ..	... ..	.....	.....	... ..	Nil	Nil	Nil	?	50'19	?
		Sheikpura ..	... ..	... ..	... ..	.....	.....	... ..	.....	Nil	Nil	Nil	?	43'32	?
	South Bhagulpore	Bhaugulpore ..	... ..	... ..	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0'47	45 00	42'70
		Banka	... ..	.....	...	... ..	.....	.....	.....	Nil	Nil	Nil	0'45	38 34	44'23
		Kalgong ...	... ..	.....	... .	... ..	.....	.....	.....	Nil	Nil	Nil	?	46'97	?
		Bungaon ..	.....	... ..	... ..	... ..	.....	.....	.....	Nil	Nil	Nil	?	?	?
	Sonthal Perguunahs.	Rajmehal ...	... ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'25	59'90	52 50
		Godda ...	... ..	.....	. ...	... ..	.....	.....	.....	Nil	Nil	Nil	0'54	49 04	48 04
		Pakour .	.....	... ..	... ..	.....	.....	.....	.....	Nil	Nil	Nil	0'33	73'59	55'07
		Nya Doomka	. ..	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'64	56'77	53'03
		Deogur	... ..	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0'56	40'40	51'20
		Jamtara ...	... .	... ..	.....	.....	... ..	.....	.....	Nil	Nil	Nil	0 32	45'21	49 46
		Mohagama .	...	.....	... ..	.....	... ..	.....	.....	Nil	Nil		?	50'41	?
		Nanihat ...	... ..	.....	... ..	.....	... ..	.....	.....	Nil	Nil	Nil	?	55'87	?
TIA NAGE.	Hazaribagh ...	Paonamba (*Giridi*).	. ...	... ..	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'63	58'90	48'12
		Hazaribagh .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'64	49'10	47 76
		Semtaaruan	.....	.....	... .	.....	.....	.....	.....	Nil	Nil	Nil	0'42	36'24	47'34
		Mahudi Hills	...	.....	.....	... ..	.....	.....	.....	Nil	Nil	Nil	0'47		48'07
		Jhoomra Hills	... ..	.....	. ...	.....	.....	.....	... ..	Nil	Nil	Nil	0 46	43'00	63'30
		Barhi ...	... ..	... ..	... .	... ..	... ..	... ..	... ..	Nil	Nil	Nil	?	31'36	?
		Chatra .	...	.....	.....	. . .	.....	.....	... ..	Nil	Nil	Nil	?	46'04	?
		Karaglcha ..	.....	.....	... .	.....	.....	.....	... ..	Nil	Nil	Nil	?	30'35	?
		Ramghar	... ..	.....	...	.....	... ..	.....	... ..	Nil	Nil	Nil	?		?
	Lohardugga ...	Lohardugga ...	.. ..	.....	.. ...	.....	.....	.....	.. ...	Nil	Nil	Nil	0'57	45'24	52'02
		Ranchi ...	.....	.....	... ..	... ..	... ..	.....	.....	Nil	Nil	Nil	0'87	53 61	53 06
		Palamow	... ..	.....	.....	.....	.....	.....	... ..	Nil	Nil	Nil	0'46	34'16	43'84
		Silli ..	. .	... ..	.. ..	.....	.....	...	.....	Nil	Nil	Nil	?	33'80	?
		Balumat .	. ..	... ..	. ..	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Hosseinabad ..	... ..	..	. . .	... ..	.....	.....	.....	Nil	Nil	Nil	?	44'40	?
		Garwah .	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28 77	?
	Singbhoom	Chyebassa ...	.....	... .	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'80	48'76	52'50
		Chakradharpore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40'80	?
		Ghatsilla ...	.....	.....	.. ..	.....	.. ...	.....	.....	Nil	Nil	Nil	?	58'70	?
		Baharagura...	.....	.. .	... ..	.....	.....	.....	.....	Nil	Nil	Nil	?	53'80	?
	Manbhoom ...	Purulia ...	.....	... .	.....	.....	.....	.....	.....	Nil	Nil	Nil	0'88	43'52	40'89
		Gobindpore .	.....	... ..	... .	... ..	... ..	. . .	.....	Nil	Nil	Nil	0'83	33'19	45'84
		Raghunathpore.	... ..	.....	.....	... ..	... ..	.....	.....	Nil	Nil	Nil	?	45'01	?
		Barrabhoom	.....	... .	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44'32	?
		Jhalda ..	....	... ..	.....	... ..	... ..	.....	.....	Nil	Nil	Nil	?	51'42	?
		Cass .	.....	. ..	.....	... ..	... ..	.....	.....	Nil	Nil	Nil	?	58'56	?

Explanation.—Indicates that no rain has fallen If the return for any day has not been received, the corresponding space is left blank. If any of the returns wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, *the 25th February* 1890.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 21st FEBRUARY 1890.

In the meteorology of the previous week it was noticed that there had been a slow but steady disappearance of the north-east monsoon or cold-weather conditions with the gradual establishment of the conditions which obtain just previous to the setting in of the hot weather. Pressure at the close of that week was decidedly low, while temperature was rather largely in excess of the normal, and the northerly component in the wind directions was growing steadily more feeble. The general result of the changes which have taken place this week has been to practically almost entirely efface the conditions which obtain in the cold season and to establish those of the hot weather. Winds have been generally light and variable during the week, with a steadily increasing southerly component in them, temperature on the whole has risen steadily, and pressure has continued very low for the season. The only period during the week when there was any break in the steady establishment of the hot season conditions was on the 17th and 18th, when a barometric depression passed through Bengal. This depression had first been observed near Jacobabad on the morning of the 15th and it moved in an easterly direction, but though the barometric depression at its centre was decidedly large, yet it failed to give any rain to Bengal in its passage through it. When the depression commenced to advance over Bengal, temperature was as usual exceptionally high, but in its rear temperature fell very distinctly, though the effect was only very temporary; and again at the close of the week temperature generally averaged from 3° to 6° above the normal. With the absence of any disturbance, therefore, which was sufficiently intense to give local storms, again the whole province has been quite rainless for the period under review.

Pressure—Has been in defect of the normal almost throughout the week, and the average defect in different districts has varied from about nine to twelve-hundredths of an inch.

Temperature.—The mean temperature of the whole province for the week has been between 4° and 5° above the normal, the excess being largest in South Behar and Chutia Nagpur, where it has exceeded five degrees. The rapid increase in temperature during the week is clearly seen in the figures representing the average mean temperature in the various districts, and thus in Orissa the rise during this period has equalled 4·2°, in South-West Bengal it has been 5·9°, in East Bengal 6·0°, in North Bengal 4·1°, in North Behar 3·6°, in South Behar 3·9°, and in Chutia Nagpur 4·0°. The actual temperatures during the week, the range from day to night, and their variation from their normal values are best seen in the following table where the average maximum, minimum and mean temperatures at nine typical stations in different districts of the province are given, together with their normal values. It will be seen that both day and night temperatures have been almost equally in excess, and that at some stations the average temperatures have even been as much as about 6° and 7° above the normal:—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 21st February 1890.

	Normal mean maximum temperature for the week ending 21st February.	Actual mean maximum temperature for the week ending 21st February 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 21st February.	Actual mean minimum temperature for the week ending 21st February 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 21st February.	Actual mean daily temperature for the week ending 21st February 1890.	Variation of actual mean from the normal.
Cuttack	90·3	93·9	+3·6	65·5	66·9	+1·4	77·9	80·4	+2·5
Calcutta	82·0	85·4	+3·4	60·3	64·6	+4·3	71·2	75·0	+3·8
Sibsagar	82·3	86·5	+4·2	57·8	62·5	+4·7	70·1	74·5	+4·4
Dacca	83·0	90·0	+7·0	57·8	61·8	+4·0	70·4	75·9	+5·5
Burdwan	78·2	84·2	+6·0	52·5	56·6	+4·1	65·4	70·4	+5·0
Patna	81·9	87·0	+5·1	56·2	60·0	+3·8	69·1	73·5	+4·4
Gya	79·5	83·3	+3·8	51·4	51·7	+0·3	65·5	67·5	+2·0
Purnea	77·7	83·6	+5·9	54·2	59·3	+5·1	66·0	71·4	+5·4
Bauribagh	47·4	53·2	+5·8	34·2	39·9	+5·7	40·8	46·6	+5·8
Darjeeling									

Rainfall—Has been entirely absent throughout the whole province for the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 21st of February 1890 :—

Meteorological Divisions.	Temperature						Rainfall.								
	Highest observed during week.	Lowest observed during week.	Averages for week. Of highest of each day.	Of lowest of each day.	Of mean for each day.	Average mean of week above or below normal mean of week.	Of week. Average.	Normal average.	Variation.	Rainy days. Average number in week.	Normal average number in week.	Variation.	Since 1st of month. Average.	Normal average.	Since 15th May 1889. Average	Normal average.
	°	°	°	°	°	°	Inches.	Inches.	Inches.				Inches.	Inches.	Inches.	Inches.
Orissa	95·9*	61·0*	88·0*	67·5*	77·8*	+2·5*	Nil	0·27	−0·27	0·0	0·4	−0·4	Nil	0·75	62·10	54·21
South-West Bengal ...	95·3	51·5	88·1	62·5	75·3	+4·8	Nil	0·26	−0·26	0·0	0·4	−0·4	Nil	0·91	52·81	52·85
East Bengal	89·1	54·6*	84·4	62·2	73·3	+4·4	Nil	0·26	−0·26	0·0	0·5	−0·5	Nil	0·88	76·56	75·16
North Bengal	88·6	49·8	84·2	55·2	69·7	+4·4	Nil	0·22	−0·22	0·0	0·4	−0·4	Nil	0·55	73·54	74·98
North Behar*	84·7	48·9	82·8	51·2	66·9	+3·1	Nil	0·10	−0·10	0·0	0·3	−0·3	Nil	0·41	57·89	49·20
South Behar*	91·2	52·5	86·0	56·8	71·4	+5·1	Nil	0·12	−0·12	0·0	0·3	−0·3	Nil	0·41	44·16	44·27
Chutia Nagpur	88·0*	56·3*	83·9*	58·9*	71·4*	+5·2*	Nil	0·17	−0·17	0·0	0·4	−0·4	Nil	0·64	43·08	5

* Pooree, Chupra, Dehree and Chyebassa not included.

Meteorological Office, Bengal; *The 25th February* 1890.

A. Pedler, *Meteorological Reporter to the Govt. of Bengal.*

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 16th to 22nd February 1890.

Month.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	Temperature. Daily mean.	Maximum.	Range.	Minimum.	Hygrometry. Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	Rainfall past 24 hours.
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Feb. 1890 ...	16th ...	29·849	75·7	82·9	14·5	68·4	77·6	72·8	·743	70·3	79	Nil
,, ,, ...	17th ...	·806	79·4	89·0	19·2	69·8	79·6	72·6	·709	68·9	70	.....
,, ,, ...	18th ...	·959	76·2	86·4	20·4	66·0	78·6	63·6	·389	52·0	40	.....
,, ,, ...	19th ...	30·018	73·5	86·3	25·6	60·7	79·6	63·8	·380	51·4	37	.....
,, ,, ...	20th ...	29·999	75·6	87·8	24·4	63·4	79·6	68·6	·551	61·7	55	.....
,, ,, ...	21st ...	30·002	77·5	89·0	23·1	65·9	80·4	68·6	·542	61·2	52	.....
,, ,, ...	22nd ...	29·982	77·2	89·6	24·9	64·7	79·6	67·6	·516	59·8	51	.....

	Inches.
The mean 10 A.M. pressure of the seven days	29·945
	°
The mean temperature of the seven days	76·4
The extreme variation of temperature	28·9
The maximum temperature	89·6
	%
The mean 10 A.M. relative humidity of the seven days	55
	Inches.
The total fall of rain from 16th to 22nd February 1890	Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. Little, *For Meteorological Reporter to the Govt. of India.*

Meteorological Office, India; *The 24th February* 1890.

Results of the Meteorological Observations taken at the Alipore Observatory from 16th to 22nd February 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature. Mean.	Maximum.	Range.	Minimum.	Hygrometry. Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Wind. Prevailing direction.	Miles recorded.	Rain.	Weather.
1890.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Feb.	16th	137·5	7·9	29·756	75·4	86·4	18·7	67·7	71·0	0·702	68·7	81	SSW and S by W ...	137	Nil	Chiefly cloudy, ∆.
	17th	139·5	8·9	·735	77·1	88·5	19·0	69·5	71·1	·681	67·8	74	SW and SSW	181	,,	Clear.
	18th	138·5	7·3	·872	74·6	85·5	19·5	66·0	66·9	·566	62·4	67	N, variable and calm	63	,,	Chiefly clear, ∆, = .
	19th	140·2	8·1	·917	72·4	85·2	25·9	59·3	62·4	·432	54·9	58	NNW and variable..	44	,,	Clear.
	20th	139·0	8·1	·910	74·2	86·5	25·1	61·4	66·7	·557	62·0	67	S and WSW	80	,,	Clear.
	21st	143·4	8·9	·889	75·8	88·5	24·6	63·9	66·3	·519	60·0	62	SW by W and variable.	81	,,	Clear.
	22nd	142·6	8·6	·901	75·1	88·6	25·5	63·1	66·4	·533	60·8	61	SW by S and variable.	46	,,	Clear, ∆.

		Inches.
The mean pressure of the seven days		29·854
The average pressure of the corresponding period for 24 years, S.-G.'s Office ...		29·948
		Hours.
The total number of hours of bright sunshine		57·8
The maximum possible number of hours of sunshine		80·8
		°
The mean temperature of the seven days		74·9
The average temperature of the corresponding period for 24 years, S.-G.'s Office		74·0
The extreme variation of temperature		29·3
The maximum temperature		88·6
		Miles.
The highest velocity of the wind in one hour		13
		lbs.
The highest pressure of wind on one square foot		Not measurable.
		%
The mean relative humidity		67
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office		66
		Inches.
The total fall of rain from 16th to 22nd February 1890		Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		0·25
The total fall from 1st January to 22nd February 1890		0·77
The average fall of the corresponding period for 24 years, S.-G.'s Office ...		1·29

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the New Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

∆ dew, = fog.

C. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;
Calcutta, the 24th February 1890.

MEMORANDUM.

DURING the week ending 8th February 1890, the returns of the vital statistics of the principal Municipalities in Bengal presented the following results :—

1. The birth-rate amounted to 23·3 per 1,000 of population, against 21·7 per 1,000 in the preceding week ending 1st February, showing an increase in the registration, and the death-rate to 23·9 per 1,000, against very nearly the same ratio, viz., 23·7 per 1,000.

2. The following Municipalities returned the highest proportions of births and deaths —

Births.

	Ratio per *mille.*
Darjiling	51·9
Comillah	50·1
Naraingani	37·3
Durbhanga	36·2
Monghyr	35·3
Bhagulpore	31·7
Gya	31·4

Deaths.

	Ratio per *mille.*
Poori	128·0
Darjiling	50·3
Jessore	49·0
Serampore	47·1
Hughli and Chinsurah ...	46·9
Purneah	38·1
Naraingani	37 3
Burdwan	35·1
Gya	34 8
Midnapore	31·0

3. The mortality from the several death-causes was as follows in comparison with that in the preceding week :—

	Ratio per *mille* during the weeks ending—	
	8th February 1890.	1st February 1890.
Cholera	2·3	2·2
Small-pox	1·1	·6
Fever	10·3	9·3
Bowel-complaints	3·3	3·9
Injury	·5	·4
Other causes	6·4	7·3

The only noticeable point indicated by the above figures is that there was a noticeable increase of mortality from fever.

4. The following Municipalities suffered in a more marked degree than the others from the diseases mentioned in the foregoing table :—

Cholera.

	Ratio per *mille.*
Poori ...	33·6
Hughli & Chinsurah ...	8·2
Serampore ...	7·8
Howrah ...	5·7

Small-pox.

	Ratio per *mille.*
Poori...	39·8

Fever.

	Ratio per *mille.*
Darjiling ...	44·5
Purneah ...	31·2
Gya ...	21·8
Hughli and Chinsurah...	21·3

Bowel-complaints.

	Ratio per *mille.*
Serampore ...	17·7
Burdwan ...	10·7
Poori ...	10·5

Other causes.

	Ratio per *mille.*
Poori ...	25·2
Midnapore ...	18·6
Bali ...	17·5
Naraingani ...	16·6
Gya ...	11·6

Small-pox unfortunately continued to rage in Poori town with much severity.

5. The mortality referable to *Sex*, *Class* and *Age* stood as follows :—

According to Sex.

	Ratio per *mille.*
Males	26·3
Females	21·3
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population ...	124

According to Class.

	Ratio per *mille.*
Christians	29·9
Hindus	24·9
Mahomedans ...	21·4

According to Age.

	Ratio per *mille.*
Under 1 year ...	141·3
1 and under 5 years ...	24·6
5 „ 10 „ ...	15·1
10 „ 15 „ ...	13·1
15 „ 20 „ ...	13·5
20 „ 30 „ ...	15 2
30 „ 40 „ ...	18·1
40 „ 50 „ ...	18 3
50 „ 60 „ ...	26·8
60 years and upwards ...	75·9

W. H. GREGG, *Dip. Publ. Health, Camb.*,
Sanitary Commissioner for Bengal.

The 24th February 1890.

...Deaths in the principal Municipalities in Bengal during the week ending 8th February, 1890.

1	2	3			4			5			6	7							8						9	10				11	12
DISTRICTS.	NAMES OF MUNICIPALITIES.	POPULATION.			BIRTHS.							MORTALITY ACCORDING TO—																			
					NUMBER OF—			RATIO PER 1,000 OF POPULATION PER ANNUM.				Disease.							RATIO PER 1,000 OF POPULATION PER ANNUM.								Sex.					
												DEATHS FROM—														DEATHS.		RATIO PER 1,000 OF POPULATION PER ANNUM.			
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Ratio of male births to every 100 female births.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fevers.	Bowel-complaints.	Injury.	Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the previous week.	Males.	Females.	Males.	Females.	Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population.
Burdwan ...	Burdwan	18,063	16,017	34,080	5	3	8	7·6	4·6	12·2	166	...	..	11	7	.	5	23	...	...	16·8	10·7	.	7·6	35·1	33·6	12	11	34·5	35·7	97
Midnapore ...	Midnapore ...	16,927	16,633	33,560	8	6	14	12·4	9·3	21·7	133	1	...	3	3	1	12	20	1·5	...	4·6	4·6	1·5	18·6	31·0	31·0	9	11	27·6	34·4	79
Hughli ...	Hughli and Chinsurah.	15,859	15,829	31,697	7	8	15	11·5	13·1	24·6	87	5	...	13	6	1	3	28	8·2	..	21·3	9·8	1·6	4·9	45·9	44·3	16	12	52·5	39·4	133
Serampore ...	Serampore ...	13,559	12,937	26,496	7	5	12	13·7	9·8	23·6	140	4	..	7	9	...	4	24	7·8	..	13·7	17·7	..	7·8	47·1	58·9	11	13	42·2	52·2	81
	Utterpara	3,046	2,484	5,510	1	1	2	9·4	9·4	19·9	100	...	...	...	1	...	1	2	...	..	..	9·4	...	9·4	18·9	37·7	2	.	34·1	.	No female death.
Howrah ...	Howrah	53,153	37,660	90,813	18	22	40	16·3	12·6	22·9	82	10	..	11	6	1	6	34	5·7	..	6·3	3·4	·6	3·4	19·5	33·5	18	16	17·6	22·1	77
	Bali	7,836	6,979	14,815	3	3	6	10·5	10·5	21·1	100	...	...	2	...	1	5	8	..	..	7·0	.	3·5	17·5	28·1	24·6	6	2	39·8	14·9	279
Nuddea ...	Kishnaghur ...	13,263	14,214	27,477	3	2	5	6·7	3·8	9·5	150	...	1	...	1	...	1	3	...	1·9	...	1·9	...	1·9	5·7	22·7	2	1	7·8	3·7	233
	Ranaghat	4,628	4,655	8,683	..	1	1	..	0·0	0·0	No male birth.	...	..	2	..	...	...	2	...	...	12·0		..	..	12·0	6·0	2	...	25·8	...	No female death.
	Santipore	13,708	15,979	29,687	2	3	5	3·5	5·3	8·8	66	...	...	6	..	...	1	7	..	...	19·5	...	..	1·7	12·3	1·7	5	2	19·0	6·5	316
Jessore ...	Jessore	4,580	3,665	8,495	2	1	3	12·2	6·1	18·4	200	1	..	3	1	..	3	8	6·1	...	18·4	6·1	.	18·4	49·0	55·1	5	3	53·8	42·6	126
Rajshahye ...	Rampore Beauleah	10,766	9,025	19,791	5	5	10	13·1	13·1	26·3	100	...	...	5	...	..	2	7	...	..	13·1	...	...	5·3	18·4	26·3	5	2	24·2	11·5	218
Darjiling ...	Darjiling	4,579	2,439	7,019	1	6	7	7·4	44·5	51·9	16	..	...	6	...	.	2	8	..	..	44·5	.	..	14·6	59·3	22·2	5	3	56·8	64·9	87
Dacca ...	Dacca	42,782	37,379	80,161	11	16	27	7·1	10·4	17·5	69	..	1	9	5	1	6	22		·6	5·8	3·2	·6	3·9	14·3	15·6	11	11	13·4	15·3	87
	Narainganj ...	7,605	4,956	12,561	1	8	9	4·1	33·1	37·3	12	1	..	3	..	1	4	9	4·1	...	12·4	..	4·1	16·6	37·3	41·4	5	4	34·2	42·0	81
Chittagong ...	Chittagong ...	13,340	8,790	22,130	2	2	4	4·7	4·7	9·4	100	...	.	5	3		2	10	..	...	11·7	7·0	.	4·7	23·5	21·1	6	4	23·4	23·7	100
Tipperah ...	Comillah	8,153	5,353	13,506	7	6	13	27·0	23·1	50·1	116	2	...	3	...	...	2	7	7·7	...	11·6	...	...	7·7	27·0	38·5	3	4	19·1	38·9	50
Patna	Patna City ...	78,762	81,475	160,237	28	23	51	9·1	7·5	16·6	121	4	...	25	5	1	4	39	1·3	...	6·1	1·6	·3	1·3	12·7	6·8	22	17	14·5	10·8	140
Gya	Gya	38,290	37,831	76,121	19	27	46	13·0	18·4	31·4	70	2	...	32	...	...	17	51	1·4	...	21·8	...	...	11·6	34·8	30·7	29	22	39·4	30·2	130
Shahabad ...	Arrah	20,960	22,505	43,465	11	8	19	13·2	9·6	22·7	137	...	1	9	2	1	1	14	...	1·2	10·7	2·4	1·2	1·2	16·7	7·2	5	9	12·4	20·8	60
Mozufferpore .	Mozufferpore ...	23,084	19,658	42,742	9	6	15	10·9	7·3	18·2	150	..	...	1	1	2	5	9	..	...	1·2	1·2	2·4	6·1	10·9	14·6	3	6	6·8	15·9	40
Durbhanga ...	Durbhanga ...	33,774	32,322	66,096	20	26	46	15·7	20·5	36·2	77	...	..	15	3	...	9	27	...	...	11·8	2·8	...	7·1	21·2	20·5	19	8	29·3	13·9	241
Sarun	Chupra	25,116	26,554	51,670	17	9	26	17·1	9·1	26·2	188	...	..	2	3	...	4	9	...	...	2·0	3·0	...	4·0	9·1	12·1	6	3	12·4	5·9	240
Bhagulpore ...	Bhagulpore ...	29,640	27,813	57,453	24	11	35	21·7	9·9	31·7	218	...	...	11	...	...	11	22	...	...	9·9	...	...	9·9	19·9	22·6	16	6	28·1	11·2	254
Monghyr ...	Monghyr	28,154	29,366	57,520	17	22	39	15·4	19·9	35·3	77	...	...	8	6	...	9	23	...	...	7·2	5·4	...	8·1	20·8	23·5	13	10	24·9	17·7	181
Purneah ...	Purneah	8,463	6,553	15,016	4	3	7	13·8	10·4	24·2	133	...	...	8	1	..	1	11	...	...	31·2	3·4	...	3·4	38·1	17·3	7	4	43·0	31·7	139
Poori	Poori	13,247	11,537	24,784	6	4	10	12·6	8·4	21·0	150	16	19	9	5	...	13	61	33·6	39·8	18·9	10·5	...	25·2	128·0	100·7	36	25	141·3	112·7	126
	Total				237	475	11·7	11·6	23·3	100	46	22	210	68	10	132	488	2·3	1·1	10·3	3·3	·5	6·4	23·9	23·7	279	209	26·3	21·3	124

DISTRICTS.	NAMES OF MUNICIPALITIES.	Class. Deaths among— Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.	Ratio per 1,000 of Population per annum. Christians.	Hindus.	Mahomedans.	Buddhists.	Other classes.
Burdwan ...	Burdwan	...	17	6	...	...	...	37·3	30·4	...	...
Midnapore ...	Midnapore ...	...	17	3	...	...	...	34·1	21·6	...	..
Hughli ...	Hughli and Chinsurah	...	23	5	...	...	...	47·3	42·3	...	...
Serampore ...	Serampore ...	...	23	1	...	...	...	47·4	55·4	...	...
	Utterpara	...	2	...	...	...	...	19·5	...	...	...
Howrah ...	Howrah	2	24	8	...	...	54·9	18·3	20·3	...	..
	Bali	...	6	2	...	...	...	23·3	79·3	...	...
Nuddea ...	Kishnaghur ...	...	3	...	...	...	...	5·4	...	...	...
	Ranaghat	...	2	...	...	...	...	14·2	...	...	..
	Santipore	...	5	2	...	...	...	12·6	11·6	...	...
Jessore ...	Jessore	...	3	5	...	...	...	34·6	68·0	...	...
Rajshahye ...	Rampore Beauleah	...	3	4	...	...	...	15·7	21·2	...	...
Darjiling ...	Darjiling	...	6	2	...	...	...	67·9	109·9	...	..
Dacca	Dacca	...	14	8	...	...	...	18·1	10·6	...	...
	Narainganj ...	...	4	5	...	...	...	32·9	42·2	...	...
Chittagong ...	Chittagong ...	1	...	9	...	...	65·3	...	30·6	...	...
Tipperah ...	Comillah	1	2	4	...	...	429·8	17·5	28·1	...	...
Patna	Patna City ...	...	29	10	...	...	...	12·7	12·7	...	...
Gya ...	Gya	...	42	9	...	...	...	36·4	29·1	..	...
Shahabad ...	Arrah	...	10	4	...	...	...	16·8	16·8	...	...
Mozufferpore ..	Mozufferpore ...	...	6	3	...	...	...	10·4	12·5	...	...
Durbhanga ...	Durbhanga ...	...	19	8	...	...	...	20·4	23·7	...	...
Sarun	Chupra	...	7	2	...	...	...	9·2	8·6	...	...
Bhagulpore ...	Bhagulpore ...	...	13	9	...	...	...	17·0	27·2	...	..
Monghyr ...	Monghyr	...	17	6	...	...	...	19·8	24·8	..	...
Purneah ...	Purneah	...	6	5	...	...	...	34·0	45·9	...	...
Poori ...	Poori	...	60	1	...	...	...	127·2	247·6	...	...
	TOTAL ...	4	3[illegible]	121	...	...	29·9	24·9	21·4	..	...

DISTRICTS.	NAMES OF MUNICIPALITIES.	Age. Deaths. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	2	1	...	2	2	4	2	6	1	3
Midnapore ...	Midnapore ...	9	...	2	...	1	3	...	1	1	3
Hughli ...	Hughli and Chinsurah	4	4	...	2	1	5	...	2	5	5
Serampore ...	Serampore ...	3	1	2	...	...	2	5	1	2	8
	Utterpara	...	...	...	...	...	1	...	..	...	1
Howrah ...	Howrah	2	7	4	2	1	3	6	2	3	4
	Bali	1	...	...	1	1	1	1	1	...	2
Nuddea ...	Kishnaghur ...	...	...	...	...	...	1	...	...	...	2
	Ranaghat	..	...	...	...	...	1	...	...	1	...
	Santipore	..	...	...	...	...	1	1	...	..	5
Jessore ...	Jessore	4	1	..	...	...	...	1	...	...	2
Rajshahye ...	Rampore Beauleah	1	1	...	...	1	...	3	...	...	1
Darjiling ...	Darjiling	1	2	...	...	1	1	1	1	1	...
Dacca	Dacca	2	3	1	...	...	5	3	1	2	5
	Narainganj ...	1	...	...	1	1	1	2	...	...	3
Chittagong ...	Chittagong ...	1	4	1	...	...	1	2	...	1	...
Tipperah ...	Comillah	1	2	...	...	1	..	1	...	..	2
Patna	Patna City ...	3	...	3	...	2	5	10	4	4	8
Gya ...	Gya	4	2	1	1	1	7	9	10	7	9
Shahabad ...	Arrah	3	1	...	2	...	1	...	1	...	6
Mozufferpore ..	Mozufferpore ...	2	...	1	...	1	2	...	2	1	...
Durbhanga ...	Durbhanga ...	6	2	6	1	...	1	4	...	3	4
Sarun	Chupra	2	...	2	...	1	..	2	1	...	1
Bhagulpore ...	Bhagulpore ...	5	2	1	1	...	3	..	4	2	4
Monghyr ...	Monghyr	4	4	1	2	...	1	2	3	...	6
Purneah ...	Purneah	1	..	..	...	1	6	1	1	...	1
Poori ...	Poori	7	7	7	4	5	6	5	3	6	11
	TOTAL ...	69	44	32	19	21	62	61	44	40	96

DISTRICTS.	NAMES OF MUNICIPALITIES.	Age. Ratio per 1,000 of Population per annum. Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and upwards.
Burdwan ...	Burdwan	157·6	23·0	...	41·3	33·3	26·3	15·1	70·6	21·2	105·3
Midnapore ...	Midnapore ...	629·9	...	27·7	...	16·5	21·2	...	14·0	25·2	85·2
Hughli ...	Hughli and Chinsurah	259·0	93·7	...	41·9	20·7	41·9	...	24·9	100·0	125·4
Serampore ...	Serampore ...	219·7	28·8	41·4	...	...	19·3	52·3	15·4	54·3	299·1
	Utterpara	...	...	...	...	...	45·2	...	...	...	200·0
Howrah ...	Howrah	50·4	65·7	33·1	15·8	7·1	6·9	16·2	8·8	28·4	55·5
	Bali	143·6	...	...	43·8	39·0	15·5	18·6	26·9	...	142·1
Nuddea ...	Kishnaghur ...	...	...	...	...	...	10·8	...	...	...	69·2
	Ranaghat	...	...	...	...	...	34·5	...	...	71·8	...
	Santipore	...	...	...	...	...	10·6	12·0	...	...	132·4
Jessore ...	Jessore	1,072·2	105·3	...	...	...	...	34·0	...	...	227·1
Rajshahye ...	Rampore Beauleah	128·1	36·7	...	...	31·3	...	43·3	...	...	54·0
Darjiling ...	Darjiling	429·8	161·7	...	...	81·3	26·0	36·3	75·1	213·1	...
Dacca	Dacca	54·8	21·2	5·2	...	...	17·7	13·4	6·2	22·0	46·7
	Narainganj ...	186·4	...	...	45·8	49·8	19·5	48·8	...	...	239·3
Chittagong ...	Chittagong ...	92·4	105·7	20·8	...	..	11·2	31·2	...	47·9	...
Tipperah ...	Comillah	175·1	79·5	...	...	41·3	...	26·1	...	...	151·4
Patna	Patna City ...	36·2	...	9·3	...	9·3	9·0	22·4	11·0	14·7	30·1
Gya ...	Gya	116·2	16·4	7·4	7·7	9·9	24·7	36·8	53·2	55·4	99·9
Shahabad ...	Arrah	121·1	11·7	...	23·5	...	6·6	...	11·1	...	108·2
Mozufferpore ..	Mozufferpore ...	108·9	...	11·6	...	17·2	12·1	..	20·8	16·0	...
Durbhanga ...	Durbhanga ...	200·4	13·7	39·9	9·4	...	3·9	18·6	...	35·6	65·1
Sarun	Chupra	73·7	...	17·5	...	15·0	...	16·4	8·6	...	15·3
Bhagulpore ...	Bhagulpore ...	217·8	19·8	8·9	8·3	...	14·3	...	33·0	24·4	57·7
Monghyr ...	Monghyr	140·1	33·4	7·4	18·1	...	5·0	11·7	24·5	...	87·0
Purneah ...	Purneah	183·7	...	...	...	52·3	95·[illegible]	18·3	28·0	...	64·4
Poori ...	Poori	1201·3	209·6	163·4	110·9	139·2	59·1	64·2	46·9	139·8	316·7
	TOTAL ...	141·3	24·6	15·1	13·1	13·5	15·3	18·1	18·3	26·5	75·9

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,
The 24th February 1890.

W. H. GREGG, *Dip. Publ. Health, Camb.,*
Sanitary Commissioner for Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 22nd February 1890, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 22nd February 1890.			Week ending Saturday, the 23rd February 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,794	2,81,282	4,616	1,065	2,89,857	5,222
Jute	135	98,125	1,605	135	87,675	1,757
Firewood	115	59,210	1,030	107	76,810	1,209
Other articles	1,024	2,74,750	4,032	1,027	2,45,395	3,813
Total ...	3,068	7,16,367	11,283	2,354	6,99,737	12,001

Eastern Bengal State Railway.

Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of November 1889, as compared with the same month of the previous year.

Staples.	1889.		1888.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1888.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
... ...	6,909	1,573	7,5	2,169	8,509	9,713		1,154
on, raw	51	459	73	74	510	146	364	
on twist and yarn—								
1.—European								
2.—Indian								
on piece goods—								
1.—European								
a. In bales and bundles ...	3,055	60	3,216	167	3,115	3,383		268
b In boxes								
2.—Indian—								
a—In bales and bundles ...								
b—In boxes ...								
ns—								
1. Rice	1,455	1,177	1,396	3,106	2,632	4,802		2,170
—Others	709	2,452	852	3,687	3,162	4,539		1,087
s and skins—								
.—Hides of cattle—								
a.—Dressed								
b.—Undressed	8	553	9	478	561	487	74	
.—Skins of sheep, &c.—								
a. Dressed								
b—Undressed								
—								
.—Raw—								
a. Screwed	... ...	7,366	...	6,104	7,366	6,104	1,262	
b.—Unscrewed	86	39,137	29	28,514	39,223	28,543	10,680	
—Gunny-bags and cloth ...	117	1,153	93	1,325	1,270	1,118		148
ls—								
.—Copper, unwrought								
—Brass, unwrought ...								
.—Brass and copper, wrought ...	926	78	932	86	1,004	1,018		14
.—Iron								
.—Tin								
.—Others								
	497	2	418	6	499	424	75	
.—Kerosine	199	40	143	53	239	196	43	
.—Others								
eds—								
—Linseed								
—Rape and mustard								
.—Til or gingelly	61	1,350	113	1,200	1,411	1,313	98	
.—Niger								
.—Castor								
.—Poppy								
—Others								
sions—	103	654	116	75	757	191	566	
.—Betelnuts	468	295	192	189	763	681	82	
.—Others	2,456	2,504	2,832	1,306	4,760	4,198	622	
ay plant and rolling-stock	5,011	18	3,202	22	5,029	3,224	1,805	
... ...								
—								
—Drained	625	92	503	173	717	676	41	
—Undrained								
—Foreign	... ...	1,045	6	1,584	1,045	1,590		545
—Indian								
—	315	236	94	76	551	170	381	
—Timber	1,437	...	1,434	3	1,437	1,437		
—Firewood	45	617	39	897	662	936		274
co								
her articles of merchandise—								
—Unmanufactured	2,810	1,092	2,720	1,655	3,902	4,375		473
—Manufactured	511	.....	498	2	511	500	11	
straw, and wooloo (C. & S.-E. Section) ...								
Total	27,888	62,988	26,762	53,242	90,876	80,004	16,459	6,587

Comparative Statement of traffic, Eastern Bengal State Railway, for November 1889.

DECREASES.

	Tons.
Coal	1,153
Due to sufficient stock for railway and flotilla purposes.	
Rice	2,170
The decrease is due to the failure of crops in Bengal.	

INCREASES.

	Tons.
Betel-nuts	566
Due to extensive despatches from Khoolna and C. P. T. Railway.	
Railway plant and rolling-stock	622
For construction, repair and renewal purposes.	
Salt	1,805
Due to favourable despatch from Chitpore.	
Tea	355
Due to favourable despatch from Jalpaiguri.	

CALCUTTA, *the 20th February* 1890.

F. P. QUINLAN,
Examiner of Accounts.

Bengal Central Railway.

Abstract of principal commodities carried over the Bengal Central Railway during the month of November 1889. *as compared with the same month of the previous year.*

STAPLES.	1889.		1888.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1888.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	1,797	.....	2,303	10	1,797	2,313	.....	516
Cotton, raw	1	.....	3	.....	1	3	.....	2
Cotton twist and yarn—								
1.—European								
2.—Indian								
Cotton piece-goods—								
1.—European—								
a.—In bales and bundles	266	1	274	.....	267	274	.....	7
b.—In boxes								
2.—Indian—								
a.—In bales and bundles								
b.—In boxes								
Grains—								
2.—Rice	201	21	7	211	222	218	4	.....
5.—Others	49	15	32	199	64	231	.....	167
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed								
b.—Undressed								
2.—Skins of sheep, &c.—	.....	22	.....	17	22	17	5	.....
a.—Dressed								
b.—Undressed								
Jute—								
1.—Raw—								
b.—Unscrewed	.....	1,802	.....	2,611	1,802	2,611	.....	809
2.—Gunny bags and cloth	2	.....	5	.....	2	5	.....	3
Metals—								
1.—Copper, unwrought								
2. Brass, unwrought								
3.—Brass and copper, wrought								
4.—Iron	25	18	34	18	43	52	.....	9
5.—Tin								
6.—Others								
Oils—								
2.—Kerosine	114	.....	80	.....	114	80	34	.....
3.—Others	74	.....	62	.....	74	62	12	.....
Oilseeds—								
1.—Linseed								
2.—Rape and mustard								
3.—Til or gingelly								
4.—Niger	16	69	58	78	85	136	.....	51
5.—Castor								
6.—Poppy								
7.—Others								
Provisions—								
2.—Betel-nuts	.....	651	2	81	651	83	568	.....
3.—Others	21	8	14	5	29	19	10	.....
Railway plant and rolling-stock	10	28	45	36	38	81	.....	43
Salt	301	.....	163	.....	301	163	138	.....
Sugar—								
1.—Drained	8	63	14	140	73	103	.....	90
2.—Undrained								
Wood—								
1.—Timber	.....	.....	10	11	.....	21	.....	21
2.—Firewood								
Tobacco	26	19	25	6	45	31	14	.....
All other articles of merchandise—								
1.—Unmanufactured	272	107	296	207	379	503	.....	124
2.—Manufactured								
Total ...	3,183	2,826	3,427	3,039	6,009	7,066	785	1,842

Comparative Statement of traffic, Bengal Central Railway, for November 1889.

INCREASES.

	Tons.
Betel-nuts	568
Due to favourable market.	
Salt	138
Due to favourable despatch from Chitpore.	

DECREASES.

	Tons.
Coal	516
Due to sufficient stock for railway and flotilla purposes having been in hand.	
Jute	809
Due to dullness of the market on account of previous year's crop coming in earlier.	

CALCUTTA, *the 20th February* 1890.

F. P. QUINLAN,
Examiner of Accounts.

Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of January 1890, *as compared with the same month of the previous year.*

Staples.	1889.		1890		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1890		
	Tons	Tons.	Tons.	Tons.	Tons	Tons.	Tons.	Tons.
Coal	794	.....	757	.....	794	757	.....	37
Cotton, raw	12	.....	14	.....	12	14	2	.....
Cotton piece-goods—								
1.—European	42	.....	18	1	42	19	.....	23
Grains—								
2.—Rice	38	1,148	98	647	1,186	745	.....	441
4.—Others	30	71	25	37	101	62	.....	39
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed	.....	4	.....	7	4	7	3	.....
b.—Undressed	.....	1	.....	.....	1	.....	.....	1
Jute—								
1.—Raw	.....	22	.....	17	22	17	.....	5
2.—Gunny-bags and cloths	24	4	12	4	28	16	.....	12
Leather, manufactured	5	.....	6	.....	5	6	1	.....
Liquors—								
1.—Beer	8	.....	.....	.....	8	.....	.....	8
1.—Wines	1	.....	.....	.....	1	.....	.....	1
Metals—								
2.—Iron	3	.....	15	.....	3	15	12	.....
4.—Others	10	4	8	4	14	12	.....	2
Oils—								
1.—Castor	4	1	1	.....	5	1	.....	4
2.—Kerosene	2	1	1	.....	3	1	.....	2
3.—Others	10	.....	8	.....	10	8	.....	2
Oilseeds—								
3.—Mustard and rape	74	.....	28	.....	74	28	.....	46
6.—Others	6	.....	.....	.....	6	.....	.....	6
Provisions—								
1.—Ghee	3	.....	9	.....	3	9	6	.....
2.—Dried fruits and nuts	2	.....	2	.....	2	2	.....	.....
3.—Others	73	.....	40	.....	73	40	.....	33
Paper and pasteboard	1	.....	.....	.....	1	.....	.....	1
Railway plant and rolling-stock	77	9	55	13	86	68	.....	18
Salt	30	1	24	1	31	25	.....	6
Silk, raw—								
2.—Indian	13	23	62	36	36	98	62	.....
Silk piece-goods—								
2.—Indian	.....	3	2	4	3	6	3	.....
Stone and lime	.....	.....	6	.....	.....	6	6	.....
Sugar—								
1.—Drained	24	.....	15	.....	24	15	.....	9
2.—Undrained	24	.....	92	.....	24	92	68	.....
Tobacco	.....	3	1	.....	3	1	.....	2
Timber	3	.....	4	.....	3	4	1	.....
All other articles of merchandise	75	17	148	9	92	167	75	.....
Total	1,388	1,312	1,451	799	2,700	2,241	239	708

Increase.

	Tons.
Metals—	
(2) Iron	12
This increase is due to greater demands.	
Silk, raw—	
(2) Indian	62
This increase is due to greater import of tussur cocoons from Raniganj district.	
Sugar—	
(2) Undrained	68
Due to greater import owing to higher rate.	

Decrease.

	Tons.
Coal	37
Due to previous stock not being exhausted.	
Cotton, piece-goods—	
(1) European	23
Due to previous stock not being exhausted.	
Grains—	
(2) Rice	441
Due to less export from intermediate stations, owing to less demand in North-Western Provinces.	
(4) Others	39
Due to less export of *kalie* this year owing to the failure of the crops.	
Jute—	
(2) Gunny-bags and cloths	12
Due to less export of rice.	
Oilseeds—	
(2) Mustard and rape	46
Less imported, bazar being dull.	
Provisions—	
(3) Others	33
Due to potatoes being carried this year by boats.	
Railway plant and rolling-stock	18
Less railway materials carried during the month.	

R. G. MOOKERJEE,
Manager, Nalhati State Railway.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 15th February 1890, on 1,525½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	255,058	3,05,880 1 0	27,70,975 0	6,48,315 10 0	21,086 15 0	9,75,282 10 0	66,605½	93,399½	160,004
Or per mile of railway	....	200 8 2	.....	424 15 9	13 13 2	639 5 1	.....	.....	....
For previous 6 weeks of half-year	1,470,051	16,67,706 6 0	1,13,01,949 20	32,94,693 1 0	1,11,723 13 0	50,74,123 4 0	379,707½	500,217½	879,925
Total for 7 weeks	1,725,109	19,73,586 7 0	1,40,72,924 20	39,43,008 11 0	1,32,810 12 0	60,49,405 14 0	446,315	593,617	1,039,930
COMPARISON.									
Total for corresponding week of previous year	281,232½	3,09,550 12 0	28,82,673 10	6,25,084 5 0	17,727 0 7	9,52,362 10 7	65,644	98,801	164,44
Per mile of railway corresponding week of previous year	.....	202 14 8	.....	409 12 2	11 9 11	624 4 9	.....	.....	....
Total to corresponding date of previous year	1,708,439½	20,04,195 9 5	1,91,28,461 0	41,80,783 12 3	1,04,646 10 0	62,89,625 15 8	445,447	667,903	1,113,34

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI. Railway, dated 23rd July 1883.

Receipts for week ending 16th February 1889.			Receipts for week ending 15th February 1890.			Total receipts from 1st April 1888 to 16th February 1889.			Total receipts from 1st April 1889 to 15th February 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,525½	9,52,363	624	1,525½	9,75,283	639	1,525½	3,88,29,351	553	1,525½	3,85,65,889	550	.....	2,63,462

PATNA-GYA STATE RAILWAY

Approximate Return of Traffic for week ended 15th February 1890, on 57½ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	13,105	6,984 9 0	41,560 20	2,719 9 0	49 10 0	9,753 12 0	1,709	618	2,4
Or per mile of railway	229	122 1 9	725 30	47 8 9	0 13 10	170 8 4	.....	.....	
For previous 6 weeks of half-year	71,201	37,567 8 0	1,98,915 10	13,325 9 0	284 8 0	51,177 9 0	9,858	4,0[illegible]2	13,9
Total for 7 weeks	84,306	44,552 1 0	2,40,454 30	16,015 2 0	334 2 0	60,931 5 0	11,567	4,670	16,3
COMPARISON.									
Total for corresponding week of previous year	13,674	7,320 10 10	24,801 30	1,707 3 0	35 15 0	9,063 12 10	1,858	636	2,3
Per mile of railway corresponding week of previous year	239	127 15 9	433 30	29 13 6	0 10 1	158 7 4	.....	.....	....
Total to corresponding date of previous year	83,966	44,475 0 4	2,02,191 10	11,893 7 0	236 5 9	56,594 13 1	12,876	3,886	16,7

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 16th February 1889.			Receipts for week ending 15th February 1890.			Total receipts from 1st April 1888 to 16th February 1889.			Total receipts from 1st April 1889 to 15th February 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	9,004	156	57½	9,754	171	57½	4,25,353	163	57½	*4,43,024	168	17,671	.....

* Rs. 239 on account of difference between the approximate and audited figures to 31st December 1889.

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 15th February 1890, on 22¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	22,660	5,651 10 0	17,085 10	562 2 0	6 3 0	6,219 15 0	884	84	968
Per mile of railway ...	.....	254 0 1	.. ...	25 4 3	0 4 5	279 8 9	.....	.....	.....
For previous 5 weeks of half-year	113,202	27,579 7 0	73,128 0	2,569 8 0	41 10 0	30,190 9 0	5,000	397	5,406
Total for 6 weeks ...	135,862	33,231 1 0	90,213 10	3,131 10 0	47 13 0	36,410 8 0	5,893	481	6,374
Comparison.									
Total for corresponding week of previous year	25,834	6,713 13 2	9,648 10	342 2 0	3 0 0	7,058 15 2	896	72	968
Per mile of railway corresponding week of previous year ...	.....	301 11 11	.....	15 6 0	0 2 2	317 4 1	.....	.....	.....
Total to corresponding date of previous year	137,350	34,026 15 6	92,118 20	2,163 3 0	44 15 9	37,135 2 3	6,055	435	6,490

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

Receipts for week ending 16th February 1889.			Receipts for week ending 15th February 1890.			Total receipts from 1st April 1888 to 16th February 1889.			Total receipts from 1st April 1889 to 15th February 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
22¼	7,059	317	22¼	6,220	280	22¼	2,44,017	235	22¼	*2,40,083	235	.....	3,934

* Deducted Rs. 324 on account of difference between the approximate and audited figures to 31st December 1889.

EASTERN BENGAL STATE RAILWAY.

(Including N. B., Dacca, K. and D., and Assam-Behar Sections.)

Approximate Return of Traffic for week ended 8th February 1890, on 747 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated), including steam-boat.	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week... ...	213,500	93,950 0 0	5,53,390 0	1,00,190 0 0	19,350 0 0	2,13,790 0 0	23,147	28,165	51,312
Per mile of railway ...	286	126 0 0	741 0	134 0 0	*3 0 0	283 0 0	.....	.....	.....
For previous 5 weeks of half-year	704,290	3,54,930 0 0	20,96,080 0	6,67,540 0 0	84,010 0 0	11,06,480 0 0	105,124	165,605	270,729
Total for 6 weeks ...	917,790	4,48,880 0 0	25,49,470 0	7,68,030 0 0	1,03,360 0 0	13,20,270 0 0	128,271	193,770	322,041
Comparison.									
Total for corresponding week of previous year	177,242	81,899 0 0	4,30,483 0	67,967 0 0	16,673 0 0	1,66,537 0 0	22,670	23,786	46,456
Per mile of railway corresponding period of previous year ...	263	122 0 0	640 0	101 0 0	*1 0 0	224 0 0	.....	.....	.....
Total to corresponding date of previous year	832,011	4,20,263 0 0	28,57,243 0	5,90,453 0 0	94,830 0 0	11,05,546 0 0	125,688	159,323	285,011

* Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 8th February 1889.			Total receipts from 1st April 1889 to 9th February 1890.			Total increase in 1889-90	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
673	1,66,537	247	747	2,13,790	286	673	93,47,035	309	726	*99,46,505	305	5,98,570	

* Audited up to week ending 14th December 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 8th February 1890, *on* 125 [illegible]

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	36,870	11,520 0 0	57,310 0	3,200 0 0	100 0 0	[illegible]	3,736	1,936	5,672
Or per mile of railway	295	92 0 0	458 0	25 0 0	1 0 0	118 0 0	.....	.....	.....
For previous 5 weeks of half-year	123,330	48,030 0 0	2,01,240 0	12,300 0 0	360 0 0	61,590 0 0	17,078	8,852	25,930
Total for 6 weeks ...	160,200	60,450 0 0	2,58,550 0	15,500 0 0	460 0 0	76,410 0 0	20,814	10,788	31,602
Comparison.									
Total for corresponding week of previous year	34,230	10,017 0 0	58,308 0	2,070 0 0	64 0 0	13,051 0 0	3,739	1,937	5,676
Per mile of railway corresponding period of previous year ...	274	80 0 0	466 0	24 0 0	.....	104 0 0	.....	.....	.....
Total to corresponding date of previous year	167,136	54,022 0 0	2,78,341 0	13,638 0 0	3,739 0 0	71,399 0 0	21,374	11,675	32,449

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 9th February 1889.			Total receipts from 1st April 1889 to 8th February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	13,051	104	125	14,830	118	125	6,17,554	110	125	*6,46,615	115	29,061	.....

* Audited up to week ending 14th December 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 8th February 1890, *on* 86 *miles open.*

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	16,000	6,380 0 0	24,720 0	2,700 0 0	210 0 0	9,290 0 0	2,482	794	3,276
Or per mile of railway	186	74 0 0	287 0	31 0 0	3 0 0	108 0 0	.....	.....	.....
For previous 5 weeks of half-year	78,230	28,370 0 0	1,61,950 0	16,340 0 0	950 0 0	45,660 0 0	11,336	4,120	15,456
Total for 6 weeks ...	94,230	34,750 0 0	1,86,670 0	19,040 0 0	1,160 0 0	54,950 0 0	13,818	4,914	18,732
Comparison.									
Total for corresponding period of previous year	14,552	4,510 0 0	9,378 0	1,082 0 0	448 0 0	6,040 0 0	2,482	622	3,104
Per mile of railway corresponding period of previous year	169	52 0 0	109 0	13 0 0	5 0 0	70 0 0	.....	.....	.....
Total to corresponding date of previous year	88,256	26,602 0 0	69,020 0	7,418 0 0	1,138 0 0	35,158 0 0	14,209	3,561	17,770

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

Receipts for week ending 9th February 1889.			Receipts for week ending 8th February 1890.			Total receipts from 1st April 1888 to 9th February 1889.			Total receipts from 1st April 1889 to 8th February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	6,040	70	86	9,290	108	86	2,58,632	67	86	*3,39,872	88	81,240	.....

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 15th February 1890, on 27¼ miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs A. P.			
Total traffic for the week ...	76	1,244 0 0	12,188 0	861 0 0	19 0 0	2,124 0 0	509	254	763
Or per mile of railway ...	131	46 0 0	447 0	31 0 0	1 0 0	78 0 0	.....	.....	.....
For previous 5 weeks of half-year	17,164	5,971 0 0	76,409 0	4,677 0 0	80 0 0	10,728 0 0	2,836	1,415	4,251
Total for 6 weeks	20,740	7,215 0 0	88,597 0	5,538 0 0	99 0 0	12,852 0 0	3,345	1,669	5,014
COMPARISON.									
Total for corresponding week of previous year ...	3,513	1,322 0 0	12,938 0	857 0 0	8 0 0	2,187 0 0	509	581	1,090
Per mile of railway corresponding week of previous year ...	129	49 0 0	475 0	31 0 0	.....	80 0 0	.....	.....	.....
Total to corresponding date of previous year	21,867	8,235 0 0	1,05,802 0	5,774 0 0	105 0 0	14,114 0 0	3,417	3,855	7,272

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

Receipts for week ending 16th February 1889.			Receipts for week ending 15th February 1890.			Total receipts from 1st April 1888 to 16th February 1889			Total receipts from 1st April 1889 to 15th February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27¼	2,187	80	27¼	2,124	78	27¼	89,355	75	27¼	88,660	74	.....	695

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 15th February 1890, on 273 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	46,417	20,995 0 0	3,83,234 0	38,391 0 0	4,275 0 0	63,661 0 0	5,923	9,545	15,468
Per mile of railway ...	170	76 0 0	1,221 0	141 0 0	3 0 0	220 0 0*	.....	.....	.....
For previous 5 weeks of half-year	288,752	1,27,560 0 0	13,72,237 0	1,55,158 0 0	28,476 0 0	3,11,494 0 0	35,484	48,767	84,251
Total for 6 weeks ...	330,169	1,48,555 0 0	17,05,471 0	1,93,849 0 0	32,751 0 0	3,75,155 0 0	41,407	58,312	99,719
COMPARISON.									
Total for corresponding week of previous year	51,957	21,688 0 0	1,37,119 0	12,989 0 0	3,694 0 0	38,371 0 0	5,094	6,204	12,198
Per mile of railway corresponding week of previous year ...	190	79 0 0	502 0	48 0 0	4 0 0	151 0 0*	.....	.....	.....
Total to corresponding date of previous year	270,414	1,03,406 0 0	9,14,397 0	85,162 0 0	21,414 0 0	2,09,982 0 0	37,900	37,407	75,307

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

Receipts for week ending 16th February 1889.			Receipts for week ending 15th February 1890.			Total receipts from 1st April 1888 to 16th February 1889.			Total receipts from 1st April 1889 to 15th February 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs	Rs.		Rs.	Rs.		Rs.			Rs.	155	4,02,000	.....
273	38,371	141	273	63,661	233	265·04	14,59,4[illegible]	[illegible]	273	18,62,0[illegible]			Rs.

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.
Approximate earnings for week ending 25th January 1890	8,270
Corresponding period of 1889	8,450
Increase	20

	Rs. A. P.
Receipts per mile for week ending 25th January 1890	166 1 3
Corresponding p riod of 1889	165 11 0
Increase	0 6 3

Receipts from 1st to 25th January 1890	25,983
Corresponding period of 1889	24,788
Increase	1,195

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

	Rs.
Approximate earnings for week ending 1st February 1890	7,224
Corresponding period of 1889	8,180
Decrease	956

	Rs. A. P.
Receipts per mile for week ending 1st February 1890	141 10 4
Corresponding period of 1889	160 6 6
Decrease	18 12 2

Receipts from 1st January to 1st February 1890	33,207
Corresponding period of 1889	32,969
Increase	238

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